ELSEVIER

Ambulatory Surgery 7 (1999) S1–S108

Ambulatory Surgery

Abstracts

3rd International Congress on Ambulatory Surgery April 25–28, 1999

Organization and Management

Severity of symptoms following day case cystoscopy

M Cripps

Lecturer Practitioner, Day Surgery Unit, Salisbury District Hospital, Wiltshire, England

INTRODUCTION: This is the result of a collaborative study undertaken by six Day Surgery Units around South West England looking at the morbidity following day case cystoscopy.
METHODS: The study investigated, through patient questionnaire, the patients' experience in the first 48 hours post surgery of pain, sickness, presence of haematuria, burning on micturition, frequency of micturition and contacts with health care professionals. There was also opportunity for the patient to provide feedback on their experience.
RESULTS: 10% of patients experienced unsatisfactory amounts of pain. The majority of patients experienced burning on, and frequency of, micturition. Comparisons were made between grade of surgeon, sterilisation techniques of equipment, whether the patients were pre assessed or not and quality of patient information.
CONCLUSION: Collaborative studies such as this enable sharing of information to ensure best practice is disseminated through many centres. Individual Units that took part are receptive to recommendations and a local Senior Nurses Interest Group has arisen from this project to enable further collaborative work.

Principles of civil liability as regards knowledgeable consent

FM Donelli

Via A. Mario 32, Milano 20I49, Italy

A surgeon's work is liable to the principles of civil law stating the duties of brainwork employees and of criminal law as regards a culpable behaviour. Various stages of professional responsibility originate from a breach of the rules in the relationship between a physician and his/her patient. Assumption of this contract relationship is the capacity to engage so as to make the contract valid and lawful. Consequently a basic condition to a contract-relationship regarding medical matters is a KNOWLEDGEABLE CONSENT, e.g. the declaration by which a patient intends to bring about a relationship generating on the other side an obligation to treat and on his/her side the obligation to be treated. In order to be aware of it a patient must know the content of possible consequences to be expected; it means that for a contract to be valid it requires basically the suitable and consistent information about the disease, its treatment and possible consequences both of the disease and of its treatment. Lack of information can make the contract null and void causing a physician to act against the law. For the consent to be valid it has to be given by a Subject in full possession of his/her faculties or aged to be as such. The surgeon's obligation so established in the contract is the obligation of means or diligence in his/her performance and not an obligation to results. A surgeon therefore acts within the limits of a behaviour obligation and not of an obligation to results. Nevertheless this is an apparent distinction, as a fact, considered as a mean in respect of a subsequent aim, will be a result when assessed as such, and as the final stage of a limited sequence of facts.

Critical management factors (CMF) in an ambulatory surgery center

RC Williams

Federated Ambulatory Surgery Association, Washington, DC. USA

INTRODUCTION: Ambulatory Surgery Centers (ASC) are expensive to build and operate and are frequently reimbursed less than hospitals providing the same or similar services. Therefore, to meet or exceed profit expectations, ASC's must be managed efficiently. Experience in developing and/or managing more than fifty ASC's has demonstrated that there are fifteen Critical Management Factors (CMF) that, when complied with, will ensure the ASC operates in an efficient, effective and profitable manner.
METHODS: Through the aforementioned experience, certain values and ratios have been established that have become recognized as performance benchmarks or CMF. These CMF will vary slightly, depending upon the cost structure of the ASC, and are established during the annual budgeting process. Once established, comparing the CMF to actual performance will clearly point out those areas where management needs to focus its attention in order to meet or exceed budgetary expectations. These performances benchmarks, or CMF provide a detailed measurement of patient volume, revenue, staffing costs and ratios, supply cost per case, total expenses, accounts receivable analysis, income and profit margins.
RESULTS: CMF represent to a good ASC manager what a patient's vital signs represent to a physician. With a good CMF protocol, an ASC manager can identify areas of managerial concern, without ever looking at the financial report or speaking with either employees or staff physicians. The beauty of a good CMF process is that it provides a busy manager, or physician owner, with a "snap shot" of the ASC's over all performances, and areas of concern, without having to look any further.
CONCLUSIONS: To efficiently and effectively manage an ASC in the future, particularly in view of lower reimbursement, will become increasingly more difficult and time consuming. Proven management tools, such as well established CMF process, will dramatically im-

PII: S0966-6532(99)00015-3

prove the manager's and owner's ability to ensure the center operates in a manner that meets the expectations of all involved.

The effect of the day surgery experience on the quality of life and psychological well-being of the patient: an assessment of patients' perceptions of health

AM Coll, C Torrance, L Moseley

Department of Nursing Research, University of Glamorgan, Pontypridd, South Wales CF37IDL, Great Britain

INTRODUCTION: An attempt to establish patients' perceptions of health status before and after their day surgery experience using a postal questionnaire one week before and two weeks afterwards. An attempt to measure the quality of life of patients, establishing the degree of impact experienced by the patient before and after surgery in all areas of daily living. It is the extent of the alteration in their daily functioning, particularly in the post operative period that we hope to establish.
METHODS. Three day surgery units throughout Great Britain. The full study involves a consecutive sample of 900 patients (300 from each centre) based on three surgical procedures: laparoscopic sterilisation; hernia and varicose vein surgery. The data has been generated by Formic (questionnaire design package and scanner and analyst facility) and SPSS. Five health assessment tools were selected: SF36; Health Locus of Control; Satisfaction with Life scale; Duke-UNC Social Functional health profile and visual analogue scales.
RESULTS: To date over 600 patients have been recruited and the interim findings will be reported on a discussion of: general health perceptions; physical functioning; symptom distress; psychological distress and limitations in social and role functioning both pre and post operatively.
CONCLUSIONS: It is anticipated that this research study will make a significant contribution in: the development of a greater informed and participative relationship with the patient; provide a more accurate assessment of patient outcomes in day surgery during the first two weeks and provide scope for a more unified approach for the measurement of quality of life.

Organisation of a day-surgery unit based on quality

P Hommelgaard, J Moelgaard

Anesth. Department, Silkeborg Comunity Hospital, Falkevej 1–3, Silkeborg, DK8600, Denmark

Change is a welcome opportunity for alteration of habits and routines. The new establishment of a day-surgery unit has become the opportunity to let the organisation develop according to 'principles of continuous quality improvements', based on the wish to increase quality for both patients and staff. To attain the high degree of flexibility, specialist staff (OR- and AN-nurses) take care of all patient-related functions, which also include continuity as experienced by the patient. The principle of the unit is that the individual who carries out the job is responsible for its quality. This has required education and a change of attitudes. The unit was established in February 1997. Questionnaire studies have been used to check the quality. There is an extensive degree of patient satisfaction. Specific points of criticism including waiting time, have been remedied. It is possible to establish a unit where high-quality efficiency and service go hand in hand with staff satisfaction.

Surgical preoperative assessment for daysurgery: sense or nonsense?

D de Jong

Surgery Department, University Hospital Vrije Universiteit, P.O. Box 7057, Amsterdam, The Netherlands

INTRODUCTION: Although patient selection is a key feature of ambulatory surgery, surgeons usually restrict themselves to determination of the type of operation, and leave other items to nurses and anaesthetists. We were of the opinion that proper patient selection and preparation for day surgery required a more intensive surgical participation and arranged a consultation with a specialised surgeon on the day of anaesthesiological pre-assessment, 4–6 weeks before scheduled surgery. The usefulness of this procedure was analysed.
METHODS: Retrospective analysis of cases presented for surgical preoperative assessment.
RESULTS: From 01–01–'97 till 30–06 = '98 a total of 486 patients, after consultation with their surgeon, received an appointment for surgical and anaesthesiological pre-assessment as day-surgery was found indicated. Of these patients, 24 (5%) never appeared. Eighty-one (17%) patients were found unsuitable for ambulatory surgery, and 14 (3%) patients, after proper information, renounced surgery. From the 81 patients found unsuitable for ambulatory surgery, 27 were rejected for anaesthesiological reasons, all others for surgical reasons: surgical treatment not indicated, suggested operation to much time-consuming for an ambulatory procedure, etc. A total of 367 patients was eventually scheduled for an ambulatory procedure, from which 20 (5%) did not appear on the day of surgery, and 11 (3%) had to be clinically admitted after surgery.
CONCLUSION: Surgeons should be more actively involved in the selection and preparation of patients for ambulatory surgery. There even might be a need for specialisation in this field. It was disappointing to notice that despite this thorough preparation the number of no-shows was inacceptably high.

Federated Ambulatory Surgery Association Outcome Survey

CH Beeler

President, FASA, Alexandria, Virginia, USA

SURVEY DEVELOPMENT PROCESS

* Question Selection

* Refining Question Definitions

* Determining Definition and use of confounding factors
RESEARCH AND EXPLORATION

Indicators

* Process Indicators

* Education/ Follow-up

* Documentation

* Qualifications of Staff Indicators

* Patient Satisfaction
RESULTS AND NEXT STEPS

Establishing a free standing day surgery

H Bartholomeusz

Chief Executive Officer, Tri Rhosen Day Surgery, Ipswich, Queensland, Australia

In 1995 Tri Rhosen Day Surgery broke new ground in the West Moreton Regional Health Authority in Queensland Australia. It became the first free standing multi-disciplinary Day Surgery in the area servicing a population of two hundred thousand people. As it nestles in the heritage precinct of Ipswich, this Day Surgery is unique in that its architecture reproduces a cottage of the 1860's era. This ambience is translated internally into a homely and comfortable environment that is less threatening than the usual "clinical coldness" of many hospitals. This paper deals with the genesis of the Day Surgery from concept to completion and pictorially illustrates its day to day operation.

Ethical & legal aspects of consent in ambulatory surgery

H Cahill

Department of Health Studies, University of York, England

Consent to surgical intervention is a complex issue; it is an expression of respect for autonomy in much the same way as an apology is an expression of regret (Dworkin, 1988); without the latter, the former is meaningless. This paper argues that many health care professionals' understanding of consent is incomplete; a ''triumph of myth over reality'' (Kennedy, 1992). But although consent is an important recognition of patients right to self-determination, in practice, too many doctors and nurses simply focus on the requirement of patients to sign a form (Kessel, 1994). Through custom and practice in a fast moving service, staff may also be exposing themselves to possible civil and criminal actions. This paper reiterates the ethical and legal principles of valid consent in the context of ambulatory surgery and outlines the essential criteria of competence, voluntariness and adequacy of information. All practitioners, must be aware of the boundaries and implications of their duty of care to patients and understand the position of the law.

References

Dworkin G (1988) *The Theory and Practice of Autonomy* Cambridge: Cambridge University Press.

Kennedy I (1992) 'Consent to Treatment: The Capable Person' **in** Dyer C (Ed.) *Doctors, Patients and the Law*, Oxford: Blackwell Scientific.

Kessel AS (1994) 'On failing to understand informed consent' *British Journal of Hospital Medicine* **52** (5): 235–8.

Models of a daily meeting for the organization of a service by giving workers responsabilities: what advantages for the patients

F Venutolo, N Jugier, C Delalande, A Le Coent, L Verbanck, V Caherec

Service Soins Ambulatoires, Centre Hospitalier, Boite Postale 71, 95503 Gonesse Cedex, France

Abstract not received.

Organization of an ambulatory surgery unit in department of major surgery

A Orio, G Fichera, P Granelli, C Siardi, M Reitano, M Fioravanti and F Zennaro

Institute of General Surgery and Oncological Surgery (Chief: Prof. A. Peracchia), Ospedale Maggiore Policlinico IRCCS, Milan, Italy

INTRODUCTION: An Ambulatory Surgery Unit, devoted to minor surgical procedures carried out under locoregional anesthesia, was created in our Department since January 1994.
METHODS: In the early period some problems arose about the availability of the hospital facilities. At the end we managed to exploit to the utmost the common resources. Now there is a fixed medical team (senior surgeon, junior surgeon and three resident surgeons), two days every week are reserved for day surgery, a general ambulatory and one dedicated only to day-surgery. In the ambulatory the patients are selected following general and specific medical standards. We care either the social-environmental status of the patient, and the patient's and its family understanding of risk and benefits related to surgical procedure. The eligible patients undergo a blood screening, ECG and preoperative evaluation by an anesthesiologist. Patients older than 40 or suffering from cardiopulmonary diseases are also submitted to the cardiologist visit and chest X-Ray. The operations performed in day-surgery are reserved to ASA I-II patient and to some selected ASA III. A single shot antibiotical prophylaxis is administered immediately before the operation. After the surgical procedure the patients are watched for some hours in our surgical ward and, late in the afternoon, they are discharged and advised to contact the surgeon if any complication would occur. A follow up is performed in every patient at 7th postoperative day, and then after 1, 6, and 12 months.
RESULTS: In 5 years of experience we operated on 2598 patients: 637 for hernia repair, 549 for proctologic diseases, 89 for lower limbs varicose veins, 215 for benign breast pathology, 1100 for minor skin and annexes diseases, 8 for urological diseases. There were 4.4% of postoperative complications and a satisfaction index of 98.9%. In addition, 612 operative endoscopies are performed.
CONCLUSION: Good clinical results were recorded in 98.4% of the patients, with a high satisfaction index. Cost saving was also relevant and major surgical procedures were not reduced or impaired by the Day Surgery Unit.

Some relevant evaluation criteria in ambulatory surgery: the French experimentation

L Jouffroy[a], L Ricour[b]

[a]*Clinique des Diaconesses, Strasbourg,* [b]*Compagnie Générale de Santé, Paris, France*

From the start, the French Association for Ambulatory Surgery (AFCA: Association Francasie de Chirurgie Ambulatorie) considered evaluation and quality as important objectives: 'In the interest of all patients and the society, to promote the quality of treatment in ambulatory surgery and every evaluation in this type of surgery, and to encourage every organization effort in the field of quality insurance'. The promises include the statement that only health professionals can conceive, handle and take charge of evaluation, quality procedures and all the more accreditation. According to these objectives was formed a multidisciplinary reflection group: one of its first assignments is the development and the setting up of clinical indicators in ambulatory surgery.
These objectives are:
*showing proof of appropriate practicing and adequate organization;
*indicating unexpected events, which can help us to improve quality; indeed, quality being the major issue (or problem) quality insurance is an improving procedure consisting in satisfying even anticipating the patient's needs.
It is very important not to mix up these two notions, especially when related to health care and ambulatory surgery:
*quality is the satisfaction a patient gets from its treatment,
*quality insurance is the confidence he can have in the medical care organization.
We are presenting the preliminary results of the French experimentation: eight clinical indicators, in five application fields, whose daily recording take three minutes.

Pediatric day-surgery. a three years activity report

P Signoretti, C Brunori, P Brugnolo, S Uguccioni, L Landa

General Surgical Service, Anesthesia Service, Santa Croce Hospital, Fano, Italy

Abstract not received.

Day surgery and territorial medicine: a project of integration

A Tropè Couvin, M Biondi, A Gubitosi

Associazione Chirurghi Territoriali Italiani, Napoli, Italy

Our complete awareness of territorial and suburban realities, the search for a more efficient co-ordination between the requirements of the patient and ambulatory specialists to improve treatment in Day Surgery, have encouraged us to undertake initiatives and carry out some specific research. The patients uneasiness and uncertainty about how and where to undergo treatment, the unnecessary repetition of tests and medical examinations, the arbitrary nature of referrals to

surgery departments together with doubts over the patients health in the post-operative phase of Day Surgery and the lack of co-ordination among specialists and between specialists and surgery departments, all constitute the motive for our work. We have turned our attention to all issues concerning patients referred to the ambulatory surgeon in Day Surgery treatment, from the preparation to the follow-up. In order to make Day Surgery feasible and practicable, it is necessary that the ambulatory surgery has specialists in all areas of surgery, such as urology, orthopaedics, otolaryngology and so on. Another aspect is the importance for the specialist to keep himself up-to-date with new developments, by attending refresher courses and, last but not least, total co-operation with the surgery department. Our aim is to develop a surgery without admission to hospital and to find quick, easy, specific solutions in agreement with the economic programs of the Health Service.

The organization of day surgery in Carpi hospital (Modena)

AM Pietrantonio, A Bezer, M Capalbo, G Tonto

Health Administration at Carpi Hospital (Public Health Services of Modena Province), Day Surgery Unit at Carpi Hospital, Carpi, Modena 41012, Italy

INTRODUCTION: The Carpi Hospital is part of the larger public Health Services of the Province of Modena in Northern Italy. It has a capacity of 300 beds, advanced technology, one General Surgery Unit and four specialised surgery units. In November 1997, a Day Surgery Unit was set up after the approval of a project to improve the efficiency of the surgery area.
MATERIALS AND METHODS: The work towards the realization of the Day Surgery unit was conducted by a team of Doctors of the Health Administration, Anaesthetists, Surgeons and Nurses who proposed guidelines for patient care and organizational procedures for case mix, structure ordering and the unit working staff.
RESULTS: The work of the team first defined a logistical ordering of the unit structure which permits the start and finish of the patient's experience (pre-surgery, evaluation, the surgery and post surgical observation, follow up) with indications that are as simple and clear for the patients as for the family and relatives. Secondly, guidelines were furnished to guarantee the professional quality of patient care and/or to better it accompanied by instruction sheets regarding all the procedures excepted in the unit. Thirdly, the patients were given written information notes which explained all of the aspects of the surgery process including his/her duties in the pre and post surgical phases with specific reference possible problems or complications that might arise at home once discharged. At the time of discharge, the patient always received a questionnaire which he/she had to fill out in order that the administration might understand the degree of patient satisfaction regarding structure, organization comfort and human relations.
CONCLUSIONS: In the first eight months, since the start of the day surgery unit there has been an 81% increase of the work-load with a saving of hospital bed days, and a recovery of resources to be used in the majoir surgery unit. All this in a noticeable atmosphere of patient satisfaction which constitutes yet another positive factor in the implementation of this surgical assistance model.

Pre-operative waiting time in day-care admission

L Van Outryve, MD Volkskliniek

Tichelrei 1-B-9000, Gent, Belgium

Surgical day-care hospitals in Belgium can be divided into four categories: Cat. I: Use of traditional hospital facilities; Cat. II: some facilities are exclusively designated to the day-care hospital; Cat. III: all facilities are exclusively designated to the day-care hospital with exception of the operation theatre and recovery room; Cat. IV: the day-care hospital works fully independently. Patients were asked how long their pre-operative waiting time was after their admission to the day-care hospital. A study was conducted by the B.A.S.S. in the period of February–March 1998; 3429 patients in 59 hospitals (in a total of 123 hospitals) filled out a questionnaire. Patients who experienced the pre-operative waiting time as "long": Cat. I: 26.7%; Cat. II: 28.7%; Cat. III: 23.0%; Cat. IV: 14.3%. Patients who experienced the pre-operative waiting time as "short": Cat. I: 73.3%; Cat. II: 71.3%; Cat. III: 77.3%; Cat. IV: 85.7%. The actual waiting times were: less than one hour: Cat. I: 42.7%; Cat. II: 46.1%; Cat. III: 46.8%; Cat. IV: 59.8%. Over one hour: Cat. I: 23.5%; Cat. II: 23.0%; Cat. III: 18.1%; Cat. IV: 9.7%. The shortest actual pre-operative waiting times, as well as the pre-operative waiting times as experienced by the patients, were obtained in category IV where the surgical day-care hospital works as a fully independent unit.

Surgical short stay scenarios: case studies from around the united states

J Steinman, J Harenski

Managing Principals, AUSMS Healthcare Consultants, San Diego, CA, USA

INTRODUCTION: America's experience with freestanding ambulatory surgery centers and postsurgical recovery centers has resulted in many iterations that have been devised and are being tested by hospitals, physicians, and surgical center corporations.
METHODS: The presenters consulting practice has provided them with the opportunity to plan, develop, and evaluate the ASC/PRC model or care in many parts of the country, in a variety of demographic and socio-economic settings and for a wide cross-section of providers of day and short-stay surgical services. Four discrete scenarios will be reviewed during this session: (1) the integrated, comprehensive, single surgical specialty campus (focus on orthopaedics and/or gynecology; (2) the multi-specialty "emerging" surgical facility; (3) the short-stay, full service hospital; (4) Extending market share with ASC/PRC remote from the hospital campus.
RESULTS: The four scenarios will be examined in accordance with key performance indicators: (A) population, demography and demand characteristics of the model; (B) model proponents key characteristics as a health care provider; (C) marketplace competition; (D) regulatory and payer incentives and obstacles; (E) key performance indicators (patient mix, procedure mix, payer mix, financial variables and others); (F) risk assessment of model to date.
CONCLUSION: The ingenuity of surgical services providers in prompting the breadth of clinical advances now deemed "customary" practice is matched by the creative spirit now being demonstrated by these same providers to reform, update and upgrade the very system of health care delivery that can bring these clinical innovations to patients and their families. This session is designed to offer a reasoned discourse on the value of the ASC/PRC model while imparting an evaluative approach to those considering the development of this capability for their surgical practice, hospital or health system.

Evaluation of quality indicators in a DSU

M Prats, LA Hidalgo, A Heredia, A Aldeano, JM Badia, JM Gubern

Consorci Sanitari de Mataró, Mataró, Spain

AIM OF THE STUDY: To evaluate the clinical indicators of quality assessment used in DSU in a general community hospital.
PATIENTS AND METHODS: From 1994 to June 1998, 6161 patients were operated on in our DSU. During the same period of time, a total of 18,253 surgical procedures were performed (substitution index 33.75%). The clinical indicators evaluated were early admissions, late admissions, cancellations and mean stay in DSU. Both early and late admissions and cancellations were classified depending on the cause: anesthetic, surgical, medical, administrative and social. Avoidability, probably avoidable and unavoidability were considered for each cause.

RESULTS: A total amount of 155 patients were clasified as early admissions (2.52%): 42 patients for surgical reasons, 71 anesthetic, 16 medical, 10 social and 16, administrative. Twenty four cases were considered avoidable (15.5%), 33 cases: probably avoidable (21.3%) and 98 cases unavoidable (63.2%). Late admissions included 17 patients (0.28%): 10 surgical causes, 6 anesthetic causes and 1 medical cause, 15 unavoidable (88.2%) and 2 probably avoidable (11.8%). Cancellations were done in 134 cases (2.17%): medical 64, social 23 and administrative 47. Avoidability was judged in 40 (32.8%), and 90 unavoidable (67.2%). Mean stay in the DSU was calculated for the more prevalent procedures: cataracts 126 minutes, treatment of varicose veins 126, arthroscopy/meniscectomy 166, pilonidal cyst 197 and groin hernia 223 minutes.
CONCLUSIONS: Our results compare favorably with other series. Anesthetic and unavoidable causes predominate in early admissions, while surgical causes predominate in late admissions. Adequate monitoring of clinical quality indicator allows early detection of problems and subsequent solving interventions.

Audit of morbidity following day case: a follow-up survey of 10,764 patients

J Coles, A Majeed, S Hull, WL Rowe

Sir Arthur South Day Procedures Unit, *Norfolk and Norwich Hospital*, *Norwich*, *UK*

INTRODUCTION: We aimed to determine the incidence of post-operative morbidity following day case surgery, and to determine the impact of day surgery on activity levels, time off work (or school) and patients' future preferences for day surgery.
METHODS: We contacted 10,764 patients attending the Day Procedure Unit following their return home over a 3 year period. 67% were contacted within 3 days and 75% within one week. A questionnaire was completed by a trained staff nurse in each case.
RESULTS: Operations were ranked in order for pain (up to 50% moderate to severe), nausea (up to 21%), loss of appetite (up to 7%) sleep disturbance (up to 42%), wound problems (up to 54%), mobility and time off work.
DISCUSSION: The incidence of morbidity for some procedures was surprisingly high even though patients had all met discharge criteria In spite of this we were reassured that most patients would prefer day surgery again.

Development of a modern day surgery

A McHardy

Wagga Wagga Day Surgery, *Wagga Wagga*, *Australia*

INTRODUCTION: Designed and built especially for day surgery. This unit is an exciting development adding modern dimensions to day surgery.
METHODS: The concepts, design, building and equipping stages will be outlined.
RESULTS: This advanced facility allows doctors to provide a top service to their patients with minimal inconvenience. Excellent patient and nursing flow has been achieved.
CONCLUSION: This purpose built free standing day surgery has been awarded an Australian design award and this concept could be adapted in most parts of the world.

The computer-based patient record: a joint tool for the medical and nursing staff at a day-clinic facility at Vejle/Give Hospital, Denmark

D Lund, AG Vemmelund, S Holbech Esmann

Department of Orthopaedics, *Vejle Hospital*, *Denmark*

INTRODUCTION: The orthopedic day-clinic established in 1992, is constantly developing technologically and professionally. On a yearly basis 1500 surgical procedures are carried out at the clinic together with 4500 pre- and postoperative out-patient consultations. The clinic is located at a minor hospital 30 km from the main hospital. The two hospitals have joint administration, thus allowing the clinic to work closely with the out-patient clinic and clinical wards at the main hospital. The computer-based patient record (CPR) has made possible a closer cooperation between the two hospitals throughout the course of treatment in terms of management and administration.
METHOD: The CPR began as a project at the department of orthopedics at Vejle Hospital September 1997. Following an analysis and description of the current and future procedures of the medical, secretarial and nurcing staff the CPR was implemented at the clinic in Give on the 15. August 1998.
RESULT: The CPR can be easily accessed and follows the patient. Furthermore the CPR can be used by other hospitals and different professional groups, it reduced the paper flow and helps ensure continuity in the course of treatment.
CONCLUSION: The CRP has proved a valuable daily tool and is used throughout the patient's contact with the hospital.

Are we learning by our experience?

HJ Shaikh, M Virdi, E Burton, E Clements

The Plane Tree Centre, *Whipps Cross Hospital*, *Leytonstone*, *London E11 1NR*, *UK*

INTRODUCTION: Day Surgery has been carried out in our trust since 1987. In October 1995, the Plane Tree Centre was opened, a purpose-built multidisciplinary Day Unit. Over 12,000 procedures are carried out in the unit each year.
METHOD: Retrospective analysis of recent 2 years activity in general surgery and gynaecology were undertaken with reference to *Admissions*, *Cancellations* and DNAs. A target of 1% was set.
RESULT: Admissions in both specialities were mainly due to surgical reasons rather than anaesthetic or social reasons.

Speciality	Gynaecology		General Surgery	
Year	96/97	97/98	96/97	97/98
Scheduled cases	1684	1516	1186	1122
Actual procedures	1608	1450	1119	1040
Admissions	31(1.93%)	21(1.45%)	16(0.99%)	29(2.79%)
Cancellations	60(3.56%)	42(4.77%)	48(4.05%)	60(5.35%)
DNAs	16(0.95%)	24(1.58%)	19(1.60%)	22(1.96%)

CONCLUSION: Our target of 1% has not been achieved in either year. More attention is needed to improve administration and communication. Admissions for surgical reasons are inevitable with increasing complexity of procedures. Overnight facilities should be available.

Design planning for ambulatory cares facilities

M Séraqui

Architect, *Paris*, *France*

Ambulatory surgery can be practiced in different types of facilities: integrated, satellite or independent. These facilities are either within hospital premises or detached.
The satellite center situated in the heart of the establishment with distinct reception, rest and surgical areas are the most adapted for ambulatory surgery.This is particularly true for the surgical areas, where hygiene, security, comfort, organization and operating costs are globally optimized.

With regard to the number of surgical blocks, the quantity should be determined according to the type, amount average length of surgery and estimate efficiency coefficient. In principal an ambulatory surgical block can handle between 1300 and 1800 operations per year, depending on the type of surgery, and two blocks can handle a minimum of 3000 interventions per year.
The operating room is based on the concept of an "empty room" equipped only with permanent equipment. Materials specifically required for each operation are installed in the room in advance, using carts, as supply is organized from a central storage room.
Induction is carried out in a specific room or in the operating room itself.
The requirement of this space depends on specialities and types of anesthesia used; the recovery room can be situated outside or inside the enclosure of the surgical block.
In order to isolate the ambulatory patients two distinct areas can be created within the recovery room for both serious cases and less serious cases.
With regard to the rest area where the patient recuperates after waking, three types of area can be designed in order to provide for different types of patients and pathologies: the chair, the box and the room.
- The chair are organized in a "salon" type of space and grouped without screen dividers.
- The box is a small room, 7–8 m^2, separated from others by rigid panels 2.20 m high, or by curtains.
- The room is 12 m^2 and allows isolation of patients or children.
In this rest area the surveillance desk is positioned as an "observation post" so as to better watch other patients.
The symbol of this design concept is the circle with patients on the periphery and health care providers in the center.

International ambulatory surgery data: an OECD perspective

FK Orkin

Departments of Health Evaluation Sciences and of Anesthesia, Penn State College of Medicine, Milton S. Hershey Medical Center, Hershey. Pennsylvania, USA

INTRODUCTION: Reliable, longitudinal, international data are needed to track international growth and trends in ambulatory surgery. This study evaluated ambulatory surgery data contained in *OECD Health Data* 98. (OECD Health Data 98: A Comparative Analysis of 29 Countries [CD-ROM or diskettes]. Paris, Organisation for Economic Co-operation and Development, 1998).
METHODS: Contents of the *OECD Health Data* 98 CD-ROM were reviewed for variables and data relevant to ambulatory surgery.
RESULTS: Annual ambulatory surgery data (total, component procedures, % surgery) from governments are present for ten countries for 1–9 years during 1988–96. Most countries have only a few years' data, with questionable data for at least one country.
CONCLUSIONS: Health care planning requires reliable, timely data. *OECD Health Data* 98 provides timely data, but completeness and perhaps reliability of information are limited. International organizations interested in ambulatory surgery should encourage their governments to improve their ambulatory surgery data collections.

Ambulatory surgery in free-standing units (Germany)

J Brökelmann

Bundesverband für Ambulantes Operieren e.V. (BAO), Sterntorbrücke 3, D-53111 Bonn, Germany

Almost all ambulatory surgery in Germany is performed in freestanding units, only approx. 1% is hospital-based. The BAO represents 1165 members and approximately the same number of freestanding units. These units have grown out of doctor's offices; they have to meet certain legal requirements like a separate operating room, a recovery room, specially trained personal and safety equipment. These requirements are not as extensive as for hospitals, but higher than in normal doctors offices. The size of these surgical units range from a somewhat enlarged doctors office up to a 'day clinic' or 'ambulatory surgery center' in a separate building. All units are privately owned. In the larger units, extended procedures like hysterectomy, cataract surgery, cholecystectomy, by-pass operations and alike are performed. Quality assessments confirm that the outcome quality of ambulatory surgery in general is substantially better than in inpatient surgery. Nevertheless, there are large differences in payments for ambulatory surgery in free-standing units and inpatient treatment in hospitals because in Germany we have a strict partition in planning and budgeting between hospitals and doctors offices. The costs for the same surgical procedure in freestanding units are less than half the costs in hospitals. The development in Germany has shown that most surgical procedures can well be performed in specially-equipped, privately owned surgical units, which are marked by a high quality, a very good patient acceptance, and a low price.

See and do clinic: a safe and cost effective method

K Enver, KS Wynne

South Tyneside Hospital, South Shields, Tyne and Wear, NE 34 OPL, UK

INTRODUCTION: A retrospective study is being presented in which patients were operated for minor procedures under local anesthesia on the same day of attending outpatient clinic.
METHOD: Over two years, 104 patients were seen in an outpatient clinic who required operations for minor problems. These patients underwent operations within the last hour of the clinic and were given adequate analgesia prescriptions.
RESULTS: Out of 70 patients who were sent a questionnaire, 65 (92.8%) replied. All patients responded positively to all questions, except one who was not very comfortable during local anesthesia.
CONCLUSION: We feel that performing minor procedures under local anesthesia in the outpatient clinic will reduce the workload on the day case units as well as being cost effective and convenient to the patient.

Cutting costs in healthcare: has the day surgery scalpel helped?

C Fitzpatrick

Conducted while a student at: Department of Economics, Trinity College, Dublin 2, Ireland

INTRODUCTION: The change in management of specified procedures from in-patient to day case, in Ireland from 1980 to 1996, was assessed estimating economies achieved.
METHOD: Using Department of Health data from the hospital in-patient enquiry (HIPE) scheme, the rate and proportion of transition to day surgery, was calculated. Geographical disparity in day case performance through regional areas was noted. Savings were identified by costing nurse labour time, due to reduced hospital stay.
RESULTS: All procedures surveyed exhibited day surgery increase, corresponding decrease in in-patient management, despite increased overall procedure performance. Important geographical differences in day surgery were noted. Nurse labour time saved was calculated at in excess of two million pounds.
CONCLUSION: In Ireland, a marked transition to day surgery has occurred for the procedures studied. Geographical differences warrant examination. Savings in labour costs has facilitated the maintenance of aggregate procedures performed.

Day surgery: a survey of patient satisfaction and quality of care involving 3,429 patients and 59 Belgian hospitals

C De Lathouwer, L Van Outryve

Volkskliniek, Tichelnei 1, Gent 9000, Belgium

Day surgery is growing in popularity in Belgium as well as in a number of other countries. This approach is reputed to offer many advantages as compared to traditional hospitalization, including: greater patient satisfaction, improved working conditions for health care personnel, greater overall quality care, and more efficient use of social security financial resources. Various structures and organizational models exist. This survey was undertaken to ascertain the level of patient satisfaction vis-a-vis this approach, to evaluate certain objective criteria of quality, and to determine if the structure or organization of these centres has a significant influence on them. Overall, the level of patient satisfaction is striking. One observes a great similarity in responses regardless of the surgical specialty, method of anesthesia, or the structure or organizational model of the centre.

Cost savings by the one day hospital

AMF Vleugels

University Hospitals of the Catholic University of Leuven, Herestraat 49, Leuven B-3000, Belgium

INTRODUCTION: The aim of this study is to estimate, from a societal point of view, the cost saving effect of a shift towards the one day hospital in the Belgian health care context. In Belgium the development of the one day hospital has not been supported by strong financial incentives. The traditional in-patient hospital and the out-patient hospital are financed by different mechanisms. Connections between both systems are limited.
METHODS: The results are based on an analysis of the existing national data bases on charges for hospital and one day hospital use. Only the costs of stay are taken into account.
RESULTS: For 1995 the cost savings on the national hospital budget by the actual one day hospital activities can be estimated to amount to ± 2 billion Belgian francs, or almost 2% of the total budget for in-patient stay. In the maximal substitution case the cost saving could amount to ± 6 billion Belgian francs.
CONCLUSION: Expenditures for in-hospital stay show a yearly growth of 6–7%. In this perspective the savings induced so far by one day hospital activities are limited. In this analysis savings resulting from potential differences in the use of medical services and pharmaceuticals are not taken into account. In the Belgian system their effect can go in both directions ($+$ or $-$). They will probably not influence the final results. We conclude that substantial savings can only result from a financing system that integrates both types of hospital activity.

Six week follow-up after ambulatory surgery

DK Wasowicz, RF Schmitz, PMNYH Go

Department of Surgery, Sint Antonius Hospital Nieuwegein, The Netherlands

OBJECTIVE: To evaluate day surgery practice from doctor's and patient's view.
DESIGN: Descriptive.
SETTING: St. Antonius Hospital, Nieuwegein, the Netherlands.
METHOD: During a six month period all patients treated by general surgeons in ambulatory surgery (breast surgery 109, hernia repair 82, varicose veins 60, lymph node or mass 42, pert-anal surgery 33, ganglion 30, removal of bone implants 26, laparoscopic cholecystectomy 9, miscellaneous 58) were evaluated by questionnaires (which were completed before surgery and just before going home) and by interviews (one day and six weeks after surgery). Questions were asked about pain, nausea, complications, recovery and their satisfaction. Re-operations, unplanned overnight stays and re-admissions were registered. Also all charts were checked on complications six weeks after surgery.
RESULTS: After 449 planned day cases, 423 patients (94%) returned home the same day (reasons for overnight stay: pain and/or nausea 12, an operation late in the afternoon 4, haemorrhage 4, more extensive surgery than expected 3, collapse 1, hypoglycaemia 1, anuria 1). Four patients were re-operated on because of haemorrhage and one because of a wound infection. Most patients were discharged without or with mild to average pain (92%) and without nausea (97%). In the group of patients who went home the same day, 29 complications (7%) occurred (wound infection 18, haemorrhage 5, haematoma which needed medical care 3, pneumonia 1, UTI 1, cardiac arrhythmia 1). After a mean of 7 days (range 0–72), normal activities at home could be resumed. An average of 9 working days (range 0–44) was missed. On a scale of 1 (extremely bad) to 10 (excellent) the overall treatment was judged with a mean of 8 (range 1–10). Most patients would choose day care again (86%).
CONCLUSION: Day surgery is a safe way of treating people. Most patients are content to have been treated in day care.

Development of day-surgery in the Netherlands based on seven interventions

DK Wasowicz, RF Schmitz, HJ Borghans, RRM de Groot, PMNYH Go

Department of Surgery, Sint Antonius Hospital Nieuwegein. The Netherlands

OBJECTIVE: To assess the development of day-surgery in the Netherlands.
SETTING: St. Antonius Hospital, Nieuwegein and SIG Health Care Information, Utrecht.
DESIGN: Descriptive.
METHODS: Analysis of numbers of interventions derived from Dutch data bases of the National Hospital institution (NZi) in the period 1984–1995 and from SIG Health Care Information. with regard to seven specified interventions in the years 1991 to 1995, i.e. breast tumour excision, inguinal hernia repair, varicose vein operation, laparoscopic sterilisation, knee arthroscopy, cataract operation and tonsillectomy.
RESULTS: In the Netherlands the percentage of interventions performed in day-surgery increased in the period 1984–1995 from 9.9 to 29.1%, which equals a growth of approximately 480,000. There is a wide variation in the percentage of day-surgery cases per procedure among hospitals. From the seven examined interventions a possible shift from in-hospital procedures to day-surgery can be calculated resulting in an increase of approximately 40% day-surgery cases. This is the equivalent of 45,000 cases annually.
CONCLUSION: Based on the increase of day surgery in the period 1984 until 1995 and the calculated possible substitution from in-hospital to day surgery admissions, the number of procedures in day surgery will increase in the forthcoming years in The Netherlands.

The current status and the future of ambulatory surgery in Poland

A Staniszewski, J Kołodziej, L Spytkowski, A Steciwko

Wroclaw University of Medicine; Department of Surgery, Lower Silesian Centre for Tuberculosis and Pulmonary Diseases; Wroclaw, Poland

INTRODUCTION: In the early 1990s, the health care (hc.) system in Poland, as a predominantly ax-funded system, was skill relying on governmental funding mechanism, and was characterized by a specialist oriented medicine with poor organization (e.g. an existence of traditional structures integrating hospitals with other forms of h.c., including primary hc.), an uneven distribution of h.c. providers and the growth of h.c. expenditures, while financial limitations and impracticable regulations were making efficient manage-

ment impossible. In accordance with the general political and economic changes aimed at the creation of a democratic country with its market economy, a rational functioning of the h.c. system became a top priority. The 1991 Health Care Institutions Act, followed by the National Health Insurance Act (NHIA, 1997), which came into effect on Jan. 1, 1999, made a sound basis for health care reform in Poland.
CURRENT STATUS: The NHIA has introduced a statutory health insurance where participants contribute to the non-profit and compulsory sickness funds that reimburse physicians and hospitals through negotiated contracts. Therefore this system enables us to develop a day surgery service on a larger scale. Until now ambulatory surgery in Poland was performed mainly in hospital based units (usually contained day beds in standard surgical wards) and private medical practitioners' offices (including those even run by anaesthetists). There are also a few university departments of paediatric surgery with day case wards as well as private free-standing day surgery centres (clinics). Ambulatory surgery services to some extent are also provided in hospitals' outpatient clinics and admission rooms. Unfortunately, at present no statistical data on ambulatory surgery in Poland are available.
FUTURE DIRECTIONS: There are governmental plans for developing various alternatives to traditional inpatient care in Poland, such as day hospitals and day wards, short stay units, home care, nursing homes, hospices, etc. Restructuring of hospitals will ensure maximum efficiency and improve the quality of patient care. Since 50–60% of elective surgery can be safely performed on a day case basis, some incentives for the expansion of these services are desired.

A two-year experience of ambulatory surgery in a polish public hospital

J Kołodziej, A Staniszewski, L Spytkowski, G Kacprzak, A Rzechonek, AM Majewsk Pawlak, A Steciwko

Department of Surgery, *Lower Silesian Centre for Tuberculosis and Pulmonary Diseases; Wroclaw University of Medicine*, *Wroclaw*, *Poland*
INTRODUCTION: The authors report on their experience with ambulatory surgery in a public teaching hospital which serves a population of 2.9 million inhabitants of the south-west of Poland as a regional referral hospital for pulmonary diseases. It has a bed capacity of 400, of which 86 are assigned to general and thoracic surgery, and also has three operating rooms. The number of hospital admissions is about 6,000 per year, including approximately 800 surgical inpatients. There is no specifically designed facility for ambulatory procedures. However, one of the hospital's operating rooms is used for ambulatory surgery.
METHODS: Data available for study consist of operative records for the period August 1996 to July 1998. The notes of 413 patients (pts) undergoing ambulatory surgery as well as 2783 who underwent ambulatory diagnostic procedures were reviewed retrospectively.
RESULTS: Over a two-year period, a total of 1908 pts underwent surgery at our hospital. Of these pts, 413 (21.6%) were treated as day cases under local anaesthesia. The types of operation carried out exclusively on a day basis were: nail avulsion or wedge resection for ingrowing toenails (56 cases), lymph node biopsy (43), removal of foreign body (27), excision of ganglion (17), joint puncture (14), incision of abscess (12), anal fissurectomy (12), wound debridement (7), and removal of anal warts (6). The most frequent types of ambulatory surgery also included: excision of local skin and subcutaneous lesions (124 cases, i.e. 96.1% of all these operations performed at our hospital), proctological procedures (for a total of 73 cases, including: haemorrhoids 46, anal abscesses 17, pilonidal cysts 7, and anal fistulae 3; i.e. 66.4% of all perianal and anorectal conditions treated in our department), and breast biopsy or excision of benign lesions (14 cases, 73.7%). Among 2783 ambulatory diagnostic procedures were: fibreoptic bronchoscopy (1613), and rectoromanoscopy (927). There were no serious post-operative complications necessitating hospital admission.
CONCLUSION: A large number of surgical procedures can be safely and effectively performed on a day-case basis. In our case it accounted for 21.6% of all surgery. We should, however, expand our activities and re-organise our services to create a dedicated day surgery unit within the hospital.

Clinical indicators for day surgery

B Collopy, L Rodgers, J Williams, N Jenenr, L Roberts, J Warden

Australian Council of Healthcare Standards, *Care Evaluation Program*, *Melbourne*, *Australia and the Australian Day Surgery Council*, *Sydney*, *Australia*

INTRODUCTION: As the number, variety and complexity of day procedures increase, it is clearly important to ensure maintenance (and improvement) in quality of the care given.
METHOD: To achieve this, the Australian Day Surgery Council, assisted by the Australian Council on Health Care Standard (ACHS) Care Evaluation Program (CEP) developed five generic performance indicators reflecting access, patient selection, safety of anaesthesia and surgery and discharge planning. They were indifferent then introduced into an existing hospital accreditation program. In 1997, 240 organizations involved in the ACHS Evaluation and Quality Improvement Program (EQulP) monitored the indicators and forwarded data to the ACHS CEP which reflected the management of over 380,000 patients in day procedure facilities.
RESULTS: Aggregate rates for the five indicators in 1997 were:

Failure to arrive	1.5%
Cancellation of Procedure after arrival	0.9%
Unplanned Return to Operating Room	0.08%
Unplanned Overnight Admission	2.2%
Unplanned Delayed Discharge	0.56%

These data will be compared with the 1998 data as it comes to hand.
CONCLUSION: The unplanned overnight admission rate was significantly lower in freestanding than in attached facilities and significantly lower rates were noted for private compared with public facilities for all of the indicators. Numerous actions were reported, as a result of indicators monitoring, including patient education, the production of information leaflets, establishment of pre-anaesthetic clinics, alteration of surgical techniques and drug trials. Amongst the policy changes were a review of the type of procedures which were day only, alteration to the order of the list and various changes to the anaesthetic, antiemetic and analgesic drugs used. Overall 64% organisations addressing the indicators took some action as a result.

Undergraduate & OPST graduate day surgery education: the Australian experience

SM Redfern

Monash University, *School of Nursing*, *Australia*

In the advent of rapid changes in technology and pharmacology, where hospitals have to consider economic rationalisation, many surgical procedures for patients are being performed on a day surgery basis. Are the universities and colleges keeping up-to-date with the educational demands of the professional nurse by providing perioperative day surgery-specific courses? Are they introducing students to day surgery concepts in the undergraduate programmes and utilising day surgery clinical venues for student experiences to enhance their career choices following graduation?
This paper will address whether:
* there is a need for day surgery to be covered in U/G &P/G courses
* day surgery nurses meet the needs of their work place

* qualified day surgery nurses make a difference in the work place
This paper will also:
* question the need for formal perioperative/day surgery qualifications
* highlight the advantages of gaining a qualification not only for the nurses, but to the employer and the patient as well
* identify the restrictions to gaining further qualifications in relation to:
(a) cost
(b) time
(c) distance
Finally, the areas where qualifications are being offered in Australia will be given in detail, including a handout of details of courses, contacts, addresses, phone numbers, costs, on campus or distance education facilities.

How many operating rooms should we have at our day surgery unit?

M Casal, P Lemos

Anaesthetics Department of Hospital Geral Santo António, Porto, Portugal

INTRODUCTION: The development of Ambulatory Surgery programmes should be based on a wide investigation that includes social and cultural, finance and clinical aspects. 'Bearing in mind the characteristics of the population who attend our Institution and based on our past experience with day case surgery, we created the ideal Day Surgery Unit (DSU) for the expected surgical volume of our Hospital in the near future.
METHODS: In order to know the size of our ideal DSU we settled the following issues: (1) our DSU should be opened between 8:00 and 20:00 hours every weekday; (2) the last general anaesthesia should be finished at 16:30 hours; (3) a 20% of wasted time. It means that we must have a 96.000 min. per operating room per year of major surgery. We selected the 12 most performed day case surgical procedures and based on the surgeries done in 1997, the surgical waiting list (planning the surgeries of all outpatients in 2 years) and the new cases/year, we applied the mean surgical time and the ideal substitution index for each surgical procedure. We proposed a 30–40% of the total effective operating room time to our 12 basket surgical procedures in order to allow the inclusion of other types of surgeries and the development of new surgical programmes. Finally we applied our target percentage to the total effective operating room time and we obtained the following results: (a) No DSU if total operating room time (TORT) < 28.800 min.; (b) 1 operating room if TORT < 38.400 min.; (c) 2 operating rooms if TORT < 76.800 min.; (d) 3 operating rooms TORT < 115.200 min.; (e) 4 operating rooms if TORT $\geq$ 115.200 min.
RESULTS: After applying all the criteria previously mentioned to our data we reached a TORT of 86.680 min., which means a 3 theatre DSU and 30,1% of the total effective operating room time.
CONCLUSION: Although one can question the criteria used in this study we think that this kind of investigation should be performed when planning a new DSU.

Foot surgery: why 45% of our cases are not treated in day unit

S Beeharry, D Cantore, P Michel

GHPCA, 5 Av Joffre, Colmar 68000, France

From October 1996 to September 1998, 229 patients had surgery of the foot in our clinic, 55% of these were treated in the day unit. In this study we have analysed the different factors that have influenced the choice of the stay. These are: age, social conditions, associated pathology, capacity to control pain and post operative treatment, type of surgery and anesthesia. The three types of surgery were: metatarsal osteotomy, arthrolysis, cyst and tumor ablation. Anaesthesia were of four types: local, ankle bloc, epidural and general. There was no relation between the type of anaesthesia or surgery and the stay. Full hospitalisation was chosen mainly because of social condition or of the inability of patient to cope with post operative care. We came to the conclusion that it will be necessary in the future to educate and familiarise patients or to have efficient outpatient services to handle non medical problems.

Extended overnight recovery in ear, nose and throat surgical practice

JC Warden, G Lucchese

Department of Anaesthesia, Royal North Shore Hospital, Pacific Highway, St. Leonards, Sydney, NSW 2065, Australia

INTRODUCTION: Same day surgery for ear, nose and throat surgery has been extensively utilised in Australia for more than a decade for less extensive procedures such as tympanic tube insertion, adenoidectomy, nasal polypectomy and some sinus surgery. A conservative approach to tonsillectomy, nasal and sinus surgery requiring overnight packing, etc. has resulted in a low rate of utilisation of day surgery for these procedures.
METHODS: An assessment of likely utilisation of a proposed overnight extended stay facility attached to an existing free-standing day surgery centre on a teaching hospital campus was carried out.
RESULTS: Post-operative management for procedures formerly requiring admission has been reviewed and needs for postoperative care reassessed.
CONCLUSIONS: A significant reduction in conventional inpatient admissions can be achieved using an extended overnight recovery facility.

Ambulatory surgery in Spain. Results of an inquiry in 708 hospitals

MP Rivas Lacarte, D Estrada, J Marín, R Gutierrez, A Perez, M Giner, B Moro, J Cubero, J Porrero, J Cobian, J Fatás, C Zaragoza, J Seco

Hospital de Viladecans, ASECMA (Spanish Ambulatory Surgery Association) and FISS (Ministerial Health Resources), Barcelona, Spain

The International Association for Ambulatory Surgery suggest in 1996 the necessity for an international inquiry about real activity in their member countries. In this line we made an investigation in Spain from January 1997 to December 1998. Spain had 17 Autonomous Communities with different health and information system, that justify an individual inquiry for all Spanish hospitals because is not possible to know global activity (inquiry is a translation of international suggest that). The Spanish Health Ministry listed 1500 surgical centers in 1996, but only 708 can perform ambulatory surgery. Surgical coordinators in all of these hospitals and Health Autonomous Ministries received the inquiry. The inquiry had questions about architecture facilities, personal and general characteristics and exhaustive activity information. The inquiry was supported by Health Ministry Resources. We present the results according: (a) autonomous communities, (b) bed number, (c) private or public hospital, and (d) kind of ambulatory unit.

Direct access day case oral and maxillofacial surgery

A Joshi, L Doyle, JP Rood

Oral Surgery Day Case Unit, Manchester Royal Infirmary, Manchester, England

At Manchester Royal Infirmary, we have a fast track direct access service for Oral and Maxillofacial patients.
RATIONALES: The study was commissioned as we believe direct referrals would mean: fewer visits for patients and less waiting times; involve primary sector in decision making; reduce waiting list and clinical time and ? value for money.

AIMS: (1) To compare the effectiveness of Direct Access referrals with Standard letter referrals. (2) To assess the impact of this service on the primary care provider, the secondary sector and from the patients perspective.
OBJECTIVE: To routinely offer Direct Access to the Primary Care Sector for Oral and Maxillofacial Services in the future.
METHOD: 12 General Dental Practitioners were recruited and protocols set for Direct Access/Standard Referrals. Each Practitioner was given 100 randomly allocated envelopes which contain 50 direct referrals and 50 standard referrals. Practices were provided with the relevant literature, BP monitor, Hemocue, fax machine and weighing scales. Our Research Coordinator communicates with the Practitioners and coordinates patient admissions. We have received 950 referrals. A designated team of Surgeons and Anaesthetist treat the patients on a dedicated list. Evaluation is currently being undertaken via four questionnaires completed by (1) Referring Primary Care Practitioner, (2) Anaesthetist, (3) Surgeon, (4) Patient.
OUTCOMES: An assessment of the questionnaires has revealed that there is obvious benefit to the Practitioner, Secondary Care Provider and Patients who are referred by the Direct Referral method in line with above rationales. Patients referred via the standard letter route are subject to long waiting times for clinic appointments, funding restrictions and cancellations for various reasons.
CONCLUSION: This study highlights the obvious benefits of Direct Access for Oral amd Maxillofacial Surgery.

Concept analysis of "home readiness" in relation to adult patients as seen by nurses working in the UK

M Parsons

Homerton College School of Health Studies, Education Centre, Addenbrookes Hospital, Hills Road, Cambridge CB2 2QQ, UK

The magnitude and complexity of surgery carried out on a day basis is widening with older and more debilitated patients being selected as suitable for day surgery. Consequently deciding when a patient is ready to go home is an important issue for patient care. Much of the literature in relation to the concept of ''home readiness'' originates from the United States of America predominately from medical staff and, focuses on pre-determined criteria. There is little published within the United Kingdom (UK) where it is the nursing staff who frequently decide when a patient is ready to go home. This paper explores the concept of ''home readiness'' from a contemporary viewpoint. Rodgers (1989) framework for concept analysis lends itself to this approach. She sees concepts as dynamic and tied to the context in which they are placed. Her framework was used to explore this concept in relation to adult patients, specifically looking at the literature and the viewpoints of nurses working in a dedicated day surgery unit within the UK in order to generate an operational definition.

Permanent venous system access: patient satisfaction index of surgery

B Roche, J Deléaval, Ch Robin, M-C Marti

Outpatient Clinic for Surgery, HUG, 1211 Geneva 14, Switzerland

To implant a permanent venous system access is a common ambulatory procedure. We analysed the satisfaction of 127 consecutive patients. All the procedures were realised in local anaesthesia. Pain was well controlled in 97.4% of the cases by paracetamol only. Postoperative global index satisfaction is high, more than 97%.
CONCLUSION: This procedure is a good indication for ambulatory surgery. Patient satisfaction index is high.

Ambulatory practice: an ambitious challenge in a French district hospital

A Talon, A Zirn, C San Martin, J Tognarelli, M Karasoglu, V Bleuze, C Daudre, JL Le Doare

Centre Hospitaliere De La Haute Vallee de L'Oise, Noyon, France

Day surgery: organizational model and experience

B Coffano, R Monzani, O Montino

Istituto Clinico Humanitas, via Manzoni 56-20089 Rozzano, Milano, Italia

The Instiuto Clinico Humanitas (ICH) is a private, technologically advanced multi-specialty hospital registered for treating patients covered by the Italian National Health Care Service. ICH opened in March, 1996. On June, 1997 we opened the Surgical Day Hospital area, now functioning up to 80% of planned capacity. The area includes: patient registration, patient preparation (block room), a surgical block with four surgery rooms and a 20-bed recovery area. The goals of our Surgical Day Hospital are:
DAY SURGERY (DS): Concentration and organization of procedures performed by surgeons of different specialities. Providing pre-, intra-, and post operative support with particular care and attention to the patient.
DS PATIENT SELECTION: Accurate patient selection for DS procedures according to guidelines developed in cooperation by surgeons and anesthesiologists.
DS PERSONNEL SELECTION AND TRAINING: Selection and training of medical and nurse personnel dedicated to DS, with particular attention to patient care and humanization.
DS ECONOMICAL SURVEY: Daily gathering of information pertaining the procedures provided (drugs, materials, etc.), divided according to the specific surgical interventions. The goal is optimization of resources and improvement of efficiency as well as of efficacy.
DS ENVIRONMENT AND SERVICE: Providing the best possible comfort, reducing as much as possible nuisances for the patient.
RESULTS: Since June 16, 1997 nº 5094 surgical interventions have been performed in the Surgical Day Hospital (44% of all non cardiac surgery in ICH), with 78% in DS (nº 3979) and nº 1115 in Ordinary Admission (OA). These surgical interventions can be divided in the different specialities as follows: Ophthalmology 77% (DS nº 1427; OA nº 409), Orthopedics 53% (DS nº 455; OA nº 403), Gynecology 86% (DS nº 702; OA nº 112), Urology 87% (DS nº 290; OA nº 42), General Surgery 58% (DS nº 208; OAnº 146), Vascular Surgery 12% (DS nº 13; OA nº 93), ORL 13% (DS nº 37; OA nº 234), Plastic Surgery 77% (DS nº 195; OA nº 58), Neurological Surgery 94% (DS nº 63; OA nº 4). The use of DS was not hampered by the extreme age of some patients. Complications requiring transfer to OA were as follows: hemorrhage 0.07% (nº 4), assistance-related problems 0.05% (nº 3), hematoma within 24 hr in one patient. The ICH Surgical Day Hospital is a unit constantly developing and perfectioning its skills and functions. Presently adopted instruments for quality improvement are guidelines and protocols and developments of its peculiar Organization Model.

Patient satisfaction in day surgery: improving the utility of questionnaires

A Jiménez, F Lamata, E Nunez, MD Arribas, C Navarro, M Martínez

U.C.M.A. Hospital Universitario Lozano Blesa, Victoria nº 47 casa 9, Zaragoza 50011, Spain

INTRODUCTION: Patient satisfaction is becoming progressively more important to hospitals in order to measure the development of new modalities of health care. A majority of the patients are satisfied with ambulatory surgery but a better use of patient information to identify areas for service improvement is possible.
METHODS: One month after surgery, anonymous questionnaires with 22 scaled close-ended items and six demographic variables were sent by mail to 1813 patients operated in a day surgery unit in the last three years. The questionnaire was designed by experts before the

implementation of this surgery in the hospital. In order to make better use of the information, answers were grouped in five modules and transformed into a score system with a maximum of 20 points per module and 100 points per questionnaire. Data were analysed with Stat View 4.1 program. Statistical comparisons were made with ANOVA test and a level of signification of 0.05.
RESULTS: A total of 1014 patients (56 per cent) responded (65 per cent men, median age 48). Ninety three per cent of patients were satisfied with the day surgery unit and 85 per cent of them would choose the unit again if necessary. The average total score was 84 with only ten patients under 50. The analysis of each module showed deficiencies in waiting times, postoperative pain relief and comfort at the unit. One misunderstood question about 'the quality of phone contact with the unit' was detected because it wasn't answered by 65 per cent of patients. Demographic variables allowed comparisons among patients finding that the highest scores were related to retired, widowed and over 65-year-old patients, and the lowest scores to unemployed, single and under 40-year-old patients ($p = 0.007$, $p = 0.005$, $p = 0.03$). There were no differences related to sex, rural/urban habitat nor level of education of patients ($p = 0.2$, $p = 0.9$, $p = 0.2$).
CONCLUSION: (1) Questionnaire surveys in ambulatory surgery allows us to, not only know patient satisfaction, but to identify the reasons for patient dissatisfaction. (2) The transformation of qualitative data in a score system allows the monitoring of improvements and the comparisons of groups of patients by applying more powerful statistical tests.

Day case surgery in a district general hospital setting in the north of Scotland

J Hrisha, G Cooper, I Gunn

Dr Gray's Hospital, Elgin, UK

INTRODUCTION: The provision of a dedicated 15 bed day case unit in Dr Gray's Hospital, Elgin, as part of the recent expansion of facilities in the Moray area, has seen a 44% increase in the number of patients attending on an ambulatory basis in the first 6 months since opening. The aim of our audit was to evaluate patient satisfaction with the new facilities and monitor post discharge problems.
MATERIALS AND METHODS: All 289 patients admitted to the day case unit in Dr Gray's Hospital during a 30 day period were invited to participate in out study. A 2-part questionnaire was developed by a multidisciplinary team involving medical. nursing and management personnel. Part I contained questions on pre-admission information, travel to hospital and experience in hospital and was completed immediately prior to discharge following the procedure. Part 2 contained questions on leaving hospital, post-operative pain control, post-operative complications and return to work/nominal activities. Part 2 was circulated by post 3 weeks following discharge.
RESULTS: (221/289) 76% of patients completed part I. (169/289) resumed both parts 3 weeks later (58.5% response rate). 94% of patients found day care a suitable mean of treatment in our study but only 83% of them would recommend similar care to a friend. The reason for this discrepancy is unclear.
CONCLUSION: Despite a significant increase in the number of patients treated as day cases in our hospital, patient satisfaction is very high. Day Case Surgery is a cost effective, acceptable method of health provision in a district general hospital setting and its development is to be encouraged.

Accreditation: Does it really validate quality in day surgery?

BK Goodall

Member Australian Day Surgery Nurses and Australasian Day Surgery Association, PO Box 372 Roseville, Sydney, NSW 2069, Australia

INTRODUCTION: Quality is determined through accreditation; the measurement of outcomes, and is directly linked to funding. Current models of accreditation do not validate quality either through the control of all processes that lead to the outcomes, or an effective method of assessment through the sampling of each process to determine compliance to validate performance/quality: outcomes.
METHODS: A national survey of the 151 free standing licensed day surgeries in Australia; 90 located in two states, and Gap analysis of 30 facilities; 20 accredited to the ACHS & 10 with no accreditation was completed, using 161 criteria developed from the ISO9000 Model for Quality Assurance. An IS09000 model for day surgery was developed and implemented in 21 day surgeries.
RESULTS: 80% of Day Surgeries would transfer to an alternative program. There was only 5% variation in compliance between the accredited and non accredited group.
CONCLUSION: No relationship exists between current accreditation and the 'quality' of clinical practice. ISO9000 goes beyond the current standards of accreditation to provide quality assurance and continuous quality improvement.

Ambulatory surgery: activity versus unit

P Hernández Granados, MA Lasala Gausa, M Alvarez Antolínez, P Vorwald Kubom, JM Fernández Cebrián, J Martín Cavanna, P Jiménez Almonacid, M Pardo de Lama, F Pereira Pérez, A Ouintáns Rodríguez

Fundación Hospital Alcorcón, Avda. de Budapest nº l. 28922 Alcorcón, Spain

INTRODUCTION: Ambulatory surgery has developed in Spain in a few years. Most of the centers that perform ambulatory surgery are independent Units, even in the economic aspect. In our center, the ambulatory surgery has been developed like an activity integrated in a Surgical Service. We present in this paper our initial experience.
METHODS: Our hospital is a new one, inaugurated in January 1998. Before the beginning of surgical activity in March 1998, we designed a protocol for ambulatory surgery that included inclusion and exclusion criteria for the patients, list of surgical procedures, types of anesthetic and surgical techniques, asistencial pathways and post-operatory follow-up. We have registered in a prospective way all our surgical activity from March 6th 1998 to October 30th 1998.
RESULTS: We have performed 1901 surgical elective procedures in the study period. Of them, 992 (52.18%) were in ambulatory basis. Distribution by areas are shown in Table 1. In the Surgery Area, the distribution of surgical procedures are shown in Table 2.

Table 1

Area	Ambulatory Surgery	Nº procedures (total)	%
Surgery	659	1224	53.83
Orthopaedy	302	500	60
Gynecology	31	177	17.51

Table 2

Speciality	Ambulatory Surgery	Nº procedures (total)	%
General Surgery	223	545	40.9
Ophtalmology	308	374	82
ORL	102	170	60
Urology	26	135	19.25

In General Surgery, the most frequent pathology were the hernias of the abdominal wall. Only 11 patients needed admission, 8 due to the anesthetic complications (headache, urinary retention), 2 due to patients desire and 1, bleeding of the surgical wound.
CONCLUSIONS: We think that the organization of ambulatory surgery like an activity inside of a surgical service, has advantages, because all the surgeons are working in all the asistencial phases, and this allows better use of resources.

Design and cost advantages of day surgery centres in Australia

L Roberts

Chairman, Australian Day Surgery Council, Suite 11, 38 East Esplanade, Manly, Australia

Day (Ambulatory) surgery practice in Australia has steadily increased, especially over the past five years, and there are now 162 free standing day surgery centres (May 1998). Most of these are multidisciplinary with a small number of speciality day surgery centres, together with endoscopy and some day medical centres. Many private hospitals have day surgery units, however public hospitals have been slower to develop day surgery services. The design of several free standing day surgery centres, both city and rural based, will be presented and discussed. Finally, the cost advantages of day surgery will be discussed, including capital costs of construction compared to acute bed hospitals and cost savings for day surgery patients compared to overnight(s) acute bed hospital stay. The potential for very great financial savings, if day surgery expands to its maximum potential, will be demonstrated.

Wound infection in a day-surgery unit: a prospective study of 642 operations

J Raeder, E Kimsaas, B Groegaard

Department of Anaesthesia, Ullevaal University Hospital, N-0407 Oslo, Norway

INTRODUCTION: In a day-surgery unit the patients are less exposed to hospital bacterial strains. On the other side, ambulatory patients are less exposed to post-operative professional care. The objective of this study was to prospectivly determine the surgical wound infection rate associated with elective outpatient operations in an adult, non-gynaecological day-surgery unit.
MATERIALS AND METHODS: During a 6-month period all patients in the unit were considered for the study. Excluded were patients with an ongoing infection, patients using antibiotics profylactically and patients suffering from hepatitis or HIV. All wound incisions were examined 7 and 30 days postoperativly by one of two observers. The diagnosis of infection was based on one or more of the following criterias: (1) discharge of pus from the wound, (2) micro-organisms present in swabs taken from any discharge from the wound, (3) surgical revision and drainage of the wound, (4) antibiotic treatment due to clinically suspected infection. Deep infection was defined as infection beneath the deep fascia.
RESULTS: A total of 692 patients were operated during the period. Forty-two patients had anal surgery and were excluded. A total of 8 patients did not attend the control at the 30th post-operative day. This left 642 patients (98.8%) for evaluation, 316 females and 334 males with average age 46 years (range 6 to 85) and 49 years (range 4 to 81), respectively. Superficial wound infection developed in 22 (10 female, 12 male) of the 642 patients (3.5%). Two patients were hospitalised for treatment of the infection while 20 received antibiotic treatment as outpatients. No deep infection was encountered.
DISCUSSION: Clean wound infection rate is rated between 1–5% in the best studies. The infection rate in our study is well within the limits, but may still seem high compared to some studies on ambulatory surgery. Due to almost 100% follow up of our patients for 30 post-operative days, and using strict objective criteria for infection, underestimation of the infection rate is minimized, which seems to be a problem with most previous studies.

Planning and commissioning a new day surgery unit

DR Powell, K Richardson

Northern General Hospital NHS Trust, Herries Road, Sheffield S5 7AU, UK

INTRODUCTION: Two factors combined to offer the opportunity to review the quantity and organisation of day surgery undertaken. (a) The express wish of purchasers supported by reports of the Audit Commission (1990) and the Day Surgery Task Force (1993). (b) The availability of capital funding, particularly in the light of local service re-configuration, to provide appropriate facilities to support increased day surgery activity.
METHODS (TERMS OF REFERENCE): (a) Structured interviews with clinicians. (b) Analysis of individual clinical practice, converting number of cases into operating sessions. (c) Capital options. (d) Establishment of operational policies, particularly for admissions and discharge. (e) The Commissioning process: equipment, implementation of operational policies, staff recruitment (emphasis on multi-skilling), and publicity.
RESULTS: Eighteen months after commissioning (Oct 1998) the Day Surgery Unit is operating at full capacity, cost effective and provides high quality care for patients.
CONCLUSION: Data will be provided to support the effective implementation of the described methodology.

Ambulatory surgery, four years experience

C Brandi, H Martinez, E Beveraggi, E Sivori

Ambulatory Surgery Unit, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina

INTRODUCTION: The purpose of this paper was to describe the experience of the Ambulatory Surgery (ACU) of the Hospital Italiano de Buenos Aires (HIBA) in the first four years experience.
PATIENTS AND METHODS: In the period between 1994 thru 1997, 11.577 surgical procedures were performed in the ACU (hospital dependent unit), during the same time, 49.495 was the total of surgical procedures performed at HIBA. The ambulatory method represents 23% of the total of all surgeries performed. Averaging 11.8 surgeries a day and 240 surgeries a month. 45.7% of ambulatory surgery were done under local anesthesia, 54.3% with general anesthesia, and 29.2% were performed by general surgery. 19.4% by ophtalmology, 16.3% by gynecology, 8.7% by orthopaedic surgery, 8.o% by pediatric surgery, and the rest by other surgical services such: plastic surgery, ORL, urology, neurosurgery and vascular surgery. We remark here the advantages and disadvantages, complications and benefits when performing this surgical method.

Evaluation of patient flow in a surgical outpatients departement with the help of bar man

F Clément, B Roche, M-C Marti

Policlinique de Chirurgie, Hôpital cantonal, 24 rue Micheli-du-Crest, CH-1205, Geneva, Switzerland

The surgical outpatient clinic is an ambulatory unit. Patients are mainly given an appointment after a consultation at the emergency center. The outpatient department receives an average of 51 000 patients per anum (1997) of which 10 000 are emergencies and the rest are on appointment. With the help of the BAR MAN (data collecting system composed of a portable data entry device with its own clock an integrated bar-code reading head; an interface unit; a communication software for DOS, WINDOWS or MACINTOSH; a BAR MAN programming software). With the BAR MAN and a bar-code being directly (immediately) associated to the time, the

consultation was thus separated (divided) in chronological portions. The BAR MAN were then arranged on an interface unit which enables the collection of the gathered data during the day and transferring them on a Personal Computer. The data is combined into a statistical programme enabling their processing and presentation in various mode (charts, graphics, etc.). The analysis of these data enables us to reorganize our outpatient clinic and the reception desk to improve efficiency and to reduce waiting time. This system has also being used to collect data on patients' circulation in the operative unit (reception, anesthesia, operative time and recovery room).

Day surgery in a rural clinic in El Salvador

M Herrmann, C Baatz

Clínica "Ana Manganaro", Guarjíla, Chalatenango, El Salvador, CA

INTRODUCTION: Surgical facilities are often limited in developing countries due to lack of territorial coverage within the national health systems and lack of financial resources both of large parts of population and of health institutions. This is also the case in the northeastern part of El Salvador. Health promoters are in charge of detection, initial treatment and referral of patients. The promoters diagnosed need for additional surgical facilities that we tried to provide within a rural community clinic, on an outpatient basis.
METHODS: In 1997, we started the first "day surgery" evaluation program, during two weeks: a total of 28 patients were scheduled for surgery under local or ketamin anaesthesia on a day surgery basis. During their home visits, health promoters referred patients; the medical doctor and the volunteer surgeon confirmed indications. The aim of this program was to confirm the feasibility of day surgery under rural conditions in a developing country, applying confirmed technical standards despite poor material conditions.
RESULTS: During this first period, we successfully operated on 23 patients. All patients left the clinic the same day, or at least within twenty-four hours, with oral analgesics. Follow up and removal of cutaneous stitches was done by health promoters at the homes of patients. Further on, all patients had a clinical control by the medical doctor at the clinic. Most patients had no more complaints at this stage, no hernia recurrence occurred during the first year after surgery.
CONCLUSIONS: Day surgery is possible and beneficial, both for patients and health systems, even under poor material conditions. Acceptance is good. Essential keys to success are application of standard anesthetic and surgical techniques on one hand and a functioning coordination with local health promoters on the other hand.

Day-surgery in geriatric surgery

S Guerrini, N Prot, L Petruzzelli, A Pluderi

Self-Standing Day-Surgery Unit, Igea Sedes Sapientiae Clinic, Torino, Italy

Abstract not received.

Organization model of a private day-surgery unit

S Guerrini, N Prot, L Petruzzelli

Day-Surgery Unit, Igea Sedes Sapientiae Clinic, Torino, Italy

Private medical treatment must be brought to the public one: private treatment considers means and results of primary importance, especially in the public eye, but this is not the case from a juridical standpoint. In a private facility one can have the guarantee of better para-medical assistance and less waiting time. The structure must guarantee safety regarding surgical procedures and intra and postoperative anesthesiological monitoring: it is useless to risk an operation in a non-adequate facility. It is not always true that a dedicated unit, for however-much it supplies the necessary requirements, can respond to emergency situations. The Authors relate the importance of the selection of the medic and para-medic staff, and describe the organization and the structure of their unit. They give special care to the forms and to the selection of adequate materials.

A free-standing day-surgery unit in a private clinic: valuation after two years

S Guerrini, N Prot, L Petruzelli

Day-Surgery Unit, Igea Sedes Sapientiae Clinic, Torino, Italy

The authors would like to make public the findings after two years of activity at a Day-Surgery unit in a private clinic. Valuation was conducted between January 1996 and June 1998. 76 patients within an age range of 26 and 76 underwent surgery; 41 were female and 35 were male. 67 patients presented ASA I and II risks, 9 ASA III risk. The collaboration and responsibility of the patients and their families were fundamental; important information was gathered regarding the sequence of events and eventual complications. With the previous consent of the patient, Bier's back anesthesia was accepted by a majority of patients. 58 patients chose this method, while 5 requested and obtained narcosis. The Authors examine the anesthesiological and operating techniques used and the results reached. They are of the idea that an eventual stay in a clinic should be considered, only if necessary and requested by the patient, as this would increase costs and staff, reduce the image of the team and the structure, decrease the overall quality and have a negative influence on the patient's psyche.

Day-surgery: organization and medical–legal problems

S Guerrini, T Musumeci, GC Fossati

Day-Surgery Unit, Igea Sedes Sapientiae Clinic, Torino, Italy

As it is up to the doctor to guide the patient, scientifically and consciously, to the best and most convenient choice for his/her own best interest and with expressed consent, it is important to note that there is no law that forces a patient to be hospitalized in order to undergo surgery. The Authors make an *excursus* about various medical–legal problems concerning the fault and the responsibility. It follows that jurisprudence allows that the contractual duty of the physician is bound only by the means, and not by the results. From a juridical standpoint the physician is not obligated to guarantee the foreseen results after the enactment of therapy: it is however of vital importance that he/she uses the correct means and necessary diligence in order to reach the therapeutic goal. However the type of Day-Surgery can invert the burden of proof. In front of juridical or medical–legal impediments to ambulatory surgery, we can reply that those operations indicated as possible by the art, understood as the application of scientific knowledge, can be performed. Only in this case, the physician incurs behavioral, as well as means-related, obligations.

Day-surgery and medical/legal issues during the phases of patient selection and dismissal (with particular reference to informed consent)

S Guerrini, T Musumeci, GC Fossati

Day-Surgery Unit, Igea Sedes Sapientiae Clinic, Torino, Italy

The Authors confirm the constitutional and civil principles regarding Day-Surgery. They assert the obligation to inform the patient of the risks and of any eventual negative outcome of medical or surgical treatment. Informed consent is therefore configured as a moment of general freedom of self-determination, including the patient's power to control the circuit of information by which he/she is surrounded, and as the freedom to refuse treatment. The Authors make an *excursus* about the sentences regarding the default of the correct information, with ulterior reference to plastic surgery. They relate that the choice of Day-Surgery patients is not only limited to clinical aspects of the disease but must also take into consideration, the patient's psychological frame of mind. Special attention is given to

dismissal, to the information to the patient and to the correct filling in the patient's file and the forms that describe the operation. The Authors remind the advantages of the patient's stay in the clinic or hospital, when limited only to the essentials, if observing accurate precautionary clinical and medical–legal norms.

Center of day surgery and one day surgery: the model of the Azienda Sanitaria of Florence

P Fabbrucci

Department of General Surgery, S. Maria Nuova Hospital, Florence, Italy

The possible organizational structures for day surgery and one day surgery are: (1) dedicated hospital wards (mono or multidisciplinary); (2) autonomous hospital ward; (3) dedicated beds in each ward. The Azienda Sanitaria 10 of Florence, one of the biggest Italian ASL, have instituted an autonomous ward for day surgery and one day surgery. This choice derives from the estimated number of patients eligible for day surgery in the different surgical areas. The surgical specialities that have begun to perform day surgery are: orthopedics, oculistics, hand surgery, odontostomatology, general surgery, and algology. This model which applies to large ASL and hospitals, has, undoubtedly, economical advantages. It saves space in the speciality wards, makes an increase in the number of major surgical operations possible and represents an island of security for patients and physicians in the sea of uncertainty of this medical activity which is still new and not deep-rooted in Italian customs.

One day surgery unit's organisation

B Mussa, S Sandrucci, F Trombetta, P Celoria

Dip. Oncologia, Sez. Chirurgia Oncologica, Dir. Porf. A. Mussa, Torino, Italy

Our One Day Surgery Unit is integrated in one specialized surgical division. We assigned to ODS activity an ambulatory room, a waiting room, a three-bed room with bathroom and an operative room for 4 hours. In 4 years we performed in this structure 1075 surgical interventations and procedures. An accurate screening for 'not suitable for ODS patients' is performed by receptionist surgeons. All instrumental and clinical examination necessary to offer a safe surgical procedure are carried out for all patients. After surgical intervention, we monitor 6 vital parameters and we dismiss patients from the hospital, only when all of the vital function are restored. With this type of organization we obtain: (1) waiting list reduction, (2) a good surgical quality, (3) very low general anaesthesia conversion 0.3%, (4) low hospital admission for complications 8%, (5) good patient perceived quality.

Quality assessment by indicators in a day surgery unit

R Moscato, B Mussa, S Sandrucci, F Trombetta

Dip. Di Oncologia, Serv. di Chirurgia Oncologica, Dir. Prof. A. Mussa, Torino Italy

From January 1994 to September 1998, we performed 921 surgical acts in our Day Surgery Unit valuated by ACHSs quality indicators like: (1) Domain Surgical act cancelled (0)-Subject: patients not coming; Numerator: patients absent, Denominator: patients called (921). (2)-Domain: surgical act cancelled (0)-Subject: pts returned, Numerator: patients returned (5)-Denominator: patients called (921). (2) Domain: repeatable operation (0)-Subject: repeatable operation on the same day, Numerator: patients with repeatable operation (0)-Denominator: surgical act (921). (3) Domain: ordinary recovery, Subject: conversion to ordinary recovery Numerator: ordinary recovery (76)-Denominator: surgical act (921). (4) Domain: late resignation, Subject: late resignation, Numerator: patient has been discharged later than six hours (0). Denominator: patient has been discharged (845). We have a 0.5% value for indicator 1, a 0% for indicators 2, a 0% for indicators 4 and 8.2 for indicator 3. We believe that an index under 10–15% is good for accreditation.

State of the art in ambulatory surgery in France and international comparisons

MC L'Huiller, D Heve, JP Sales,

University Hospital of Montpellier, France

The AFCA launched a survey to carry on with (*to follow*) the survey of the IAAS (International Association for Ambulatory Surgery) and OECD (Organization for Economic Cooperation and Development) set up under the leadership of C. De Lathouwer and J.P. Poullier. This survey has the same aim as the international study: to evaluate the substitution potentialities to traditional hospitalization, from international statistics data. The international survey focused on 20 reference groups of procedures frequently performed in ambulatory surgery; the data for France was not included in this survey because at this moment, we cannot answer. Since then, the Public Hospital Group of AFCA, who try to promote ambulatory surgery in public hospitals in France, hoped to draw up a descriptive state of the art; he used the same methodology and same groups of procedures as the IAAS study. In this way, he has established and authenticated, based on the French translation of DRG (Diagnosis Related Groups), the list of acts which are included in these 20 groups of procedures. Authorizations are in progress to get access to the bases of national DRG in 1997. The results, which will be shown, will allow us to compare: firstly, the state of ambulatory surgery's development in France and secondly, the respective part of public and private hospital sectors.

Is the inner city dedicated day surgery unit obsolete?

P Sauliders

Royal Hospitals NHS Trust, London, UK

INTRODUCTION AND METHOD: As patient selection criteria and type of surgery performed in DSU expand the secondary phase of recovery defines the patient not the facility. The ethos of day surgery extrapolated to inpatient facility standardizes perioperative quality of care An inner city DSU in teaching hospital milieu with adverse community demographics, nursing staff shortages and competitive market forces demands special. attention.
RESULTS AND CONCLUSIONS: The model of an inpatient and outpatient facility merged yet autonomous creates flexibility with effectivc utilization of preassessment clinics, pre-admission area, theatre and recovery facilities, management, staff and equipment. Inpatients would utilize pre-admission area when inpatient bed space is temporarily unavailable. The standards of primary phase of recovery are universal and a 24 hr recovery service with ambulatory phase facilities would avoid unwanted DSU admissions and unnecessary inpatient overnight stays. This model can provide a better framework for education, training and supervision and become less dependant on financial restraints and unpredictable market forces which dictate surgical activity.

Consideration for the DSU carer: a role underestimated

S Anderson, T Wiseman, P Saunders

Royal Hospitals NHS Trust, London, UK

INTRODUCTION: The carer is an extension of the patient, yet takes on the nurse role with unknown skills and experience. Information and education are equally important for the carer as are their own limitations and commitments.
METHOD: The study consists of two questionnaires: the one preoperatively provides carer details and anticipated patient problems

and the other 24 hrs later reassessed their ability to manage these problems.
RESULTS: All carers were aware of their role but not necessarily its implications. Twenty-five percent of carers felt they would be unable to manage postoperative problems and thought that information rather than lack of nursing skills was the key issue. Carers were even reluctant to give advice about traditional areas of care such as eating, drinking and activity. Carers observed the following: pain in 60%, light-headedness in 30%, wound problems in 25%, and nausea and vomiting in 20% of patients.
CONCLUSIONS: Carers, like patients, need procedure specific problem oriented postoperative information and will then be better skilled to act as a vital link between the DSU and community and thus influence as well as measure outcome.

A quality control system and its verification in ambulatory surgery

R Costantini, F Caravati, P Ceriani

Center for Day Surgery, *Hospital of Circolo of Varese*, *Varese*, *Italy*

INTRODUCTION: The concept of 'quality' includes both aspects connected with the medical activity, modality of offering and subjective sensation of the patients. A global evaluation of all aspects is needed. For this purpose, two systems of quality control were activated: the first focused on the technical aspects and the latter on subjective sensations.
METHODS: The verification and control system of the technical quality was based on clinical control in post-operative days and follow-up. The control system of perceived quality consisted of a questionnaire regarding the pre-hospital examination, the hospital stay, the post-operative period and a comprehensive opinion about medical and nurse care.
RESULTS: All patients ($n = 234$) were followed until clinical recovery: wound infection 0%; haemorrhage 0%; wound oedema 4%; haematoma 1%; pain 48% (well controlled with drugs in 90% of cases); nausea and vomiting 0%; insomnia 30% (for pain). About perceived quality: 80% of patients were satisfied, 16% not completely satisfied and 4% did not answer.
CONCLUSION: The analysis of the questionnaire proves a good acceptance of the treatment. It would be interesting to investigate further the area of "not completely satisfied". From this analysis, one could derive aspects and suggestions helpful in improving the quality of the service.

Results of waiting lists administration

R Costantini, F Caravati, P Ceriani

Center for Day Surgery, *Hospital of Circolo of Varese*, *Varese*, *Italy*

INTRODUCTION: This instrument is required by the legislator to guarantee clearness in management. A detailed analysis of the situation should be obtained to achieve this goal.
METHODS:

Cases in waiting list	Number	Percentage
Surgery 1	21	3.89
Surgery 2	487	90.19
Surgery 3	24	4.41
Plastic Surgery	8	1.48
Total	540	

RESULTS: The waiting lists have now independent management by the Center for Day Surgery. Multiple and repeated telephone calls were needed. Few patients were on the waiting list from 1991!

	Number	Percentage
Patients operated by the Center for DS	165	30.56
Patients already operated (in other hospitals)	93	17.22
Patients who could not be reached	87	16.11
Patients preferring hospital admission	20	3.7
Patients not suitable for DS	98	18.15
Patients demotivated by waiting	48	8.8
Dead patients	2	0.37

CONCLUSION: The standard goal to achieve is to make the clinical course valid and efficient, without any decision on the basis of consolidated habits or resistance to 'changes', which are often an 'element of lysis' of proper identity.

The patient's compliance to day surgery: our experience

F Scognamillo, C Pala, F Attene, G Padula, M Trignano

Institute of Patologia Chirurgica, *Sassari*, *Italy*

INTRODUCTION: Possibility to reduce to one day only patient's hospitalization time in the surgical treatment of selected pathologies, allows the reduction of health charges and waiting lists, also permits the rationalization of bed-occupation time and operative sections. The aim of this research is to evaluate whether the economics and management results correspond to satisfactory patient's comfort.
METHODS: In our Institute, since the 80s, ambulatory surgery is performed in the treatment of proctologic, flebologic and benignant mammary diseases. From November 1998, we have instituted a Day Surgery service, extending indications to the treatment of hernia, leg's varices and some male genital pathologies. To evaluate clinical evolution and subjective comfort, we consign to each patient, a questionnaire about local pain, headache, nausea and vomit, fever, need of domiciliary care and restore time of social and working life. Seeing the particular conditions of Sardynia's territory, we also evaluated discomfort or costs originated from necessary pre-operating clinical examinations and post-operating dressing. These data integrate the PADS score valued in the immediate post-operating and at discharge time.
RESULTS: The evaluation of data referred by 50 patients shows that in 35% of patients local pain was present, beginning between 2 and 36 hours after discharge time, treated by oral NSAID pain decrease between 1 hour and 3 days. No patients complained of severe pain, headache, fever, nausea or vomit. One patient (0.2%) had lipothymia 2 hours after discharge which immediately resolved without complications. One patient, underwent hernioplatsty, had a seroma 1 week after the operation, this was resolved by frequent dressing. No patients needed domiciliary care. The average time of recovery was 2.8 days for usual relation life and about 7 days for working activity. The only discomfort reported (1% of patients) was a lengthy stand-by time the morning of the operation. The patient's opinion about the degree of satisfaction was quite good for 3 patients (6%) and very good for the others.
CONCLUSION: The high quality of post-operating, the very low complications incidence rate and the quick restoration of functionality, enable us to single out the day surgery option as the choice approach in the surgical treatment of hernia, varicose veins, and selected proctologic diseases. In fact, economic and management advantages combine with a high degree of patient's satisfaction.

Preliminary evaluation of the impact of the introduction of an innovative welfare model as day surgery between the general practitioners, pacdiatrists and the public

MC Mazzeo, S Sandrucci, T Petrangolini, S Inglese, M Falconi, Angeloni

Organizative Secretariat of the Italian Federation of Day Surgery, Working Group on Quality; Patients' Rights Court; Italian Federation of General Practitioners; Italian Federation of Paediatrists

The members of the Organizative Secretariat of the Federation dedicated to the working Group on quality assurance, have organised, with the co-operation of the Italian Federation of General Practitioners, the Italian Federation of Paediatrists and with the Patients' Rights Court, a series of activities to promote the acknowledgement and diffusion of this kind of welfare model. One of these activities, the submission of a questionnaire intended for General Practitioners, Paediatrists and citizens, to evaluate the level of acknowledgement and the impact of Day Surgery on these professional categories and among citizens. In fact, the most important form of diffusion, the development and, above all, the compliance of the patients of this welfare model, is the correct acknowledgement of what Day Surgery is, where it is practised, for which kind of patients it is intended, which are the respective roles of the hospital and of the welfare territorial services for the management of these patients, which are the advantages deriving from the correct use of welfare resources, but also the patient's comfort, the clinical characteristics to carry out day surgery and the conditions that can interfere with the diffusion of day surgery between General Practitioners, Paediatrists and citizens. For a proper realization of this welfare model, a strict co-operation between General Practitioners and hospital staff is necessary, as demonstrated in other Countries where day surgery is already widespread. The questionnaire, for which a reply will be necessary, has been purposely agreed between the Italian Federation of General Practitioners, the Italian Federation of Paediatrists and the Patients' Rights Court and formulated so that the different categories of operators and citizens could give concise answering rich in information. Reading and analysing the data emerging from the answers, it will be possible to make a preliminary evaluation of the impact of this innovative welfare model, on the health service and the potential 'users'.

A multidisciplinary day surgery unit: management and quality assessment

M Castoro, D Donato, U. Baccaglini, C Castoro, A Cestrone

Azienda Ospedaliera Universita, Padova

The University Hospital of Padova has planned a 'Multidisciplinary Day Surgery Unit'. This new Center should involve several medical specialities with the aims being to define therapeutic strategies, monitor the quality of the health care and medical treatment, and share methods and goals. The Multidisciplinary Center represents a chance to experiment with new ways of management, since it overcomes the more restricted management of a single division. Furthermore, it underlines the interdisciplinary and collaborative work which adds further validation to the medical activities and integrates, and partly replaces, the 'hierarchical model'. The responsibilities should formally represent: the institutional aims of the Center and the authorities overlooking the 'critical factors' of the management of the Center. The authorities responsible for the different medical areas should reach the aims planned in the budget, as qualitative results.
METHODS: The Multidisciplinary Center has been organized as follows: (1) Medical Directorate: it defines the strategy and the general goals of the Center; (2) The Director of the Center: he has responsibility of the Center's budget, establishes the goals of the Center in terms of resources and activities, with the collaboration of the operative Co-ordinator of the Center and of the Directors of the Divisions which are involved in the Center. He finally decides actions to correct mismatching between goals and results; (3) Center's operative Co-ordinator: he has responsibility of the variable expenses of the Center, overlooks the waiting list and favors the activity of the Center (marketing function); (4) Center's Operative Units Directors: they have responsibility for the quality of the health care; (5) Center's Scientific Committee: it proposes the diagnostic and therapeutic strategies, also providing indicators for their efficacy; it establishes the gold standards for the activities and overlooks the health care control of quality.
EXPECTED AND OBTAINED RESULTS: The above described model for the organization of a Multidisciplinary Center, insures advantages in terms of quality of health care derived by the conveying of different pathologies to a single Center which involves different medical specialities. The multidisciplinary medical examination is able to reassure the patients and improve operators performance. It is also possible to perform studies in relatively short time, given the high number of medical cases and therefore it becomes possible to compare the different treatment strategies used in the different operative units with the aim to adopt in the Center a unified and more effective therapeutic strategy. The foreseeable advantages also involve the reduction of management expenses since it could be realized a general improvement of the reputation of the entire hospital due both to new adopted technologies and, as a consequence, the increased inflow of patients.

Quality and Econonomics

Day surgery substitution or addition?

MED Jarrett

Department of Surgery, Royal United Hospital, Bath, England

INTRODUCTION: One of the aims of day surgery is to transfer procedures from an inpatient to a day care basis. This paper examines whether this is occurring or whether day surgery is serving as an addition to inpatient work.
METHODS: Data were provided by the Department of Health, Hospital Episode Statistics, London, England 1998.RESULTS: Two examples to highlight the findings are as follows: Diagnostic arthroscopies performed have remained virtually static between 1990–96. Inpatient admissions have decreased from 21388 to 14450 and day cases have increased from 13588 to 19345. The number of inguinal hernias repaired increased by 12664 with the inpatient numbers reduced by 2453 (4%) and day case procedures increased by 15117 (388%).
CONCLUSION: Day case diagnostic arthroscopies are allowing fewer inpatient admissions and hence overall cost savings. Hernia repair figures demonstrate that although there has been a small transference of work to the day unit, day case surgery, rather than becoming a substitution for inpatient work, has become an addition. Hence although more hernia repairs are being done at a lower average unit cost, the cost benefit of using fewer inpatient beds is being lost.

Costs and advantages: day surgery versus ordinary hospitalization in hernial, varicose and proctological diseases

F Zennaro, F Annoni, M Reitano, P Granelli, D Bona, A Orio, M Fioravanti

Institute of General Surgery and Oncological Surgery (Chief: Prof. A. Peracchia) Ospedale Maggiore Policlinico IRCCS, Milan, Italy

INTRODUCTION: The success of the Day Surgery all over the world is due to the new correction techniques and new anesthesiologic approach (local or loco-regional anesthesia) and to the suitable structures.

METHODS: The ordinary hospitalisation (OH) for abdominal wall hernias, varicose veins and proctological diseases in our institute is only for those patients with high anesthesiologic risk (ASA III–IV). The diagnostic and operative procedure in Day Surgery consists of 3 phases: diagnosis in Day Hospital, surgery and post-surgery observation. The diagnostic phase costs about £350.000. With the surgery being a fixed cost, the profit is dependent only on hospitalisation expenses.
RESULTS: The table shows expenses in Italian Lire of different pathologies in different systems (Del. VI/25608/Feb. 98 Reg. Lombardia).

Operation	DRG price	Stay in hospital cost	Surgery cost	Materials cost	General cost	Difference cost/ proceed
Inguin-femor hernia DS	1.698.000	355.000	301.628	215.955	972.583	+725.417
Inguin-femor hernia OH	2.264.000	1.711.000	301.628	215.955	2.228.583	+35.417
Ombelic-epygastr hernia DS	2.345.000	355.000	301.628	215.955	972.583	+1.472.417
Ombelic-epygastr hernia OH	3.127.000	1.711.000	301.628	215.955	2.228.583	+898.417
Varicose veins (lower limbs) DS	3.670.000	355.000	307.848	133.255	796.103	+2.873.897
Varicose veins (lower limbs) OH	4.863.000	1.711.000	307.848	133.255	2.152.103	+2.740.897
Proctological diseases DS	1.816.000	355.000	226.221	92.194	637.415	+1.142.585
Proctological diseases OH	2.421.000	1.711.000	226.221	92.194	2.029.415	+391.585

CONCLUSION: We can say that the Day Surgery reduces the waiting and hospitalization times, needs less human resources, reduces the psychological stress and allows an early return to the daily occupations.

Profile of care of inguinal hernia alloplasty: analysis of expenses in one-day surgery

V Ripetti, R Alloni, V Altomarc, CL Cellamare, P Crucitti, A Arullani

Libera Università Campus Bio-Medico, Roma, Italy

Inguinal hernia is a widespread disease, the incidence of which in male is 3.6%. Surgical treatment for this is the 2nd most frequently performed operations and in the US, more than 700 000 such operations are performed each year. New surgical techniques used, with the use of prosthetic material, allowed such operations to be performed as outpatient or in one-day surgery. The aim of our study is the evaluation of the cost and incomes related to the cases of inguinal hernia alloplasty performed in our hospital.
MATERIAL AND METHODS: From January 1996 to September 1998, 253 patients underwent inguinal hernia repair according to the Trabucco or the Lichtenstein technique. Profile of care included routine preoperative blood studies, chest X rays and ECG. Two hundred and four cases were included in DRG 162 (Operation for femoral or inguinal hernia without comorbidity). 46 in DRG 161 (operation for femoral or inguinal hernia with comorbidity), 3 in DRG 163 (Operation for hernia age < 18 years).
RESULTS: Mean hospital stay in DRG 162 group was 2.64 days (1.37 pre-op and 1.91 post-op.) and in 3 patients included in DRG 163 was 2.33 days (2.33 pre-op and 1.0 post-op.). The preoperative stay in patients included in DRG 162 and 163 is due to the occasional difficulty of admission the day before the operation with already prepared pre-operative study, due to the long waiting list, or to the necessity to delay the operation for organizational reasons. The long pre-operative stay in patients included in DRG 161 is mainly related to the comorbidities requiring pre-operative study. The expenditure of hospital stay are analytically calculated as follows: general expenses including nurse assistance £500.00 per day, expenses for medical assistance £150.000 per day, expenses for theatre and prosthetic material £300.000. The expenditure for pre-operative work-up has been analytically evaluated and is £450.000 for DRG 162 and 163, while it is as high as £600.000 for DRG 161. The total expenditure per patient is £2 466.000 for DRG 162. £3 539.000 for DRG 161 and £2 264.500 for DRG 163.
CONCLUSION: Our analysis shows that mean duration of hospital admission is more than 2 days and cannot be included in the 'one day surgery', but is inferior at the standard defined for the Regione Lazio for DRG 162, coincident with the standard for DRG 161, and only slightly superior for DRG 163. With such duration of hospital admission, we observed a net profit of £1 944.000, £1 118.000 and £302.000 respectively for DRG 161, 162 and 163. A careful optimization of duration of hospital admission, achieved with an efficient pre-hospitalization can provide a further reduction in hospital expenses, while a modification in out-patient surgery reimbursement is needed to stimulate the practice of such surgery as out-patients.

Economic analysis of hemorrhoidal treatment

M Mistrangelo, F Baracchi, M Amisano, P Capuzzi, E Bertotti, M Antonucci, D Donati, F Corno

I Surgical Clinic, University of Turin, Turin, Italy

INTRODUCTION: Hemorrhoids are the most frequent pathology seen in a Coloproctological Unit. In [Jnited States 10.000.000 of persons are estimated to suffer from hemorrhoids and one third of these has a proctological examination. Many treatments have been proposed for this pathology and several analysis on their efficacy have been done. Bayer evaluated the cost of rubber band ligation suggesting this procedure as the choice treatment in II and III degree of hemorrhoids. This treatment is less expensive than hemorrhoidectomy. Another important aspect of outpatient procedures is the reduction of hospital stay with major disponibility for other disorders. Finally rubber band ligation permits an early return to work. Lacerda–Filho presented a comparative study on efficacy and costs of outpatient hemorrhoidectomy versus inpatient procedure. They suggest that complications are similar in the two treatments, but the cost is lower for the first one (US $314 vs. US $716.
PATIENTS AND METHODS: At the I Surgical Clinic, University of Turin, in 1997, 517 patients were diagnosed to be effected by hemorrhoids: 114 pt. (20%) presenting I degree of hemorrhoids; 313 pt. (55%) II degree; 84 pt. (15%) III degree and 57 pt. (10%) IV degree. All patients were treated with Diosmine for one month (I cp. $\times$ 3/day) associated to a dietetic therapy. This treatment was successful in 158 pt. (27.6%). Patients who didn't benefit by medical therapy were treated with rubber band ligation (293 pt.) or with outpatient hemorrhoidectomy (84 pt.). These latter patients were followed in our offices for 1–2 hours after surgery and then they returned home with the telephone number of one of the coloproctological surgeons. The last 36 patients were submitted to surgery in the operating room with a median hospitalization of 5 days. Costs evaluated are referred to under the following headings: (1) Cost of

medical therapy (69.000 £); (2) Cost of tools used for various therapies; (3) Time cost of nurses (26.374 £/h) and surgeons (54.730 £/h); (4) Cost of preoperative exams (113.000 £) required for an hemorrhoidectomy; (5) Cost of hospitalization (500.000 £/day); (6) Cost of operating room for surgery of less than 2 hours (1.000.000 £). Patients with thrombosed hemorrhoids or other proctologiacl diseases were excluded from our study.
RESULTS: Our results emphasized a cost of 125.600 £ for patients treated only with medical therapy; a cost of 373.200 £ for patients treated with 3 rubber band ligations; a cost of 345.900 for those who were submitted to an outpatient hemorrhoidectomy and 2.757.800 £ for inpatient hemorrhoidectomy. This latter cost will be increased of 500.000 £ for each day of hospitalization.
CONCLUSIONS: Considering these results we suggest that outpatient hemorrhoidectomy is the 'gold standard' in treating hemorrhoids and it would be avoided only when other major diseases afflicted the patient or when the patient refuses this kind of procedure.

Profit or loss in a day surgery

A McHardy

Albury Day Surgery, Albury, Australia

INTRODUCTION: Achieving a profitable day surgery.
METHODS: Delegating to key members of staff with incentives.
RESULTS: Owner mentality by staff, cost savings and profitability.
CONCLUSION: Overall understanding of the day surgeries cost structures by staff, therefore producing a profit.

Cost effective anaesthesia for outpatient arthroscopic knee surgery: spinal, desflurane, isoflurane or propofol anaesthesia?

M Martikainen, T Kangas-Saarela

Department of Anaesthesiology, Oulu University Hospital, Kajaanintie 52, 90220 Oulu, Finland

INTRODUCTION: Spinal anaesthesia (SA) is widely used in day-surgery because of its easiness and cheapness. But how cheap the SA really is, if you compare it to modern general anaesthesia with short acting agents? The aim of this study was to compare SA to three general anaesthesias in terms of total anaesthesia costs during outpatient knee arhroscopy (KA).
METHODS: 173 patients undergoing elective KA were randomised to receive SA with lidocain, propofol infusion (PA), isoflurane (IA) or desflurane (DA) inhalation anaesthesia. Time spent in operation theatre (OT) and time to reach home readiness after postoperative care in the recovery unit (RU) were measured. The material and personal costs for different anaesthesias were calculated.
RESULTS: The total anaesthesia cost (TC, includes OT and RU costs) for one hour elective day surgery in Oulu University Hospital is 691 FIM (1 FIM = 0.19 US$). The average OT anaesthesia material costs for SA were 104.0 FIM (15.0% of TC), for PA 164.2 FIM (23.8% of TC), for IA 110.8 FIM (16.0% of TC) and for DA 123.3 FIM (17.8% of TC). The postoperative personal costs are 0.44 FIM/min/patient spent in RU and material costs 15.3 FIM/patient. The average RU costs for SA were 88.7 FIM (12.8% of TC), 39.7 F1:M (5.8% of TC) for PA, 41.4 FIM (6.0% of TC) for IA and 34.8 FIM (5.0% of TC) for DA.
CONCLUSION: The total costs for IA and DA were significantly lower ($p < 0.05$) than SA or PA costs. Inhalation anaesthesia, either with isoflurane or desflurane, is more cost effective than spinal or propofol anaesthesia in elective ambulatory KA.

There is no such thing as a free lunch

B Lang

Epsom General Hospital, NHS Trust (Day Case Unit), Surrey, UK

''Medicine is the art of entertaining the patient whilst nature takes its course''. This quote of uncertain origin is probably as true today as it has ever been. Most medication prescribed has a dubious affect on improving a patient's health. In a lot of cases normal antibody action is sufficient to cure a host of illnesses. In surgery there is a similar analogy. Surgery performed by the NHS should be to improve health or life expectancy. However, much time and expensive resource is taken on what amounts to cosmetic or non-priority intervention, for example varicose veins, vasectomies, tattoo removal, etc. Whilst I would not presume to suggest these surgical practices should be stopped, I believe we must re-think the strategy of application if any nation's health services are to survive the ravages of today's mounting costs. This paper puts forward a suggestion for reducing the financial burden imposed by these types of operations, and shows how a hospital can actually benefit from carrying out cosmetic and 'wanted' operations as well as the type of surgery which is needed to sustain life. Where patients desire a specific surgical procedure which is not directly affecting their health, then we should learn lessons from the private sector. It is proposed that nominal charges are applied on a fixed rate basis for the privilege of using the health service. This paper demonstrates how relatively small charges, when multiplied by the number of operations actually performed in a year, can provide a very significant contribution.

Surgical Specialities

Tympanoplastic Typ III ambulatory—stationary? A retrospective study

M Pilgramm, HP Weibel, HP Schäfer, A Weeber

One-day clinic, Detmold (Germany)

In 1993 the ENT-ward of a hospital was changed into a ambulatory One-Day-Clinic. The operative surroundings (doctors, nurses, rooming, instrumental) keep the same. In a retrospective examination in the year 1997 the patients who were operated in 1992 on Tympanoplastic Type III (hospital time 9 days) were compared with ambulatory operations. A Tympanoplastic Typ III was done by chronic otitis media with auditory ossicles detort. All operations from 1992 and 1997 were done by the same surgeon.
RESULTS: Group A (stationary 1992) n = 34; Group B (ambulatory 1997) n = 29

	A	B
a) Middle postoperative increase in hearing	27 dB +/−4 dB	26 dB +/−3 dB
b) Not being able to work because of op	30 days	12 days
c) Complications after op	1	1
d) Antibiotics need after op	4	0
e) Re-op within 2 years	2	1
f) Costs for the national health dep.	DM 4630	DM 2312

Because of these results we came to the conclusion that Tympanoplastic Typ III can be done good or better ambulatory. The results of treatment are the same, the complications are just about equal, the costs are extremely reduced and the patient is more satisfied.

Outpatient hernia repairs in a minor procedure room

S Al-Shanafey, D Brock Vair

QEII Health Sciences Centre, Halifax, Canada

INTRODUCTION: The repair of an uncomplicated groin hernia is often performed on an outpatient basis. Traditionally, this procedure has required major operating and recovery room facilities, multiple

nursing staff and often general or regional anesthesia or at least anesthetic back up. In order to minimize cost and optimize utilization of hospital staff and facilities we now perform the majority of our elective groin hernia repairs in a minor procedure room in the outpatient department under local anesthesia using a mesh plug technique attended by a single circulating nurse. Neither intravenous sedation nor prophylactic antibiotics are administered. Recovery room facilities are not utilized. The patients are ambulatory immediately following surgery, and discharged directly home.
METHODS: Retrospectively the charts of patients with groin hernias managed in this fashion from 1994 to 1998 were reviewed.
RESULTS: During this period 404 groin hernias were repaired in this fashion including 53 recurrent hernias. Age range was 17 to 92 years; 368 males (91%) and 36 females (9%). Two hundred and thirty right side (57%), 171 left side (42%), and 3 bilateral (1%) groin hernias were repaired. There have been 10 (2.5%) recurrences, 2 (0.5%) minor infections and a single case of urinary retention. Patient satisfaction with the procedure is excellent.
CONCLUSION: We conclude that repair of groin hernia can be carried out on an outpatient basis under local anesthesia in a minor procedure room with acceptable results without the need for additional nursing and recovery room facilities.

Quality-comparison of ambulatory vs clinical observation laparoscopic cholecystectomy: equality in outcome

Y.C.A. Keulemans[a], J.H. Eshuis[b], D.J. Gouma[a], H. de Haes[c], L.Th. de Wit[a]

Dept of [a]Surgery, [b]Anesthesiology/Daycare and [c]Medical Psychology, Acad. Medical Center, University of Amsterdam, Postbox 22660, 1100 DD Amsterdam, the Netherlands

INTRODUCTION: After having shown that Laparoscopic Cholecystectomy (LC) is a feasible outpatient-procedure (London 1997), we compare several parameters in a Day Care (DC)- and a Clinical Observation (CO)-group of LC-patients to determine the desirability of the ambulatory procedure.
METHODS: In a prospective randomized trial equivalence was sought in several outcome parameters in 80 ASA 1 or 2 cholelithiasis-patients, divided in a 40 pts DC and a 40 pts CO-group. Statistics: t-test and Mann–Whitney *U*-test.
After premedication with 1000 mg Naprosyn, anesthesia was induced with Propofol, Fentanyl, a relaxans and maintained with Sevoflurane in O_2/air with profylactic Ondanset-ron 4 mg and infiltration of trocar and incisional wounds with Bupivacaine; postoperative analgesia was with Paracetamol, Codeine and Naprosyne. Compared were: *complications*, *(re)admissions*, *consultations* of general practitioner or hospital the first 5 days, KAS on pain and mood, *analgesic intake*, two validated psychological measure-instruments concerning mobility, selfcare, daily activities, discomfort, anxiety and depression: the *QOL score* (Quality of Life-questionnaire) and the *Total Health-score* according to Kind; further the *percentage of patients resuming their paid employment* at 2, 4, and 6 weeks and patients *treatment-preference*.
RESULTS: There were no conversions and no consultations; three admissions in the DC group (8%). Mean discharge-time was 5.7 hrs in the DC- and 31 hrs in the CO-group. There were no major postoperative complications nor readmissions. The VAS-score on pain did not show a significant difference DC/CO-groups, declining from 4 (6 hrs) to 2 (48 hrs). In both groups only 50% of patients took oral analgesics 24 hrs after operation. The QOL was (1 and 6 weeks) 6.3 and 7.4 (DC) respectively 5.7 and 7.2 (CO). The Total Health-score was equal in both groups at 1 and 6 weeks. Resumption of paid employment after 2, 4 and 6 weeks was 63, 81, 88% in the DC-group and 65, 83 and 88% in the CO-group. Patients treatment-preference was in both groups equal and 92% for their own treatment.
CONCLUSION: Quality of outcome after LC was equal in ambulatory and clinical observation groups and was independent of length of postoperative observation. Patients preference for their own treatment was 92% in both groups. Because of cost-reduction ambulatory LC is the first choice for those patients who meet the inclusion-criteria for day-surgery.

Regional anaesthesia in day-surgery

P Herlevsen

Day Surgery Unit, Randers Hospital, Denmark

Our department has a strong tradition for regional anaesthesia. We find it comparable to general anaesthesia for suitable operations in day surgery. This is a prospective study of 500 consecutive day surgery patients.
METHODS: The patients are recommended regional anaesthesia if feasible for the operation, but they are not forced to take it. General anaesthesia; Propofol, alfentanyl or remifentanil, N20. Spinal anaesthesia; needle: Whitacre pencilpoint 27G, 2% hyperbaric lidocaine. Pre- and postoperative treatment of pain: Codeine, paracetamol, ibuprofen, local infiltration anaesthesia with 0.5% bupivacaine. The patients were interviewed on the day of the operation, the day after by phone, and by returning a questionnaire 14 days after the operation.
RESULTS: All the operations demand either general anaesthesia (272), local intravenous anaesthesia (24) or spinal anaesthesia (204). Orthopaedic surgery (224). General surgery (142). Gynaecology (134). Three patients had insufficient spinal anaesthesia and received general anaesthesia.

Spinal anaesthesia		Gen. anaesthesia
Number of patients (n)	272	204
Duration of anaesthetic induction mean (minutes)	22	26
Postoperative stay in the unit mean	222	237
Postoperative pain on the day of op., vasscore (0–10) mean	1.5	1.5
Postoperative pain on the day after	2.1	2.2
Postoperative nausea	20 (7%)	8 (4%)
Postoperative headache on the day after (n)	12 (4%)	16 (8%)
Postspinal lumbar pain on the day after (n)	0	6 (3%)
Postspinal pain in the lower extremities (n)	0	4 (2%)

CONCLUSION: Spinal anaesthesia is comparable to general anaesthesia in day surgery.

Sac excision not needed for safe laparoscopic repair of large indirect inguinal hernia

G Ögünç, C Arslan, M Akaydin

Department of General Surgery, Akdeniz University Medical School, Antalya, Turkey

INTRODUCTION: Hernia sac is usually excised partially or completely in laparoscopic hernioraphy for indirect inguinal hernia. In

cases in which the indirect sac is large, the hernia sac may not be excised and left in situ.
METHODS: From September 1997 to 1998, 14 consecutive laparoscopic TAPP hernioplasty have been performed for large indirect inguinal hernia. Hernia sac was partially or completely excised in first 6 cases. Hernia sac was incised but not excised in last 8 patients. For this report the incidence of morbidity rate and mean operative time in non randomized consecutive patients following laparoscopic hernia repair of large indirect inguinal hernia with and without excision of the hernia sac was compared.
RESULTS:

	Sac excised (partially or completely)	Sac not excised
Patients	6	8
Mean age (years)	38.4	40.5
Mean operative time (minutes)	128	66
Subcutaneous amphsema	1 (16.6%)	0
Seroma	4 (66.6%)	0
Urinary retention	3 (50%)	1 (12.5%)
Testicular discomfort	1 (16.6%)	0
Mean duration of hospital stay (days)	1.1	0.8
Recurrence (1–12 months in follow up period)	0	0

CONCLUSION: Hernia sac is usually excised partially or completely in laparoscopic hernioraphy for indirect inguinal hernia. In cases in which the indirect sac is large, the hernia sac may not be excised and left in situ for safe laparoscopic hernioplasty.

Tension-free mesh repair: recovery and recurrence after one year

K Rose, D Wright, T Ward

INTRODUCTION: The outcome of two hundred consecutive patients with inguinal hernias repaired by the tension free mesh technique at a specialist clinic was assessed one year post operatively. There were no recurrences and no major complications. The wound infections rate was 1%. Less than 10% of patients had only minor complaints and 90% of patients were satisfied or very satisfied with the operation and its outcome. Low recurrence rates after one year imply low long term recurrence and testify to the benefits of a specialist approach.
METHODS: Two hundred consecutive men with inguinal hernia were repaired from November 1994 to July 1996. LA was given by sequential infiltration. The repair was after Lichtenstein. Antibiotics were not used. Follow up was by postal questionnaire with clinical examination by an independent surgeon for any dissatisfied patients.
RESULTS: The repair was performed under local anaesthetic in 138 (78%) and general anaesthetic in 40 (22%), 118 (66%) were discharged the same day and 60 (34%) stayed overnight. There were no recurrences and no major complications.
Two (1%) patients had wound infections and 9 (4.5%) developed an haematoma or seroma. No patients had long term pain but 13 (7%) had an occasional ache and 4 (2%) complained of numbness. One hundred and thirteen (64%) were satisfied and 63 (35%) were very satisfied with operation and outcome.
CONCLUSION: The tension free mesh repair is technically simple, safe and can usually be performed under LA with discharge the same day. The complication rate is minimal and early recurrence rate low. We believe it to be comparable to The Shouldice repair and superior to laparoscopic techniques.

Is an ambulatory cholecystectomy a viable possibility, economically feasible and medically sound?

A Ferdman[a], A Meidan[a], R Shefer[a], S Hendler[a], A Hirshzon[a], S Rosman[a], B Nadler[a], O Avinoam[a], G Malul[b], R Lifshitz[b], A Gelman[b], B Dagan[b], S Lalcuc[b]

[a]*Leumit Health Fund, Israel*, [b]*H.M.C. Israel*

INTRODUCTION: The performing of ambulatory cholecystectomies (AC) is not new. In the early 80's, this procedure appeared in journals. Today's AC is a routine procedure at medical centers throughout the world. This study was designed to determine whether a safe ambulatory cholecystectomy could be performed within economic parameters.
METHODOLOGY: Criteria for selecting patients eligible for an AC were based upon a diagnosis of Symptomatic Cholelithiasis, ASA 1–2. Patients underwent pre-surgical anesthetic evaluation.
An ambulatory laparoscopic cholecystectomy (ALC) was performed in the general surgery ambulatory unit (GSAU) by the same surgical staff.
RESULTS: Between the years 1994 and 1998, 294 ALC were performed on an out patient basis at the GSAU of the HMC The mean age of the patients was 58 years (M: 82, m: 7). The mean operation time was 40 minutes (M: 90, m: 20). Conversion to open procedure was necessary for 3 patients (1%). One patient (0.3%) required an exploratory d.t. intra-abdominal bleeding from trocar wound 12 hours after LC.
The patients were discharged from GSAU 12 hours after surgery (M: 20, m: 8). Patients returned to routine activities within 7–10 days (M: 14, m: 5).
CONCLUSION: 1) ALC can be safely performed in an ambulatory surgical unite. Optimal conditions required: a) proper prescreening of patients; b) experienced surgical team; c) proper at home care environment and telephonic contact with the medical staff. 2) An AC performed at the GSAU reduces the cost of surgery by 60% and reduces patients recovery time by 50% in comparison with in-patient procedures.

Anaesthesia for hernia repair—the patient's choice

W Ismail, O El Gazzar, E Beddow

Harold Wood Hospital, Romford, Essex, UK

INTRODUCTION: Several anaesthetic options are now available for the repair of groin hernias. The benefits of the local and general anaesthetic techniques are well outlined in the literature. No studies however, have assessed the patient's preference for different anaesthetic approaches or their suitability of choice in elective hernia repair.
PATIENTS AND METHODS: A cohort of 284 consecutive patients seen in a dedicated hernia clinic were included in the study. Full medical history and hernia examination was performed by one clinician. Patients having surgery were offered either general or local anaesthesia for their repair. They were given a full explanation of both anaesthetic techniques. A clinic information form was provided to assist in the decision-making process. Their favourable options and the reasons behind them were recorded in study sheet, for later analysis. The data were analysed in relation to age, sex, occupation, smoking, medical condition, previous anaesthesia, and previous hernia surgery.
RESULTS AND CONCLUSION: Most patients preferred local anaesthesia. Patient's choice was prompt and appropriate. A detailed account of the reasons that influenced the choice of different groups of patients and how that can assist in planning hernia services in district hospitals will be discussed.

Driving after hernia surgery

W Ismail, E Beddow, O El Gazzar, S Pain

Surgical Directorate, Harold Wood Hospital, Romford, UK

INTRODUCTION: This paper discusses the issue of driving after groin hernia repair. It examines the existing practice of surgeons and day units in advising patients as to when to drive after groin herniorrhaphy. It finds out whether there are adequate written guidelines in this regard and seeks to determine the scientific basis on which these are founded. It also checks whether these guidelines have changed in line with the recent changes in the management of hernia repair particularly in relation to the use of the Lichtenstein mesh technique. The views of specialist hernia centres, driving authorities and insurance companies are discussed and a detailed account of our own recommendations is also included. It is hoped that this approach will ensure patient and road user's safety without adding unnecessary inconvenience or extra financial burdens to the patients.
MATERIAL AND METHODS: Literature was reviewed on this subject. Questionnaires were sent to 200 consultant general surgeons and thirty day surgery units in the United Kingdom, selected randomly from a list provided by the Royal College of Surgeons. Postal communication was made with the DVLA, eight major insurance companies and three major hernia centres to seek their views on this subject.
RESULTS AND CONCLUSIONS: This study showed that the guidelines concerning driving after hernia surgery are far from being uniform. Further research is required to elucidate the effects of modern techniques on driving skills in the early post operative period following hernia surgery and a national policy on advice to patients should be drawn up.

Ambulatory surgery of varicose veins under tumescent local anesthesia

R Sandhofer-Novak, M Sandhofer, J Povysil

Day-Surgery-Unit Dr. Povysil, Linz, Austria

Due to economical aspects and the motto '…as much ambulatory surgery as possible', a lot of a surgery of varicose veins is undertaken on an outpatient basis in the western world every year. There is a sharp increase in procedures being performed in physicians offices or day surgeries. From 1988 to 1988 our team has recorded 2508 patients undergoing ambulatory varicotoms (V.saph. magna 1.464, Vsaph.parva 236 and 878 varicose veins without cross-section). This was made possible by careful preoperative clinical evaluation and the additional use of directional Doppler, LRR and Duplexexamination and in very few cases by phlebography. Additionally the use of tumescent local anesthesia, and more and more frequently administered monitored anesthesia care and an exact intra- and postoperative compression therapy facilitated the procedures. The surgical performance is based upon the rudiments of selective surgery of varicose veins. Since 1992 we routinely use the tumescent local anesthesia in 1447 cases. In our hands TLA provided a very safe, comfortable method of anesthetizing patients for ambulatory phlebetcomia. The procedures performed in this way showed no serious complications. None of the cases required postoperative hospital admission. Moreover the complication rate and the convalescence time of the patients was remarkably reduced!

Time efficient neurolept anaesthesia for skin cancer surgery

H Bartholomeusz

Tri Rhosen Day Hospital, Ipswich, Australia

Abstract not received.

Is acupressure at T6 point effective in preventing post-operative nausea and vomiting after day case surgery?

S Sherllalah, C Dabvies

Channel Day Center, William Harvey Hospital, Ashford, Kent, UK

Remifentanil-TIVA and balanced analgesie in ambulatory pelviscopy

B Kuhrt

Tagesklinik Altonaer Straße Zentrum für gynäkologische Endoskopie, Hamburg, Germany

INTRODUCTION: Due to the modern anaesthesiological procedure as well as the differential operative techniques in ambulatory pelviscopy a new concept is necessary regarding the pain-management.
METHODS: Four hundred patients were registered and compared to their postoperative analgesic drug consume after receiving a TIVA anaesthesia. Two hundred randomised patients received preop. Naproxen 500 mg (NSAID), 200 patients received no premedication at all. The TIVA included Remifentanil, a modern opioid with an ultra short duration. Some patients received when necessary an infiltration with Carbostesin around the wound. At the end of the operation all patients received Piritramid iv. In addition there was a choice of various analgesic drugs.
RESULTS: Only 17% of the patients with balanced analgesie, consisting of preop. NSAID, intraop. if necessary Carbostesin, postop. Piritramid, needed an additional drug. Patients without Naproxen demanded up to 4 times an additional drug.
CONCLUSION: A balanced analgesic has proven the most effective pain therapy and we believe it is essential in ambulatory with Remifentanil-TIVA. It ensures the patient pain relief and comfort, reduces duration in the recovery room, manpower and costs.

The today-possibilities of the ambulatory ear-surgery and its perspectives

G Georgopoulos

Otorhinolaryngological Clinic, University of Thrace, Alexandroupolis, Greece

INTRODUCTION: Some defects of the eardrum and the tympanic cavity can be successfully treated by surgical manoevres, executed as an office procedure, in an ambulatory manner.
METHODS: Non-marginal perforations of the eardrum can be closed using only superficial anesthesia and microsurgical techniques. The materials used to cover the perforation and facilitate the self-closure of it are Silastic folia, Micropore or Merocel sheets and special ventilating tubes proposed by us 15 years ago. On the other hand, it is possible to remove small epitympanic cholesteatomas and sanitize the retraction-pocket, without injuring its epithelial layers, using suction-tubes, hooks and small forceps.
RESULTS: Using these methods we have succeeded 1) to close 75% of nonmarginal eardrum perforations of 5 mm or less in diameter and 2) to cure definitively more than 60% of small epitympanic cholesteatomas.
CONCLUSIONS: Nonmarginal eardrum perforations and small epitympanic cholesteatomas may be successfully treated in an ambulatory way. The future of these techniques is based in the recent introduction of rigid and flexible endoscopes of small diameter, permitting the extension of the view of the surgical field sidely, into parts inaccessible to the view-field of the surgical otomicroscope.

Comparison of tramadol and diclofenac in day-care surgery

MP Corbey, AB Bach, K Lech, M El-Tawil

Anaesthetic Dept., Grindsted Hospital, Denmark

INTRODUCTION: The aim of the study was to investigate the effect of tramadol on recovery, postoperative analgesia, and side effects, with diclofenac as control.

METHODS: One hundred and forty adults ASA I–II were randomized to receive either i.v. tramadol 1.5 mg kg^{-1}, 15 min, or i.m. diclofenac 1 mg kg^{-1} 30 min before the end of anaesthesia. Postoperative analgesia was given by i.v. fentanyl. Pain was assessed using VAS at hourly intervals for four hours and the total consumption of fentanyl. Results were analysed by the chi-square test, Mann–Whitney and Kruskal–Wallis tests. Statistical significance was assumed at a P-value of 0.05.
RESULTS: Recovery times, the need for analgesia and frequency and severity of nausea and vomiting (PONV) were similar. There was a higher frequency of dizziness after tramadol ($P = 0.014$). There was no statistical difference in VAS between tramadol or diclofenac.
CONCLUSIONS: Tramadol does not increase recovery time, nor the frequency of PONV. Tramadol provides good analgesia following day-care surgery. There is an increase in dizziness following its use.

Postoperative pain management after orthopedic ambulatory surgery—results of a prospective study

H Arnold[a], J Weber[a], H Hösslin[a,b]

[a]*Orthopedic Ambulatory Surgical Center Rehau*, [b]*Practice of Anesthesia Hof*, *Germany*

INTRODUCTION: By means of a prospective study the efficacy of postoperative pain management was analyzed. An algorithm was developed for the therapy of postoperative pain in ambulatory orthopedic surgery.
METHODS: In a prospective study all patients who underwent ambulatory surgical procedures from January 1996 until August 1998 were asked for their postoperative pain with a questionnaire. Surgery embraced mainly foot (70) and hand (137) procedures as well as knee (154) and ankle (21) arthroscopy. Pain was rated with a visual analogue scale, the emotional disturbance was evaluated with psychological test instruments. Time of observation covered fourteen days after the operation. Three hundred and ninety-two patients returned the questionnaire handed over in the postoperative care unit. Statistic analysis was done by variant analysis and descriptive methods.
RESULTS: The evaluation showed that all patients were free of pain after fourteen days. They suffered the maximum of pain in the first night after the operation. No one reached the level of pain indicated as the value at the most tolerable on VAS. Variant analysis confirmed statistically significant that patients who were subject to spinal chord anesthesia suffered from a lower level of pain than patients with general anesthesia. Long lasting pain reducing effects resulted from peripheral nerve blockade in combination with the application of non-steroid drugs on schedule. All patients would agree again to ambulatory surgery.
CONCLUSION: Due to methods of modern anesthesia in combination with systemic pharmacotherapy on schedule as well as peripheral nerve blockade it is possible to offer sophisticated orthopedic operations like forefoot correcting procedures or knee arthroscopy for ambulatory surgery. Postoperative pain can be reduced to a very low level. As a result of this study we developed an algorithm for postoperative pain management in orthopedic ambulatory surgery.

Ropivacaina (Naropina 7.5 mg/ml) in anesthetic epidural procedures for day surgery in urology

B Baisi, G Castagnetti, C Botti, A Dotti, R Olmi, P Ferrari

Divisione di Urologia, *Ospedale Civile di Modena*, *Via Sant' Agostino*, *18*, *41100 Modena*, *Italy*

In our department many urological procedures were performed from more than one year as day surgery. For those operations we have had good results in using loco-regional blockade with carbocain 1% (Mepivacaina). In many endoscopic procedures during the last year we have started to use Naropina (Ropivacaina) epidural route. This anesthetic (Naropina) is able to produce a strong anesthetization without loss of motor function; moreover the deambulation is faster restarting and the outcome is safer.

Anesthesia and day-surgery

G Viganò[a], F Zennaro[b], E Quarenghi[a], G Giammarinaro[a], P Vicardi[a], A Tiby[a]

[a]*Ist. di Anestesia e Rianimazione*, *H. Policlinico IRCCS*, [b]*Ist di Ch. Generale ed Oncologia Chir.*, *H. Policlinico IRCCS*, *Milan*, *Italy*

INTRODUCTION: In the last few years an increasing number of surgical diseases have been treated successfully in Day Surgery. The evolution of the surgical techniques, a careful perioperative anesthesiologic behaviour, the introduction of hypnotic and analgesic short action drugs together with a wider use of regional blocks, have really modified the anesthesiologic management of the patient. The aim of the study is a retrospective evaluation of the anesthesiologic complications of these procedures.
METHODS: The preoperative evaluation and the intraoperative behaviour have followed the SIAARTI and IRQ recommendations. Between January '94 and October '98 the Day Surgery operations in our department have been N = 1536: Hernioplasty N = 637; Proctologic surgery N = 549; minor surgery (Quadrantectomy, Lynphonodal biopsy) N = 215; Saphenectomy N = 89; endoscopic esophageal dilation N = 46. We have used the following techniques: Sedation during Local Anesthesia (74.7%); Selective Spinal Anesthesia (15.8%); General Anesthesia in spontaneous or in mechanical ventilation (9.5%). The most utilized sedation patterns have been: Propofol 5–7 mg/kg/h + Fentanyl 1–3 μg/kg; more recently Midazolam 0.1–0.2 mg/kg/h + Remifentanil 0.025 μg/kg/min. The anesthesiologic complications more frequently observed: Urinary retention (11%); Headache (4.5%); Delayed awareness (0.06%). The necessity of hospitalization has been of 0.4%. N = 12 pts needed to change the regional block to a general anesthesia owing to: Hypersensitivity reaction (N = 1); Cardiorespiratory instability (N = 8); Unsuccessful anesthesiologic technique (N = 3).
CONCLUSION: Our results car be considered superimposable on literature dates so that these procedures look safe and effective.

The surgical treatment of abdominal wall hernias in day surgery: 5 years of experience

F Zennaro, A Orio, D Bona, P Granelli, V Manzullo, E Mozzi, R Germiniani

Institute of General Surgery and Oncological Surgery, *Ospedale Maggiore Policlinico IRCCS*, *Milan*, *Italy*

INTRODUCTION: In our department of General Surgery and Oncological Surgery, a unit of ambulatory surgery was instituted in January 1994, with the aim of reducing the waiting list and healthcare costs.
METHODS: From January 1994 to October 1998, we operated in day-surgery 681 patients (536 males, mean age 56.3 and 145 females, mean age 48.8): 352 had indirect inguinal, 132 direct inguinal, 41 scrotal, 75 recurrent, 38 femoral, 32 umbilical and 12 epigastric hernias. At the day of the operation, a short term antibiotic prophylaxis 30 minutes before the operation was applied. One hundred and forty-four patients (21.6%) were submitted to epidural, 529 pts (77.7%) to local and 8 pts (1.2%) to general anesthesia. We used a modified Lichtenstein procedure which consisted of suturing the polypropylene mesh to Cooper's ligament in treatment of the inguinal hernia. We put moreover a polypropylene plug into the internal inguinal ring, when dilated more than 2 cm, and always in recurrent hernias. A duplication of the transverse abdominal aponeurosis was done in all direct hernias, with apposi-

tion of a patch and occasionally a plug. In femoral hernias we put a plug in femoral approach and plug + mesh in the inguinal approach. In umbilical and epigastric hernias we set the mesh beneath the fascia. Visits at 3, 7 days, 3 months and 1 year after operation.
RESULTS: Eight patients were converted to general anesthesia, due to local anesthesia intolerance. At 58th month follow up, we report 93.9% success rate. Post-operative complications rate were 6.0%: 4 seromas, 13 wound hematomas, 15 cases of neuritic pain and 2 orchitis, which healed after medical treatment. We observed moreover 5 recurrent inguinal hernias (due to mesh dislocation) and 2 homolateral femoral hernias, occurring 6 months after the operation. It was the first year of our experience when we also used the Trabucco procedure. Since then we have always used modified Lichtenstein procedure, applying a single stitch to connect the mesh to the Cooper's ligament.
CONCLUSION: Our results are excellent with index of satisfaction very good (98.8%). Further this technique reduces the phycological stress with less post-operative discomfort and allows an early return to daily occupation.

Day surgery for proctological diseases: our experience

A Orio, P Boccasanta, P Granelli, M Reitano, C Siardi, F Zennaro

Institute of General Surgery and Oncological Surgery, *Ospedale Maggiore Policlinico IRCCS*, *Milan*, *Italy*

INTRODUCTION: Since January 1994 to October 1998, in our Department of 2nd General Surgery of Policlinico of Milan, 549 patients (331 males and 218 females, with mean age 47.4 years) with proctological diseases underwent day surgery.
METHODS: 277 operations were performed for second and third degree hemorroids, 133 for chronic anal fissures, 79 for non-complex fistulas, 58 for pilonidal sinus and 2 for perineal warts. Before operation in addition to a careful patient's history, screening tests and patient's consent, we carefully studied the psychophysical fitness of the patient and his/her family for day surgery under local anesthesia. The subaracnoidal locoregional anesthesia (18.2%) or local infiltration associated to neuroleptical anesthesia (81.8%) was performed with the patient in the lithotomy position. In hemorrhoidal disease the operation followed the classic Milligan–Morgan procedure or elastic ligatures; trans-sphincteric fistulase were closed by a seton; fissurectomy was always combined with anoplasty and left internal sphincterotomy. In pilonidal sinus we performed wide excision and primary closure (with a large silastic drainage) except in recurrence and in case of pilonidal abscess. Postoperative pain was controlled with nonsteroid anti-inflammatory drugs with excellent results. The patients were discharged from hospital late in the afternoon and were given the possibility to contact the surgeon in case of any complications. Clinical check-up was performed, for all patients, at 7 days, 1, 6 and 12 months post surgery.
RESULTS: We had 23 complications (6.05%) and in particular: 3 serious bleeding posthemorroidectomy (1.1%), 4 residual hemorroidis (1.44%), 8 cases of delayed healing in anal fissures (4.41%), 2 relapsed fistulas (2.51%) and 12 cases of healing by second intention in pilonidal sinus (20.6%). We had, also, 4 patients with important pain after surgery who needed hospitalization. Index of satisfaction 98.7%.
CONCLUSION: Our results are satisfactory and in line with the international literature; the day surgery for proctological diseases is, now, a reality that reduces the waiting and hospitalization time and requires less human resources.

Prosthetic tension-free hernioplasty for primary inguinal hernia: experience on 809 cases

A Coda, F Ferri, C Filippa, R Mattio, A Bona, G Ramellini

Ospedale Gradenigo. Divisione di Chirurgia. Prim. C.so Regina Margherita, *8.*, *10153*, *Torino*, *Italy*

INTRODUCTION: The authors report their experience with open prosthetic repair in the treatment of adult primary inguinal hernias (PIH): The technique is derived from Trabucco method, with some changes as the cone-shaped plug.
METHODS: 809 cases were operated with this procedure from 1992 to 1998, i.e. 70% of all PIH. Of all these operations 65.2% were performed in local anaesthesia (LA) (528 cases). Apart from 10 early cases in which dacron mesh was used, 799 polypropylene (PPL) mesh were inserted. In 545 the same mesh set up plug and patch. In nearly 10% for the weakness of the floor of the inguinal canal it has been necessary to further reinforce it, doubling the mesh. In the last 254 cases was adopted the close knit net for the patch. Particularly, a close knit net with controlled memory was chosen in 180 cases and it is still used.
RESULTS: The following complications were observed: wound infection 1.6%, hematoma 1.7%, orchitis 0.8%, recurrence 0.7%. When LA was used the complications rates dropped to 1%, 1%, 0.6%, 0.6%, respectively. Mean age of patients with complications was higher than of uncomplicated cases.
CONCLUSIONS: This procedure can be performed in virtually all cases of PIH, except very rare adult congenital hernia with aplasia of the postenor inguinal wall and abdominal retention of the testis. In other cases of even huge direct or indirect, but PIH, when the sac is reducted (indirect sac simply inverted: direct sac plicated or inverted with purse string suture), the anatomy is always the same. On the contrary we do not recommend it for recurrent hernia, that may have a problem in wound recovery for scars or deficiency of fibroblast activity. Our results were consistent with large series in literature. Complications increased when anaesthesia other than LA were used, in obese and in elderly patients. No patients required prostheses removal due to pain or infection. About the various prostheses, we strongly advise against Dacron and in favour of PPL. Several types of PPL mesh were tried.
CONCLUSIONS: We suggest a single thread close knit net with controlled memory stiffness for the patch and a looser and thinner version for the plug give the best results.

Postoperative pain after alloplastic anterior hernioplasty 'tension-free' versus 'sutureless' technique

V Ripetti, CL Cellamare, R Alloni, P Berloco, M Caricato, D Borzomati, A Arullani

Libera Università Campus Bio, *Medico*, *Roma*, *Italy*

INTRODUCTION: Inguinal hernioplasty is one of most frequent surgical operations all over the world. Anatomic techniques have been replaced by 'tension free' techniques. The incidence of postoperative pain is not definitively assessed: according to some authors the incidence of low pain is as low as 3.4% and of moderate or severe as of 0.08% two years after operation. The aim of our paper is the evaluation of the occurrence of somatic, visceral and neuropathic pain after 'Lichtenstein' hernioplasty compared with 'Trabucco' technique.
MATERIAL AND METHODS: Since April 1997 to November 1998, 50 patients underwent inguinal hernioplasty in one day surgery. Twenty four cases have been randomized for the use of Trabucco technique, 26 for Lichtenstein technique. Minimum follow-up was 6 months. Post-operative pain was evaluated 1, 7, 180 and 350 days post-operatively. The evaluation of pain was performed by Visual Analogue Scale, topographically and with a qualitative evaluation provided by a multiple choice test. Time elapsed from surgery to full physical recovery and to start working, as well as cutaneous ipo and anesthesia has been evaluated.
RESULTS: Mean follow-up was 7.9 months (range 6–12). Physical recovery was immediate in both groups, and cutaneous anesthesia

and visceral pain was never observed. Hypoesthesia along scar and in inguino-scortal area occurred in 21 patients in group A with a mean duration of 5 days (range 2–28) and in 20 patients in group B with a mean duration of 3.5 days (range 3–7). In first post-op day 14 patients complained of pain: 9 cases in group A and 5 in group B. In group A the pain was neuropathic in 2 cases and somatic in 7 cases (mean VAS value 1.88: range 1–3), and in group B was neuropathic in 3 cases and somatic in 2 (mean VAS 1.6: range 1–3). Out of 5 cases in which the pain continued until 7 post-operative days, with a mean value of 1 at VAS, 3 cases were in group A (all somatic pain) and 2 cases were in group B (somatic 1, neuropathic 1). At 6 and 12 month follow-up residual pain was never observed. Patients in group A started working 2.84 days (range 1–7), in group B 2.66 days (range 1–5) post-operatively.
CONCLUSIONS: In both groups starting work was immediate and long-lasting cutaneous anesthesia or visceral pain never occurred. Duration of ipoesthesia was shorter in group B, as well as VAS evaluation of pain in 1st and 7th post-operative day; the pain was mainly somatic in group A patients and neuropathic in group B patients. This is probably due to more strength of the suture on inguinal ligament in group A patients and to the more extensive anatomical dissection needed for the fashioning of a Trabucco ernioplasty. Such neuropathic pain was never long-lasting and is not due to nerve entrapment. Our preliminary study shows that postoperative pain has lower intensity and duration, even if not statistically significant, in the sutureless technique, and the shorter duration of non-working period may show a social utility.

Effects of spinal needle type on lateral distribution of 0.5% hyperbaric bupivacaina. A double-blind study

AM Scandroglio, E Casaletti, E Colnaghi, C Gecele, A Casati

Universita degli Studi di Milano—IRCCS H. San Raffaele, Milan, Italy

GOAL OF THE STUDY: To evaluate the influence of needle type on lateral distribution of 0.5% hyperbaric bupivacaine.
METHODS: Thirty patients undergoing lower limb surgery were placed in the lateral position with the side to be operated dependent and received aural puncture by either a 25-gauge Whitacre (Whitacre, n = 15) or Quincke (Quincke, n = 15) spinal needle. The needle hole was turned towards the dependent side and 8 mg of 0.5% hyperbaric bupivacaine were injected over 30 sec. Lateral position was maintained for 15 min, while a blind observer recorded loss of pinprick sensation and degree of motor block on both dependent and nondependent sides every 5 min until regression of motor block by one degree on the dependent side.
RESULTS: The main results are presented in the table.

	Whitacre (n = 15)	Quincke (n = 15)
Maximum sensory level (Dependent side)	T_{10} ($T_{12}-T_4$)	Tg (L_2-T_4)
Maximum sensory level (Nondependent side)	L_3 ($/-T_4$)	Tg ($/-T_5$)* §
Time to reach maximum sensory level (dependent side) (min)	20 (6–30)	20 (12–45)
Regression of sensory level by two segments (min)	60 (35–105)	75 (45–90)
Regression of motor block by one degree (min)	135 (75–165)	120 (60–180)
Patients with unilateral sensory block (45 min)	10 (66%)	2 (13%)§
Patients with unilateral motor block (45 min)	11 (73%)	6 (40%)

Data are expressed as median (range) or as count (percentage).
* $P < 0.05$ vs dependent side; § $P < 0.05$ vs Whitacre

CONCLUSIONS: We conclude that when low dose 0.5% hyperbaric bupivacaine is injected slowly in patients in the lateral position for 15 min, the Whitacre spinal needle provides a more marked differential block of sensory nerve roots between dependent and nondependent sides as compared to the Quincke needle.

Argon laser: a quite versatile instrument for office-based ambulatory plastic surgery

F Quatra[a], E Tekavec[b], M Colonna[a], P Quatra[c]

[a]*Division of Plastic Reconstructive Surgery, University of Messina, Italy*, [b]*Malmoe, Sweden*, [c]*Palermo, Italy*

INTRODUCTION: The argon laser (AL) was one of the first lasers to be introduced in Plastic Surgery in the early 80's. It was mostly used for the treatment of vascular malformations (e.g. port-wine stains) and for field-destructive procedures (treatment of warts, benignant skin tumors, etc.).
METHODS: Eight years of office-based practice with the AL are reviewed with reference to the results (compared to the relevant literature) and to the specific needs of office-based plastic surgery.
RESULTS: The AL resulted as an extremely versatile tool. The experience with a dual pattern (either continuous or pulsed modality) unit led us to a more varied use than expected, including minor surgery of the eyelids and the nasal cavities. The outcomes are comparable to more recent and more specialized laser, although often slightly inferior.
CONCLUSIONS: Even if more recent and specialized lasers tend to replace the AL in its different applications, its extreme versatility makes the AL a still outstanding and powerful tool for the plastic surgeon combining aesthetic, reconstructive and oncologic indications. It is still the best choice for a single item purchase.

Intrathecal administration of a bupivacaine–morphine hyperbaric mixture for postoperative pain relief in one day surgery

S Farci[a], A Melis[a], R Taccori[a], C Dazzi[b], S Licheri[b]

[a]*Servizio di Anestesia*, [b]*Istituto di Patologia Chirurgica, Ospedale S. Giovanni di Dio, Cagliari, Italy*

INTRODUCTION: The aim of this study was to determine the effectiveness of the intrathecal administration of morphine–bupivacaine hyperbaric mixture in relieving postoperative pain in outpatients submitted to haemorrhoidectomy avoiding major side effects.
METHODS: Informed consent obtained, 30 ASA I–II patients, undergoing Milligan–Morgan haemorrhoidectomy on an overnight case basis, was scheduled to receive 'selective perineal low-dose subarachnoid anesthesia'. After i.v. premedication, aural puncture was performed with a 25G Whitacre needle, using a midline approach at the L4–L5 interspace, with the patient kept in the sitting position for 10 min after the injection. No volemic preload was performed. The total volume of the anesthetic mixture (0.5 ml) was formed by 0.3 ml (2.25 mg) of 0.75% hyperbaric bupivacaine (HB) and 0.2 ml (0.2 mg) of hydrochloride morphine hyperbaric—made by 1:9 dilution with HB. Specific gravity of the mixture was 1.025 and pH 5.5 at 25°C. Sensitive and motor block extent was evaluated and 3 hours of bed-rest was recommended. The patients were postoperatively monitored to assess the: incidence of hypotension, pruritus, urinary retention, respiratory depression, post-operative nausea and vomiting (PONV). Postoperative analgesia duration was recorded.
RESULTS: Ten minutes after the subarachnoid puncture, sensitive and motor block was limited at S3–S5 in all patients. At the end of the surgical procedure 6 patients had S1–S2 ipoaesthesia without lower limbs motor block. No hypotension was found. Mild pruritus occurred in 14 cases particularly localised to buttocks. No patient

experienced intraoperative pain. The mean micturition time was 7 hours and no urinary retention occurred. Twelve patients suffered PONV while no respiratory depression was detected. First walking was possible after 3 hours and all patients were discharged within 24 hours.
DISCUSSION: At the described dose 0.75% HB produces selective blockade of the perineal region while HM addition protracts postoperative pain relief. Hyperbaricity of the mixture and postoperative bed-rest seems to reduce the opioid cephalic spread, as demonstrated by the low and slow onset of PONV likewise the pruritus location. We ascribe the absence of urinary retention to the low dose of drugs employed, and to the low volumes of intraoperative infusion. Whitacre 25 G needle avoided PDPH onset.
CONCLUSIONS: In spite of the small number of cases we consider the HM–HB mixture effective and safe in haemorrhoidectomy pain relief in one day surgery. Further studies are necessary to evaluate effectiveness and safety of this technique in out-patient surgery too.

Intrathecal administration of warmed 0.75% hyperbaric bupivacaine in outpatient appendectomy

S Farci, F Sias, S Licheri

Villa S. Rita Day Surgery, *Cagliari*, *Italy*

INTRODUCTION: The present study was undertaken to determine the effectiveness of the intrathecal administration of low dose warmed 0.75% hyperbaric bupivacaine for ambulatory appendectomy compatibly with a rapid street fitness recovery.
METHODS: After informed consent, 20 ASA I and II patients were submitted to ambulatory appendectomy: the surgical procedure consisted in a small incision (2 cm), extrinsecation only of the appendix whose mesenteriolus was infiltrated with anesthetic block. After premedication with midazolam 2.5 mg and atropine 0.01 mg/kg i.v., selective unilateral subarachnoid anesthesia (SUSA) with a 25-G Whitacre needle using the midline approach at the T12–L1 interspace was performed. One millilitre of 0.75% hyperbaric bupivacaine (HB), warmed to 37°C, was slowly injected keeping the patient in the right lateral decubitus for 10 minutes in Trendelembourg 10 degrees. Returning to the supine position for the operation, the following points were evaluated: the cephalic extent, the degree and length of the anesthetic unilateral block. During surgery BP, HR, EKG, SatO2 were monitored as well as intraoperative pain, postoperative nausea and vomiting (PONV). The duration of intervention and sensory blockade were recorded as well as the post-dural puncture headache (PDPH) rate.
RESULTS: Ten minutes after aural puncture, unilateral anesthetic block reached T6 in 15 patients, T8 and T9 respectively in 3 and 2 patients. Eight patients had epigastric pain and nausea during the appendix crow out. All symptoms withdrew after the anesthetic infiltration of the mesenteriolus. Neither cardiovascular abnormalities nor urinary retention were noticed. Seven patients experienced intraoperative shivering. The mean duration of surgery was 25 minutes while analgesic block lasted for 85 minutes. Al1 the patients were able to walk after 180 minutes and discharge was possible after 6 hours. No PDPH occurred in the following days.
DISCUSSION: The low dose of warmed 0.75% hyperbaric bupivacaine induced a satisfactory unilateral sensory and motor blockade. Anesthetic infiltration of the mesenteriolus was necessary to block sensitive afference of more cephalad spinal roots than T8. Unilateral sympathetic block did not provoke cardiovascular changes. Intraoperative shivering remained of uncertain origin. The satisfactory motor recovery and the absence of major side effects permitted an early discharge of patients. Analgesia length was sufficient in all cases while PDPH absence confirmed the safety of finest athraumatic needles.
CONCLUSIONS: In spite of the small number of cases, the subarachnoid administration of warmed 0.75% hyperbaric bupivacaine at low dosage appears safe and effective for SUSA in ambulatory appendectomy.

Ultrasound guided treatment of intraprostatic cyst

C Trombetta, G Liguori, L Buttazzi, G Savoca, E Belgrano

Department of Urology, *University of Trieste*, *Trieste*, *Italy*

INTRODUCTION: Prostatic cysts are rare; they are to be considered in the evaluation of obstructive azoospermia. A correct diagnosis is based on transrectal ultrasound of the prostate. Herein we describe our experience with perineal ultrasound cyst aspiration.
METHODS: During the last ten years 21 infertile patients underwent ultrasound puncture of an intraprostatic cyst. Patients were placed in the lithotomy position, a 16 G needle was adopted; by means of ultrasound was possible to follow the needle entering the cyst. The content was aspirated and, if no spermatozoa were detected in the cystic liquid, sclerosing agents were introduced.
RESULTS: The technique was performed successfully in all patients with symptomatic cyst within the prostate. Follow-up prostatic ultrasound and semen analysis were performed in 18 patients. There was one recurrence that was aspirated again. In twelve cases an increase in sperm number and motility was obtained, in three cases oligoasthenospermia remained unmodified and two patients are still azoospermic. In seven cases the partners became pregnant (three times in the same patient).
CONCLUSIONS: This technique allows for easy, successful drainage of symptomatic cysts in an outpatient setting without specialized equipment or anesthesia. In our opinion we think that this technique is particularly indicated in subfertile patients where it is better not to manipulate seminal pathways in order to avoid further damage to patients fertility.

Sclerotherapy of varicocele: a new combined retrograde and antegrade approach

C Trombetta, G Liguori, L Buttazzi, G Savoca, E Belgrano

Department of Urology, *University of Trieste*, *Trieste*, *Italy*

INTRODUCTION: Percutaneous sclerotization is an established method for treatment of varicocele performed on an outpatient basis. In 15% of cases, selective catheterization of spermatic vein cannot be carried out because of collaterals and vessel perforation. In these cases, antegrade sclerotization is a good optional tool that can be performed using local anesthesia in day surgery.
METHODS: Since 1995, 377 patients with varicocele were treated by means of sclerotherapy. Three hundred and thirty six patients underwent successfully percutaneous retrograde sclerotization, while 41 patients, in which retrograde approach was not feasible, were treated by antegrade sclerotization according to Tauber technique.
RESULTS: The follow-up clinical and ultrasound examination three months postoperatively showed complete disappearance of varicocele in 95.6% of cases. We found an improvement in progressive motility in 71% of patients treated by retrograde sclerotization and in 69% of patients treated by Tauber technique.
CONCLUSIONS: We used to prepare the operating room for antegrade procedure when we are performing a retrograde percutaneous scleroembolization. Adopting this combined approach we were able to treat 377 patients consecutively by means of sclerotherapy. Tauber technique allows to solve immediately those cases in which percutaneous sclerotherapy is not feasible.

Day surgery anaesthesia: two years activity

B Zanella, S Riggio, G Aguzzi, S Magagnotto, F Sordo

Unita Operativa di Day Surgery, *Nogara ULSS 21 Via Gianella*, *1 Legnago*, *Verona*, *Italy*

INTRODUCTION: Different types of surgical interventions have been analysed, in speciality areas such as orthopaedics, general surgery, oculists, and also the various anaesthesiological techniques applied during two years activity of a Day Surgery Service.

METHODS, RESULTS AND CONCLUSIONS: The data analysis states how new kinds of surgical interventions entered into the Day Surgery activity, and how the anaesthesiological techniques have been modified with a reduction of the subarachnoidal anaesthesia and a significant increase in a mixed technique: local anaesthesia with sedation. The study also examines the cases of some patients who have been obliged to use normal hospitalisation and how that has been conditioned more by psychosociological reasons than by the real surgical and/or anaesthesiological complications.

The Milligan–Morgan Haemorrhoidectomy in day surgery

S Riggio, M Muftah, B Zanella, F Sordo, G Aguzzi, S Magacuotto

Unita Operativa di Day Surgery, Nogara ULSS 21 Via Gianella, 1 Legnago, Verona, Italy

INTRODUCTION: During the last years, according to the WHO, the objective of improving performances, rationalising resources and the use of materials was pursued to reach better guardianship of health and to raise the psychic and physical comfort of citizens. In order to reduce the costs of hospital management of some surgical pathologies of 'average' entity (hernias, varix of inferior limbs, haemorrhoids, sinus pilonidalis etc…) structures were developed devoted to their care that would allow to limit to a few hours hospitalization after surgical procedures.
METHODS AND RESULTS: In the hospital center of Nogara (Legnago, Verona) a unit of Day Surgery is active since 1/1/97 and since than until 30/9/98, 40 Milligan–Morgan haemorrhoidectomies have been performed by the same surgeon as treatment for haemorrhoids of III and IV degree. The patients, selected on ASA issues (all I or II), had spinal anaesthesia (6) or general anaesthesia (34). All of them were discharged from the hospital after some hours (max. 6 after procedure) showing no particular problems; after 3 and 6 hours from the intervention they were called by phone and reevaluted next day in ambulatory. They had no bleeding and uroschesis. The pain has been controlled with bland FANS orally, except two cases that needed analgesic intermuscular injection therapy for two days. A case of local edema has resolved with sitz baths after 24 hours from the intervention. Alvus has opened within 24 hours. After 3 months we have not found recurrence.
CONCLUSIONS: Suitable selection of the patients, with the correct information given to them on the typology of procedure and its possible consequences, professionalism and experience of surgeons, that are always available by telephone for 48 hours after intervention, and the reception of the facility, are essential elements for correct pre and post operating management of haemorrhoidal pathology that is as much frequent as little beared.

The external fixation device of the wrist on a day surgery basis

JM Taglioretti

Istituti Clinici di Perfezionamento, C.T.O., Milano, Italy

Fourteen distal radius fractures treated by application of an external fixation device (EFD) on a Day Surgery Basis at I Department, CTO, Milan, during the first 6 months of 1998 were studied. The purpose of this study was to assess if the advantages coming from such a surgical treatment in front of wrist fractures, generally considered 'as critical' for a conservative traditional treatment and possibly with surgical indication, were such to justify to fitting out them and on a Day Surgery Basis. The patients were: 5 patients with unstable-comminuted (AO type C1–C2) fractures; 4 patients with loss of reduction following cast immobilisation; 2 patients with refracture of former fracture of the wrist treated with closed reduction; 2 patients with serious osteoporose; 1 obese patient. The range of age was 58–74 years; 8 were females, 6 males. All patients were treated through application of Pennig II external fixation device, with axillary block anaesthesia with X-ray control on Day Surgery Basis. The gentle motion was performed on the 4th and 6th week—and on the 8th week at F.E. removal. The results were considered as advantages and disadvantages compared with closed reduction and cast immobilisation or with open reduction and internal fixation.
ADVANTAGES: The application of EFD may be obtained in emergency, it deals with a quick technique, and enabling to control the fracture, the haematoma and the circulation at once makes it possible to have Day Surgery treatment; the EFD offers all the advantages of the others EFD safe immobilisation with an immediate mobilisation of the near articulations; better characteristic of the bone, tolerability (the EFD has always been well tolerated). A functional restoration (93% of the patients had a complete recovery).
DISADVANTAGES: (The same as the other fixations): cost of this method (operating theatre and staff use; device cost), mini open access; intolerance or sepsis possible of the fiches. The authors consider that this method is reliable and that it can be suggested for the following reasons: l) no neuro-algo-distrophie was observed; 2) no complications have been met. The patients proved to be satisfied, particularly the group that had previously another treatment, with the quick way back home or work; for the prompt restoration, both thanks to the lack of pain during and after the treatment, and for the small impact of this surgery.

Mini invasive procedures in hallux valgus surgical treatment

M Guelfi, E Abello, S Calcagno, M Borgni, F Priano

There are several surgical treatments for hallux valgus (HV) correction; in the literature more than 100 procedures are described and nowadays the procedures allowing a moderate invasion are appreciated for good results obtained, peripheral anaesthesia used, day-hospital, quick recovery and functional activity. Since 1993 we use mini invasive surgical treatments such as 'Distal soft tissue', and Chevron and Bosch distal osteothomy. In painful HV with incongruent joint, IM angle under 15° and Mph angle under 35°–40° we use 'Distal soft tissue' treatment employing Freeman's suture anchors. In cases presenting the same angles but congruent joint we perform a Chevron osteothomy, whereas in cases with greater angle values we perform Bosch M1 distal osteothomy. All patients have been treated in day-hospital, with loco-regional peripheral anaesthesia and load allowed in the operation day; the resumption of work has occurred between the 20th and the 40th day. Results have been valued by the Groulier score system according to which we have obtained excellent results in 27% of cases, good results in 68% and moderate results in 5%.

Ropivacaine in ambulatory chronic lower-limb superficial venous insufficiency surgery

G Botta, G Delle Monache, A Piccinetti, M Belcastro, S Mancini

Center of Phlebolinphological Research Therapy and Rehabiliatation, University of Siena, Italy

Phlebological surgery, with specific regard to superficial lower limb vein insufficiency, can be easily considered as one of the surgical procedures which can be undertaken in a Day-Surgery environment. The employment of anesthesiological techniques, such as troncular anaesthesia, blocking the sensitive nervous fibers and specifically those fibers which are responsible for pain sensation from the skin and from lower limb superficial structures, has allowed the development of surgical phlebological techniques in an outpatient setting. In this study we describe our experience with ropivacaine, a new long-acting anaesthetic used in loco-regional anaesthesia in the treatment of 50 patients (38 F and 12 M, mean age 42 years), affected by chronic lower-limb superficial vein insufficiency.

Varicocele persistance after Tauber's antegrade sclerotherapy vs. sub-inguinal ligation. A randomized study

F Rosso[a], P Cortese[a], M Scogna[b], C Giberti[a]

Divisione di [a]Urologia e [b]Laboratorio Analisi, Ospedale S. Paolo, Savona, Italy

INTRODUCTION: The sub-inguinal ligation of the gonadic veins is associated with a 20% recurrence or persistence rate. For his antegrade sclerotherapy, Tauber reports a 9% relapse rate. This randomized study compares reflux persistence, surgery duration and hospitalization, postoperatory pain, full recovery time and the satisfaction index.
METHODS: One hundred dispermic patients with idiopathic varicocele were randomized. Preoperatively, all the patients underwent C.W. Doppler ultrasounds of the spermatic cord and semen analysis: 50 underwent subinguinal ligation of the gonadic veins under spinal anesthesia, and 50 underwent antegrade sclerotherapy under local anesthesia. All the patients received a questionnaire for postoperative pain assessment, the satisfaction degree of the surgical procedure and resumption of normal activities. All the patients underwent a physical and a Doppler check 1 week from the surgical procedure to check the reflux disappearance.
RESULTS: In the 100 recruited patients, we observed 9 reflux persistences, all in their first treatment: 5 after sub-inguinal ligation (10%) and 4 after antegrade sclerotherapy (8%). Average surgery duration was 33 min for ligation and 28 min for Tauber's procedure. Postoperative pain was lower after Tauber rather than ligation (0.7 and 0.95, respectively). The satisfaction index was higher with Tauber's procedure (24 vs. 27.5), complete recovery was around 6.35 days after ligation and 4 after antegrade sclerotherapy. There was only an important complication: a chemical orchitis caused by the sclerosing agent in an antegrade sclerotherapy.
CONCLUSION: In our experience, Tauber's antegrade sclerotherapy is a valid alternative to sub-inguinal ligation, since postoperative persistence of varicocele is similar. However, Tauber's procedure is associated with shorter surgery duration and hospitalization, less pain and higher satisfaction indices.

The day surgery organization and the breast neoplastic growth control

M Cherubini, P Baxa, M Sustersich, G Mustacchi

Istituto di Clinica Chirurgica, Ospedale di Cattinara, 34100 Trieste, Italy

INTRODUCTION: The collection of SEER data (Surveillance, Epidemiology and End Results) stimulated our research on breast cancer evolution, to define an organizational model and the contribution of the Day Surgery, in the neoplastic growth control.
METHODS: The following parameters are considered in neoplastic check-up: 1. age of patients and hormonal situation; 2. tumour diameters (Tis,T1a, T1b, T1c, T2, T3, T4); 3. stage; 4. histology and grade (G1 high, G2 intermediate, G3 low differentiated tumours); 5. quantitative measure of hormonal receptors (f. mol/mg), determined in the operative sample or in the local recurrence with wide excision, performed in Day Surgery; 6. follow-up (1–6 years after operation), complementary therapies and survival.
RESULTS: The most frequent stage is II, which represents 51%, whereas 26.2% of the patients belong to the stage I, 16.2% to III, 6.2 to IV. By follow-up 10.6% had died. Local or systemic recurrence is checked in 27.5%. The local recurrence is noted 55 months after operation, more frequent after mastectomy compared to Quart. It increases in late stage operated patients and it can be caused by neoplastic embolism, it suggests mortality limited to 33% at 2 years after operation. The comparison of the four receptor phenotypes shows in pre-menopause progestinic receptors prevalence, oestrogenic in post-menopause. The percent distribution of receptor phenotypes is: 69% double receptor positivity, 19% double negativity, 10% single oestrogenic positivity, 2% single progestinic positivity. In early cancers G1 and G2 grade is represented in 85%, oestrogenic positivity in 71.3%. In late cancers (recurrence), II and III grade are more represented with oestrogenic positivity decrease, the more undifferentiated the lesion is. Oestrogenic progestinic ratio is significant and increases in recurrence (12.7), compared to stages I, II (4.44–4.86, $p < 0.01$) and to stage III (5.12; $p < 0.03$).
CONCLUSION: The neoplastic growth control is possible in a Day Surgery organization, staging and preparing the following surgical treatment in hospitalization. In contribution with an oncologic centre (for the complementary therapy), it is possible to organize in Day Surgery the follow-up and the wide excision of the recurrence, which may indicate an oestrogenic progestinic ratio > 5.12, so suggesting an evolutive breast lesion, also if not always associated with poor prognosis.

Progress in day surgery 1991 to 1998 in England and Wales

B Alexander, J Bailey, J Boyce

Audit Commission, London, UK

INTRODUCTION**:** The Audit Commission investigated day surgery in England and Wales in 1991 and found considerable scope for expansion. The report set out the main barriers and ways to overcome them, e.g. the need for better information and facilities. A recent survey by the Commission has shown a substantial improvement, but there is still scope to do more.
METHODS: Day surgery rates were measured for 20 specific procedures in 1991 and 1998, based on 244 hospitals. The throughput and utilisation of day surgery units were also examined.
RESULTS**:** For most of the procedures examined, average day surgery rates now exceed the best rates of 1991. Ninety three percent of hospitals now have special purpose units dedicated to day surgery, compared to 73% in 1991, and a higher proportion of those have theatres attached. The throughput of patients per bed space has also increased. Clinicians are more committed to day surgery, with over half of day surgery units now being directed by a consultant.
CONCLUSION: Although there have been some important improvements there is scope to do more day surgery, because many hospitals are still behind the rates achieved by the best and much more elective surgery is now being done. Some units are still under-utilised or taken up with procedures that do not require an operating theatre.

Emerging trends in short-stay surgery

PJ Wayne[a], JP Harenski[b]

[a]Western Region, HealthSouth, [b]AUSMS Healthcare Consultants, San Diego, CA, USA

INTRODUCTION: Postsurgical recovery care of ambulatory surgery patients has undergone a significant evolution from its original concept of an up to 3 day stay following the surgical procedure in a skilled-nursing care environment with acute care nursing levels. When first introduced to the California market in 1989, 72 hour postsurgery care programs were authorized to admit patients who had experienced surgery in one of approximately 60 different procedures. By 1995, one major US surgical company's recognized list of authorized recovery care procedures had shrunk to ten procedures. This change has been facilitated by advances in anesthesia, surgical technique, and postsurgical pain management.
METHODS: The presenter will review the shift to more complex types of surgical procedures in ambulatory surgery centers from the early 1990s to 1998. The reasons for this upward shift in level of complexity of the 'new' set of short-stay procedures will be identified and compared to the state of surgical practice in 1990. Economic benefits that devolve to the patient will be analyzed by comparing the fees and charges to patients for the procedure when done as an inpatient or ambulatory surgery center patient.
RESULTS: The analysis presented here will demonstrate that substantially more complex surgical procedures can now be safely and effectively executed in ambulatory surgical centers. Key factors that

must exist at the ambulatory surgery center in order to perform more complex surgery will be reviewed, including surgeon experience, OR staff expertise and experience and recovery staff capabilities. In addition, patient readiness issues, both as to readiness for the procedure itself and readiness as to needed support during the general recovery period, will be discussed.
CONCLUSION: Advances in anesthesia, surgical techniques, and pain control methods have made it possible to safely perform a new range of surgical procedures in the ambulatory surgery center setting. This shift in complexity now permits a new cohort of surgical procedures to safely be moved from the inpatient to ambulatory setting with concomitant economic savings to the patient.

Peribulbar block for community ophthalmic surgery

RA Moody

Dept. of Anaesthesia, Kettering General Hospital, Rothwell Rd. Kettering, Northants, NN16 8UZ, UK

INTRODUCTION: The concept of hospital admission and an overnight stay of up to two nights for cataract extraction and lens replacement using the most modern techniques of phako-emulsification was challenged. We set out to prove that safe, reliable and successful sophisticated cataract surgery could be performed in the community; i.e. in the patient's own general practitioner's clinic premises.
METHODS: After appropriate staff recruitment, extensive training, and establishment of rigourous selection criteria we embarked on a programme of lens replacement via phako-emulsifcation under local anaesthetic using solely a peri-bulbar technique in two sites within the premises of a general practitioner's surgery.
RESULTS: Four hundred and forty one patients (100%) received a successful peri-bulbar block as judged by a) 0% complication related to anaesthesia, b) 441 patients fully satisfied according to follow up questionnaire, c) the operating surgeon fully satisfied with operating conditions in 441 cases (100%), d) Patient waiting time reduced from a projected mean of 17.5 months to a mean of 4.5 months, e) projected financial savings of £275 (US$410) per patient to total £121 275 or US$180 810 based on one night of hospital inpatient care.
CONCLUSION: We have proved that modern sophisticated cataract surgery can be performed with total safety outside the hospital environment and in the community. This initiative has been recognised by a specific award for Innovation by the UK Secretary of State for Health, The Rt. Hon F. Dobson PC.

Outpatient laparoscopic cholecystectomy

S Bringman[a], S Ramel[a], E Peterson[b], K Hansen[b], B Anderberg[a]

[a]MISS (Minimally Invasive Surgery Stockholm) and [b]Day Surgery Centre, Huddinge University Hospital, Stockholm, Sweden

INTRODUCTION: Outpatient laparoscopic cholecystectomy has been performed in several centres in the world but has not yet been fully evaluated.
METHODS: During January–October 1998 patients with uncomplicated cholecystolithiasis without complicating medical disorders were included in the study. Preoperatively 1 g paracetamol suppository and 8 mg ondansetron iv was given. All patients received standardised iv anaesthesia with propofol/alfentanil/rocuronium. A standardised laparoscopic cholecystectomy with low pressure CO_2 was performed by experienced laparoscopic surgeons. By the end of the procedure all patients received 75 mg diclofenac and 100 mg tramadol im. Bupivacain 5 mg/ml was given in the wound edges. Postoperative pain was evaluated with VAS (Visual Analogue Scale, 1–10). The patients were interviewed by telephone in the first postoperative evening and the following morning. Follow-up was via a questionnaire.
RESULTS: Forty-two patients with a mean BMI of 26.5 (19–35) have been operated upon. The mean age was 42.6 years (18–61). Thirty percent of the patients had chronic cholecystitis. Intra-abdominal pressure was 9 mmHg on average. Peroperative cholangiography was performed in all patients. Mean operating time was 72 min (40–110). Mean VAS regarding pain was below 3 in the day surgical unit and below 2 at home. Three patients were admitted, one due to general weakness, one with multiple choledocholithiasis and Mirizzis syndrome who was converted to open surgery, and one with multiple choledocholithiasis who had an ERCP done postoperatively. The rest of the patients had a postoperative stay of 6 hours. No major complications occurred.
CONCLUSION: Outpatient laparoscopic cholecystectomy can be performed safely with a low admittance rate.

Anterior cruciate ligament reconstruction as day-surgery—procedures and postoperative evaluation

L Sørensen, M Houg, O Dichmann

Department of Orthopaedics, Vejle Hospital, Denmark

INTRODUCTION: The aim of this study was to describe the procedures and the postoperative outcome of arthroscopic anterior cruciate ligament (ACL) reconstruction when carried out as day-surgery.
METHODS: Between December 1995 and September 1998, 91 patients underwent surgery using bone-patellatendon-bone autografts and interference screw fixation. Additional surgical procedures were performed on 35 of the patients. The hospital records were evaluated for a mean of 17 (1–33) months postoperatively. The course of treatment was 1) evaluation and KLT-arthrometer test 14 days preoperatively. 2) Surgery. Cryocuff, Bupivacaine, paracetamol, NSAID and ketobemidon for postoperative pain control. 3) Discharge from hospital after 24 hours. 4) Physiotherapy starts after 14 days. 5) Follow-up after 6 weeks and 6 months.
RESULTS: Eight patients required one further day of hospitalization due to pain (4), nausea (1), haematoma (2) and prolonged anaesthesia (1). Five patients were readmitted to hospital, for a mean of 8 (3–16) days postoperatively. Two patients underwent resurgery due to haematoma/rupture of the cicatrice. No deep infections were found.
CONCLUSION: ACL reconstruction can safely be carried out as a day-surgery procedure.

Improving the process of diagnosis of nonpalpable breast lesions

A Escobedo, L Prieto, E Benito, M Recaj, D Azpeitia, A Moreno, A Guma'

Unitat Funcional de Mama, Inst. Catala' d'Oncologia, Ciutat Sanitaria i Universitaria de Bellvitge, L'Hospitalet, Barcelona, Spain

INTRODUCTION: Randomized controlled trials of breast cancer screening programs have shown that screening can detect breast cancer earlier, reduce the size and stage at which cancers are diagnosed, and reduce the absolute mortality rate of breast cancer by 25–30%. Breast cancer detected by mammography is usually nonpalpable; therefore, a guided biopsy is needed to achieve a diagnosis.
PURPOSE: To evaluate the feasibility of ambulatory biopsy of nonpapable breast lesions. To reduce the time interval between the first visit and the biopsy and to reduce the cost of the overall process.
PATIENTS AND METHOD: Since 1991 all patients with a suspicious nonpalpable lesion of the breast were studied with preoperative imaging-guided needle localization and biopsy using local anesthesia. Before this time all biopsies were performed using general anesthesia. The guide for preoperative localization was a hook or a hypodermic needle. The mammographic indications for biopsy were microcalcifications, focal masses and asymmetric densities.
RESULTS: During the period between 1991 and 1997, 640 biopsies were performed. All biopsies were carried out using local anesthesia

except in 13 cases (2%) that were performed using general anesthesia because of the presence of multifocal lesions. No admissions were needed. Only six procedures failed in removing the suspicious lesions. Thirty-two percent of these biopsies were positive for cancer. No major complications were detected. The time interval between the first visit and the biopsy was reduced from 42 days in 1997. The economic cost was reduced from $857 in 1990 to $428 in 1997.
CONCLUSIONS: The ambulatory biopsy of nonpalpable lesions is possible. The cost and the time interval of diagnosis are reduced by this process.

Ambulatory surgery in gynaecology—18 years experience

A Nold, A Obermeyer, ChM Kosters

Itertalklinik Frauenklinik, Aachen, Germany

Our faculty offers a large spectrum of classical indications for ambulatory surgery like abrasion, conization, sample excision of the breast as well as of modern endoscopic surgery. In a retrospective analysis of 18 years experience in day surgery at our clinic with over a thousand operations a year, we found an increasing rate of day operations. The increase of day surgery and the decline of days of hospitalization with bigger operations are a direct result of the patients preferences and our very low rate of complications. The future trend is to shorten the postoperative stay to three days for a hysterectomy or a similar treatment.

Vitreoretinal surgery in a day clinic—5-year report of the first unit in Germany

S Bopp, K Lueke

Augenabteilung, Tagesklinik Universitatsallee, Bremen, Germany

PURPOSE: Vitreoretinal surgery in Germany and in other countries of Europe is a domain of university hospitals and traditionally performed on an inpatient basis. In the USA, however, about 50% of vitreoretinal cases are done in outpatient centers, either in a hospital or a private setting. In 1994, we established the first day clinic focussed on vitreoretinal surgery in Germany. Treatment of these mostly difficult cases warrant highly trained surgeons and high-tech microsurgical equipment. Even so, operative/postop. complications can be significant. Thus, the efficiency of day-case vitreoretinal surgery had to be established.
METHODS: Meanwhile, >4000 procedures have been performed. Virtually all indications for vitreoretinal surgery were treated: retinal detachment of all degrees of complexity, diabetic retinopathy, macular diseases and a variety of different conditions. Surgical techniques ranged from simple vitrectomies to silicone oil surgery. To establish the effectiveness of vitreoretinal surgery on an outpatient basis, we performed clinical studies on the results of the major indication groups (see above) and reviewed medical and logistic problems in the total patient cohort.
RESULTS: 1. Success rates and complications in all indication groups investigated were equal or superior to those reported from clinical studies. 2. With the stringent organization concept provided, emergency cases (30%), unplanned postoperative events and complications were also controlled. 3. Hospital admission after surgery did occur in single cases for medical reasons, which was far less than transitions from an ophthalmology department to a medical service within a hospital setting.
CONCLUSIONS: Day-case vitreoretinal surgery is an up-to-date concept with high efficiency and great acceptance by the patients.

Carpal tunnel release in 'one hour surgery': about a series of 357 patients

P Hoang, P Maldague, H Van Ransbeeck

Brussels Hand and Microsurgery Unit, Rue de l'Activité 4/15, 1200 Brussels, Belgium

INTRODUCTION: Endoscopic carpal tunnel release remains a controversial technique. Started during the late eighties, it progressively developed during the nineties. Despite potential complications described in the literature (neurological and vascular lesions) it remains a technique of choice for carpal tunnel release. Regarding open carpal tunnel procedure, endoscopic release allows a faster reeducation in the early post-operative care.
METHODS: From January 1995 to October 1998, 357 endoscopic carpal tunnel release were performed at the Brussels Hand and Microsurgery Unit. All the patients were operated on by the same surgeon in an outpatient clinic setting. Patient selection for this surgery had no or minimal medical problem (ASA1 or ASA2) and with a carpal tunnel recurrent after steroid injection or a distal motor latency >4.4 msec at the electromyography. All operations were done with local anesthesy and tourniquet control.
RESULTS: 284 patients were in the series (317 carpal tunnel), including 230 females and 54 males. Age varied from 16 to 93 years. There was no vascular or neurologic complication, mild dystrophy was noted in 3 patients, recurrence of paresthesia occurred in 2 patients. Six percent presented a pillar pain.
CONCLUSION: Surgically, we observed a decreased number of post-operative complication such as Sudeck's dystrophy. Regarding the patient point of view, local anesthesy and the outpatient clinic setting decreased operative stress, time spent for surgery and preparation. The total cost of the surgery is drastically decreased regarding a hospital stay. Regarding our experience in 'one hour surgery', this notion was extended to 31 other additional procedures in hand surgery.

National survey of ambulatory anaesthesia in the Republic of Ireland

AE Bourke[a], J Cahill

[a]St. Joseph's Hospital, Nenagh, Co. Tipperary, Ireland, [b]Irish Standing Committee of the Association of Anaesthetists of Great Britain & Ireland

INTRODUCTION: The first National Survey of Ambulatory Anaesthesia in the Republic of Ireland was carried out during 1998.
METHODS: A questionnaire was sent out to 48 Hospitals in 1998 asking for details on the availability of ambulatory anaesthesia in their hospital; ambulatory surgery unit type; pre-operative assessment of patients; the type of procedures carried; non-consultant doctors exposure to ambulatory anaesthesia: audit of ambulatory surgery unit and problems encountered by the Anaesthetist in providing anaesthesia.
RESULTS: All units carried out ambulatory anaesthesia; 12% of hospitals have a dedicated ambulatory unit and operating theatre. Fifty-five percent of units have written guidelines for selection of patients. All units carry out minor procedures but less than 50% carry out intermediate type procedures. Seventy-five percent of anaesthetics were administered by consultants. Audit was undertaken in 47% of units.
CONCLUSION. Ambulatory anaesthesia is carried out widely in the Republic of Ireland. Few dedicated units exist and some problems result from the absence of such.

Guidelines and antithromboembolism prophylaxis in ambulatory orthopedic surgery

M Raich Brufau, P Martínez Ripol, JA Jiménez Pérez, M Jornet Balló

Unidad de Cirugía Sin Ingreso (UCSI), Hospital Universitario de Traumatología, Vall d'Hebron, Barcelona, Spain

INTRODUCTION: Different studies show the possibility of thromboembolic complications after ambulatory orthopedic surgery but there is no consensus on the optimal prophylaxis. The aim of this study is to verify clinical efficacy, administration security and perfor-

mance for the thromboembolic prophylaxis guidelines proposed by our institution (based on cumulative evidence of recently published studies).
MATERIAL AND METHODS: This prospective study included 450 consecutive patients (mean age 43 (16–75) years, 280 men, 170 women), who underwent ambulatory orthopedic surgery: knee arthroscopy (355), shoulder arthroscopy (73) and hallux valgus (22). The patients were divided into three groups in order of institution's thromboembolic risk factors (Tables I/II): group I (247), no risk, prophylaxis with physical methods; group II (112), light risk, prophylaxis with anti-platelet therapy (trifusal 900 mg/d/72 h) and group III (91) moderate risk, prophylaxis with low molecular weight heparin (enoxiparina 20–40 mg/7 d). The anesthetic technique was subarachnoid block for knee arthroscopy and hallux valgus and general anesthesia for shoulder arthroscopy. Patients administrated themselves pharmacologic prophylaxis at home (previously patient received clinical instructions) Clinical follow-up was done until 3 months.
RESULTS: We did not find any clinical signs or symptoms of either deep venous thrombosis or pulmonary embolism. Only five patients (1%, group heparin) did not carry out orders completely. We registered the next complications: difficult administration (1.8%), hematoma (2.5%) and surgery bleeding (0.7%).
CONCLUSION: Because of the high rate of thrombosis reported in ambulatory orthopedic surgery we believe that prophylaxis with physical methods (early walk) is important but not enough in all patients. For this reason we recommend routine prophylaxis with pharmacologic methods in patients with light and moderate risk. The administration at home by the patient is associated with very low complications.

Table I

Risk factors
Majority (2)
History of previous DVT or PE
Minors (1)
Previous surgery on legs
Tourniquet in lower extremity
Surgery >45 min
Age >50 years
Obesity
Oral contraceptives, smoking
Cardiac and circulatory pathology

Table II

No risk: 0–2
Light risk: 3–4
Moderate risk: 5–6

Insulin dependent diabetic patients in ambulatory surgery

P Martínez Ripol, JA Jiménez Pérez, M Raich Brufau, A Mesas Idañez, M Jornet Balló

Unidad de Cirugía Sin Ingreso (UCSI), Hospital Universitario de Traumatología, Vall d'Hebron, Barcelona, Spain

INTRODUCTION: Ambulatory surgery units are beeing submitted to more work due to socio-economic factors and this is facing us to modify patient selection criteria. We present our experience in the management of insulin dependent diabetic patients.
MATERIAL AND METHODS. Between January 97 and July 98 we have included 50 insulin dependent patients. The selection criteria were: (a) no hospitalary admission due to metabolic descompensation; (b) insulin stable requirements in last six months; (c) Glycemic controls under 250 mg/dl; (d) no major diseases associated diabetic process. Demographic data were: women 37, men 13. Average age 48 years. Middle insulin requirements were 37 UI/day. Type of surgery was: 38 hand surgery (axillary block); 7 knee arthroscopy (subarachnoid block), 5 shoulder arthroscopy (general anesthesia). Patients administered themselves their usual dose of insulin at home at breakfast time (3–5 hours before surgery). Blood metabolic glucose tests were performed before and until 48 hours after surgery every 6 hours.
Our hospital discharge criteria were: (a) glucose blood level should not be 20% higher than the basal level; (b) glucose blood levels should be higher than 100 mg/dl; (c) Oral ingesta allowed.
RESULTS: No patient required hospital readmission because of metabolic descompensation. Postoperative glucose levels never exceeded 20% the basal levels. No hypoglycemia was detected in postoperative controls.
CONCLUSION: Although there was a low number of patients included in this study, we believe that with accrued selection, insulin dependent patients could be admitted to an ambulatory surgery program.

The anesthesiogical procedure in vitreoretinal surgery. A survey of more than 3500 cases

T Riedel, H Eilers, S Böhm

Tagesklinik Universitätsallee, Abteilung für Anaesthesiologie, Bremen, Germany

PURPOSE: Vitreoretinal surgery patients are mostly multimorbid and normally treated in university hospitals and in general anesthesia. Since 1994 those patients are treated in the Tagesklinik Universitatsallee in Bremen, the first day clinic in Germany focussed on vitreoretinal surgery, ambulant mostly in general anesthesia.
METHODS: In more than 4000 procedures we demonstrated, that even with a percentage of more than 45% ASA III or worse status, we are able to perform a secure ambulant general anesthesia without having larger problems. Patients suffered mostly on hypertonia (46%), adipositas (32%), coronal heart disease (21%), diabetes mellitus (21%), different pulmonal diseases (18%) and complete renal insufficiency (5%). All ASA III + IV status patients had a general anaesthesia. Every case was documented for major diseases, the procedure and outcome after general anesthesia.
RESULTS: In more than 4000 cases of ambulant general anesthesia for vitreoretinal surgery, only 9 patients were admitted to hospital. All of them left the hospital after at least the second day, because the admittance was only for security reasons. Anesthetic problems occurred in no case.
CONCLUSIONS: General anesthesia is even in status ASA III + IV patients a safe and secure method for vitreoretinal surgery in a day clinic. The most important supposition for these procedures is an excellent highly trained team of anesthetists, ophtalomosurgeons and nurses, and the facilities of a well equipped day clinic.

Day case laparoscopic cholecystectomy: a clinical audit

GM Purdy, CMS Royston, B Duncan, J Till

UK

Abstract not received.

500 outpatient laparoscopic cholecystectomies

O Mjaland[a], E Trondsen[a], J Raeder[b], T Buanes[a]

[a]Dept. of Gastroenterological Surgery and [b]Anaesthesiology, Ullevaal Hospital, University of Oslo, Norway

INTRODUCTION: In 1994 we started to perform laparoscopic cholecystectomies as an outpatient procedure. In the first 200 operations (Group A) some patient selection was applied, and a study of this group was designed for evaluation of safety and convenience. The next 300 operations (Group B) represent our established routine. More than 90% of our elective cholecystectomies are now performed as outpatient procedures. We compare the results in these two groups.
MATERIAL AND METHODS: A total intravenous general anaesthesia technique with propofol and opioid (fentanyl and alfentanil in Group A, remifentanilin in Group B) was used. Special focus on post-operative problems was important throughout the whole period with ketorolac and propacetamol given for pain-prophylaxis and droperidol/ondansetron in order to avoid nausea. The median age in Group A was 47.4 years (range 17–82 years), in Group B median age was 48.6 years (range 21–82 years). In Group A, 150 patients were ASA I (75%), 44 ASA II (22%) and 6 patients were ASA III (3%). In Group B, 167 patients were ASA I (56%), 116 ASA II (39%) and 17 patients were ASA III (6%).
RESULTS: The median operating time was the same, 60 minutes, in both groups. Four conversions to open surgery occurred in Group A (2%). One conversion occurred in Group B. Twelve of 200 patients were admitted in Group A (6%), 19 of 300 patients were admitted in Group B (6%). The readmittance rate was 8% (15/188) in Group A, and 5% (15/300) in Group B. Three surgeons supervised all the operations; 10 surgeons in training completed more than 20 operations each.
CONCLUSION: We now perform more than 90% of our elective cholecystectomies as an outpatient procedure, and avoid admittance and readmittance in 9 out of 10 cases. These results occur despite a high number of surgeons in training.

The use of biofeedback in the treatment of anorectal dysfunction

C Zanatta, P Negrin, B Epifani, F Galeotti, G Fabris

Chirurgia Geenrale 2a and Clinica Neurologicala, *Azienda Ospedaliera e Universita'*, *Padova*, *Italy*

Abstract not received.

Short admission surgery. Our experience after 30,000 operations

A Iellin, R Flaishon, Z Babaiof, E Gavish

Tel Aviv Sourasky Medical Center, *Sackler Faculty of Medicine*, *Tel Aviv University*, *Tel Aviv*, *Israel*

INTRODUCTION: We wished to assess the efficiency, efficacy and productivity of our Day Surgery Department after 6 years since its establishment.
METHODS: We retrospectively analyzed our surgical, anesthetic and nursing experience in 30,000 operations over a 6-year period. We recorded the rate of growth of the number of surgical procedures carried out and the expansion of the availability of services according to the demands for new techniques and growing needs of the community.
RESULTS: Our data included: (1) the number of preoperative anesthetic consultations; (2) the number of day surgery and admitted patients; (3) the surgical specialties involved; (4) the reasons for cancellations; and (5) morbidity and mortality rates.
CONCLUSIONS: On the basis of our findings with regard to the causes of difficulties in admission to short admission surgical facilities, we recommended changing the criteria for use of these services in order to increase the number of day surgery procedures.

Surgery of perianal fistula under local anaesthesia

S Serra, C Pereira, C de Oliveira

Hospital de São João, *Porto*, *Portugal*

INTRODUCTION: Evaluation of the possibility of performing perianal fistula surgery under local anaesthesia.
METHODS: Twenty-one patients with perianal fistulas were operated on. Ages were between 22 and 67 years, with a median of 42 years. Pre-operative study includes rectosigmoidoscopy and endoanal ultrasound. Patients were in the Prone Jacknife Position. Local anaesthesia with lidocaine 1% and bupivacaine 0.5%. Diagnoses: intersphincteric fistulae in 12 patients, low transsphincteric fistulae in 5 patients, suprasphincteric fistulae in 1 patient, extrasphincteric fistulae in 1 patient, subcutaneos fistulae in 2 patients.
RESULTS: Fistulotomy in 17 patients. Fistulectomy in 3 patients. Loose Seton in 1 patient. The anaesthesic and surgical procedures were acceptable. More difficulties were not found when performing surgery. The patients were discharged at the same day of the surgery. One patient was readmitted because of haemorrhage at post-operative period. There are no recurrences of the fistulae.
CONCLUSION: Local anaethesia is a proper procedure for surgical treatment of perianal fistulae at ambulatory surgery in selected patients.

Long term plastic and reconstructive operations of the breast, abdominal wall and body surface in gynecological ambulatory surgery—management and care

RTh Michel[a], C Mendera-Konen[b]

[a]*Ambulant-operative Praxisklinik*, *64711 Erbach*, *Germany*, [b]*Ambulantes OP-Zentrum Bergstraße*, *64625 Bensheim*, *Germany*

The paper presents special aspects in management and care of ambulatory plastic and reconstructive gynecologic surgery. We report on a total of 122 ambulatory breast operations (61 operations of breast nodes including 14 breast cancer cases with axilla dissection Level I and Level II, 9 reconstructive operations of the breast, 25 reduction mammaplasties and corrections of the ptotic breast, 27 breast augmentations), 8 ambulatory abdominoplastic operations with implantation of the umbilicus and 28 liposculpture body contouring operations in tumescent technique with microcannulas (2 in general anesthesia and 26 in local anesthesia with a special lidocaine epinephrine and bicarbonate solution). The operation field in all these operations of the body surface is easy to survey and accessible without major problems. If there is a proper preselection and pretreatment of patients in cooperation with the anaesthesiologist and a careful intraoperative and postoperative management, even long term plastic and reconstructive operations can be performed in ambulatory surgery.

Ambulatory laparoscopic cholecystectomy: a prospective randomised study

RF Schmitz, K Hans, CD Dirksen, LJ Hoogeboom, PMNYH Go

Department of Surgery, *Sint Antonius Hospital Nieuwegein*, *the Netherlands*

OBJECTIVE: To compare day case with in-patient laparoscopic cholecystectomy. Setting: Sint Antonius Hospital Nieuwegein, the Netherlands.
METHOD: Thirty-five patients (ASA I/II according to the American Society of Anaesthesiologists) with symptomatic gallstones were randomly allocated to in-patient i.e. overnight stay (group I: 17 patients) or day case laparoscopic cholecystectomy i.e. discharge after 6–8 hours from the hospital (group II: 18 patients). Data were collected about conversions to open cholecystectomy, complications, hospital stay and re-admissions. Preoperatively, at day 1 through 7 and 6 weeks postoperatively, pain and nausea-scores were assessed using the visual analogue scale and quality of life using Short Form 36 and the visual analogue scale of the EuroQol. Patients' satisfaction was asked for and a cost analysis was made for both treatment modalities.

RESULTS: In group I one conversion to open cholecystectomy (unclear anatomy = 1); 3 complications (postoperative intra-abdominal haemorrhage = 2, cerebrovascular Accident = 1) and one re-admission (pancreatitis = 1) occurred. Hospital stay of the uncomplicated patients was 3.1 days. In group II one conversion to open cholecystectomy (minor common bileduct injury = 1) and 1 complication (wound infection = 1) were noted. Twelve patients were discharged the same day (successful day case = 66.7%). In both groups no differences were demonstrated with respect to pain, nausea or quality of life. Most patients in group II would advise somebody else ambulatory laparoscopic cholecystectomy (75%). The total costs of an uncomplicated day case laparoscopic cholecystectomy is DFI. 1997 (approximately $1000) versus DFI. 2999 (approximately $1500) for an uncomplicated in-patient laparoscopic cholecystectomy.
CONCLUSION: Laparoscopic cholecystectomy can safely be performed as a day case procedure and is appreciated by the patients. In addition, it is approximately 35% less expensive than the in-patient procedure.

Patient satisfaction after laparosopic and conventional day case inguinal hernia repair

RF Schmitz, JMA Biemans, EGJM Pierik, PMNYH Go

Department of Surgery, Sint Antonius Hospital Nieuwegein, the Netherlands

OBJECTIVE: Comparison of patient satisfaction after laparoscopic and conventional day case hernia repair.
METHOD: The postoperative course of 60 patients subjected to laparoscopic hernia repair (TAPP) and conventional hernia repair (Griffith) under general anaesthesia as day case procedure was analysed. Both groups (TAPP, n = 30; Griffith, n = 30) were comparable for age and gender. The operating time, success rate of ambulatory surgery, readmission's and complications were assessed. After 6 months (range 3–10) postoperative pain and nausea, consumption of analgesics/anti-emetics, convalescence and adequacy of patient information were recorded by a telephonic questionnaire. The patients were asked also if they would choose again a day case procedure for hernia repair.
RESULTS: In the TAPP group, 28 out of 30 operations succeeded in ambulatory surgery; one patient was admitted because of nausea and another because of the late time of operation. In the Griffith group all operations succeeded as a day case procedure. In the TAPP group patients experienced less pain ($P = 0.05$), but more nausea ($P < 0.05$); they also needed fewer days bedrest ($P < 0.05$) and felt fully recovered sooner. A total of 90% of both groups would choose a day case procedure again.
CONCLUSION: Laparoscopic hernia repair under general anaesthesia can be performed very well as a day case procedure. After laparoscopic hernia repair patients experienced less pain and had an earlier recovery, but they had more nausea than after conventional repair.

The use of high energy, ultrapulsed carbon dioxide in plastic surgery clinic

VV Grubnik, VA Sipkolenko, P Sharma

Odessa State Medical University, Odessa, Ukraine

In the out-patient department of our clinic we have been using the high energy ultrapulsed carbon dioxide laser EAGLE-50 (Mattiow Engineering). We have experience of treating 258 patients, including 81 patients with facial rhytides, 75 patients with atrophic acne scarring of the face, 35 patients with different exophytic problems of the skin (epidermal nevus, seborrheic, actinic or solar ceratosis, xantelasmas etc.), 62 patients with different scars (surgical, burn and traumatic) and 5 patients with professional tattoos. Laser resurfacing has completely revolutionized our aesthetic practice. Most of our patients with traditional facelifts can benefit from perioral resurfacing, which enhances and complements the overall result. Regional and full face resurfacing for rhytides, scars and cutaneous pathology can produce gratifying results and texture, and pigmentary changes have been minimal. Because of its ability to safely, precisely, predictably and hemostatically achieve dramatic improvement in rhytides, without scarring, we find the ultrapulse the tool of choice for this procedure.

Is outpatient proctological surgery safe?

M-C Marti, B Roche, J Deléaval

Outpatient clinic for surgery, University Hospital of Geneva, CH, 1211 Geneva 14, Switzerland

From 1986 to 1997, 4554 patients were submitted to a surgical procedure involving the anal canal. Thirty percent (1328) were operated as inpatients and 70% (3226) as outpatients. Outpatient procedures were performed in local anesthesia and in posterior perineal block. Surgery could be performed without mortality and without any infection. Complications were observed in 18 cases (0.5%). Seventeen patients had secondary bleeding on the day of surgery and could be treated on an outpatient basis in 15 cases. Two required an overnight short hospital stays (one after hemorrhoidectomy and one fistulectomy). No bladder retentions were recorded as a result of local anesthesia and suppression of intravenous infusion. Two patients developed a fecaloma which required manual elimination and enema. Thanks to a precise selection, proctological outpatient surgery is possible, safe and has a low complication rate. Patients satisfaction is very high as they are lucky to avoid any hospital stay. Proctological surgery can be done on an outpatient basis which the same success rate as any other day case procedure.

Laparoscopic cholecystectomy: its care benefits and its inclusion among ambulatory surgeries

R Kleinlein, F Todeschini

Sanatorio Los Arroyos, Hospital Italiano, Rosario, Argentina

We studied the available information from 400 cholecystectomies performed between 1995 and 1997. All of these cases had a simple gallbladder lithiasis not including those gallbladder lithiasis complicated due to choledocal syndromes, pancreatitis and/or cholecystitis with more than a 72-hour evolution. Three hundred out of 400 cholecystectomies were videolaparoscopic, and 100 were open procedures. From the 300 videolaparoscopic surgeries 2 were changed to open procedures. This was because of the presence of choledocal lithiasis seen at the intraoperative cholangiography. There were also some other complications such as 3 cases with umbilical wound fluid accumulation, less than 5 days after surgery. All of the patients except those who underwent open procedure were discharged 12 hours after surgery.
From the 100 cholecystectomies under open procedure, 1 was a choledocal lithiasis, and underwent choledoctomy. There were 2 wound fluid accumulation after discharge. Hospital stay average was 72 hours. We compared quality benefits and cost-effectiveness allocation between laparoscopy and open surgery.
CONCLUSION: Two conclusions can be drawn: 1) Costs, while a little higher when using laparoscopic surgery instead of open surgery procedure, are minimal against the final benefits. 2) Bladder laparoscopic surgery can be included within the ambulatory surgeries, as all patients studied could be discharged 12 hours after the procedure. Complications could only be seen several days after discharge.

Ambulatory oculoplastic radiosurgery: an overview and the economical aspects

PPM Raus[a], G Davi[b], M Santella[c]
Ophthalmologists; [a]Mol, Belgium, [b]Milano, Italy, [c]Firenze, Italy

OBJECTIVE AND METHODS: We explored the possibility of doing oculoplastic and minor facial operations without hospitalization by using a high frequency radiosurgical unit (Radiosurgery).
RESULTS: Patients feel more comfortable when they do not have to stay overnight in the hospital for their oculoplastic interventions. Another advantage of using the high frequency radiosurgical unit includes a decreased amount of bleeding during the operation because of small coagulation effects. This reduces operation time and is again an advantage for the patient who can return to work faster.
CONCLUSION: We can conclude that various types of oculoplastic operations: e.g. ptosis, upper and lower eye lid reconstruction, tumor resection, myocutaneous resection for cosmetic reasons, can be performed in this conditions. A one day clinic offers all the benefits to both surgeon and patients. Also the economical aspects for patients, surgeons and the hospital itself are favorable for this type of surgery.

'Doctor, I want to get rid of my superficial skin lesions?!'

PPM Raus[a], G Davi[b], M Santella[c]

Ophthalmologists; [a]Mol, Belgium, [b]Milano, Italy, [c]Firenze, Italy

INTRODUCTION: Up to 30% of the patients older than 35 years old, have one or more superficial skin lesions in the face and more specially around the eyes. Although most of the patients are embarrassed with this small problem, there seemed to be no easy way to get rid of it. Patients consult their general practitioner, dermatologist, ophthalmologist, but none of them are very enthusiastic to help them.
OBJECTIVE AND METHODS: We explored the possibility of removing the superficial skin lesions during the consultation by using a high frequency radiosurgical unit (radiosurgery). Radiosurgery involves the passage of high frequency radiowaves through soft-tissue to cut, coagulate or remove that tissue. We also did a histological examination of the radiosurgically excised skin fragments.
RESULTS: Histological evaluation of skin fragments revealed superior results to those obtained with the cold knife because: 1. there was minimal or no coagulation of the excised fragments; 2. the pressure-free excision provided by radiosurgery caused less margin irregularity of the excised specimens. In addition, our experience indicates that the use of radiosurgery shortens operative time, provides superior cosmetic results and eliminates patient's concern about in-hospital procedures.
CONCLUSION: The high-frequency radiosurgical unit has proven to be a boon for in-office removal of superficial skin lesions. Patients acceptance has been high because of the m ore rapid healing time and superior cosmetic results to those obtained using the 'cold knife'.

Outpatient laparoscopic cholecystectomy: results of 263 patients and error analysis

M Schweins, M Edelmann, H Hendricks

Outpatient surgical clinic, Cologne, Germany

INTRODUCTION: Laparoscopic cholecystectomies form the standard procedure for care of gallstone disease today. The outpatient carrying out of the operation is the consistent continuation of the operative procedure of patient friendly surgery.
METHOD: In a German city (Cologne) from 1994 to 1998 up to now in total 263 laparoscopic cholecystectomies were performed. Patient data and illness processes were essentially comparable to the corresponding data from published clinical collectives. We operated on all patients purely ambulatory, patients were at home the night before and after operation. All patients were checked postoperatively up to 6 hours, before they at the latest in the evening were dismissed from our clinic back home.
RESULTS: Two hundred and sixty patients had a problem-free postoperative process, the use of analgesics in the postoperative stage was by far smaller, the physical fitness was achieved rapid again as compared to patients from clinical studies which are published. Three patients had to be subjected to a reoperation, all in the first 3 days after the primary operation. The reoperation was initiated by us in each case and carried out under inpatient conditions at a clinic nearby (University Medical Center) with great experience in endoscopic surgery. The main reason for the reoperation was in any case a persistent abdominal pain with distension of the abdominal wall. An additional small bile duct in the liver bed, which however was already closed at the time of reoperation, found itself causal in one case. A liverbedsuture was carried out here. In a further case, no bile leakage could be found; however, approx. 200 ml bilious liquid could be found in the abdominal cavity, and laparoscopic drainage was carried out. A purely diagnostic laparoscopy was carried out in the last case of the three, no pathological discoveries raised, symptoms of medication or alcoholic withdrawal of the patient was probably causal for abdominal aches here. All patients could be dismissed from inpatient care after a few days and then had a problem-free recovery process.
CONCLUSION: Additional bile ducts and bilious peritoneal irritation are the main problems of operation worthy complications in our patients property after outpatient cholecystectomies. Prevention is not possible here, besides careful preparation during operation. From this fact sets up the early reflex at the 'not normal' or prolonged postoperative recovery-process of the patient, the essential criterion for reintervention. This is mandatory for the successful performing of outpatient laparoscopic cholecystectomies low on severe complications.

Therapy of the distal radius fracture: what is secured?

M Edelmann, M Schweins

Outpatient surgical clinic, Cologne, Germany

INTRODUCTION: The distal radius fracture is one of the most frequent fractures of the skeleton system, the most frequent one on upper extremity. For out-patient care always the question is, how extensive and invasive the therapy of the distal radius fracture may be.
METHOD: A search of literature was carried out and matched with own results.
RESULTS: In literature, there are some possible prognostic factors for bad treatment result to be expected. However, this appears to make no difference at all, in comparison to the different carried out reposition—and retention—procedures after final analysis. Minimal osteosynthesis (K-wire-fixation), supporting palmar osteosynthesis and Fixateur extern are similar. Referring to the literature they show equal percentages of good, moderate and bad results. Main cause of bad functions according to the fracture are: instability ~f the distal radio–ulna joint, uneven formation of the radio–carpal joint (more than 2 mm) and the radius shortening (relative overlength of ulna). Accompanying injuries are rare. That means that, as a standard procedure in the outpatient surgery, if necessary, reposition carried out proved in regional anesthesia by infusion or local fracture anesthesia under image converter control. Since a further proceeding is possible at once, if a simple sufficient reposition could not be managed, we prefer regional anesthesia. Then according to X ray, plaster treatment in the case of simple fractures and earliest possible functional care. In the case of unstable fracture, the K-wire-fixation as a

additional treatment, as well as Fixateur extern only if distinct radial shortening occurs.
CONCLUSION: Less is often more in care of distal radius fractures. In future, new therapeutical concepts like hydroxyapatite as inner stabilization through self-curing or low energetic and pulsated ultrasound shock waves for improvement in fracture healing or combinations of these could bring in new aspects in fracture-healing and functional results. Finally bad functional results of primary treatment after radius fractures should be provided to a corrective osteotomie more often.

Bone, tendon and join injuries in sport: surgical treatment in an outpatient clinical setting

M Schweins, M Edelmann

Outpatient surgical clinic, Cologne, Germany

INTRODUCTION: Per annum in Germany approx. 9 million accidents happen; from that 4.7 million home and leisure time accidents, 2.5 million accidents at work, 0.5 million road accidents, approx. 11.5 million sport accidents. The sport accidents represent an interesting and varied spectrum for treatment by the surgeons in an outpatient clinic.
METHOD: We report on 1134 patients with sport injuries for a period from 1994 to 1996 (3 years). Injuries of the knee (452 patients, 31%), injuries of the upper ankle joint (416 patients, 29%), as well as bruises, distortions, muscle injuries as well as tendon and capsule injuries have been the most likely sport injuries.
RESULTS: Knee injuries had to be treated mainly operatively by arthroscopy, injuries of the upper ankle joint and other body areas were handled mainly conservatively. In these collective of patients we did 764 operations in total, all of them carried out purely on outpatient terms. Transfer to hospitals could be avoided completely.
CONCLUSION: It is possible to supply virtually the entire spectrum of sport injuries purely in an outpatient setting, operatively, conservatively and functionally. In a city area like Cologne, Germany, duties of trauma surgeons or orthopedic surgeons by organization of a continuous presence, mainly at the sport intense weekends would be a further resource to increase the numbers of patients to be treated.

Adopting new guidelines for preoperative fasting in paediatric ambulatory surgery is a slow and gradual process

LH Kotiniemi, S Pätsi, PT Ryhänen

Department of Anaesthesiology, Oulu University Hospital, Oulu, Finland

INTRODUCTION: The traditional 'NPO after midnight' has been abandoned and patients without any known risk factors for delayed gastric emptying are allowed to drink clear fluids up to two hours before surgery. The fasting time for milk and solid food is 3–8 hrs depending on the age of the patient (1).
METHODS: Along with a survey on postoperative symptoms in children following day-case surgery in 1996 (2), we recorded the preoperative fasting times in 148 children aged 0.4–13.4 years presenting for ambulatory ENT surgery. The duration of fasting was unacceptably long (mean 10.4 hrs for liquids and 12.2 hrs for solid food). New guidelines were introduced, the instructions for the staff as well as for the parents were revised and the fasting times were rerecorded in 1998.
RESULTS: The age of the children was from 0.6 to 12.9 years; 146 children were included. The mean fasting time for liquids was 8.9 hrs and for solid food 12.5 hrs. The number of children who had liquids 4 hrs or less before the operation had increased from 8.4% to 17.1% but the number of children fasting over 10 hrs was 63% in both surveys. The youngest (<1 year) children in both studies had the shortest NPO times.
CONCLUSIONS: In spite of fairly extensive organizational changes during the study period we were unable to achieve any significant reduction in the preoperative fasting times. And in spite of clear instructions, many of the parents still seem to remember the traditional 'NPO after midnight', and are afraid to follow the new more liberal guidelines. The medical staff also need reminding and assurance. When trying to change traditions, one must be prepared to meet resistance and not to expect rapid results. Audits are needed, and gradual changes may take place in the course of years. In our case the hard data on the fasting times has been the best assurance that something needs to be done.
REFERENCES: (1) Schreiner MS. Ped Clin N Am 1994; 41: 111–20. (2) Kotiniemi LH et al. Anaesthesia 1997; 52: 963–69.

Specific foot-surgery in ambulatory private practice—an overview of five surgeons

D von Salomon, H Frobenius, K Hefele, C Ludwig, J Wehrmeijer

Orthopädische Praxisgemeinschaft Dres. Hild & von Salomon, Darmstädter Str. 1, 63225 Langen, Germany

We point out the possibilities of differentiated ambulatory foot-surgery in the private praxis. The advantages of day surgery are the nursing in private atmosphere at home, the good and longstanding relationship between surgeon and patient, the low price in comparison to the hospital and the high standard of surgical quality by experienced surgeons. The talk is based on the experience of five enthusiastic surgeons in private practice spread all over Germany (we have been performing round about 1100 Hallux valgus and rigidus procedures for almost 4 years). We perform a broad variety of procedures not only on the first ray but also on the Achilles tendon, the ankle fractures, the subtalar arthodesis, the release of nerve compression syndromes and the surgical treatment of tumors. We show our elaborated way of the perioperative organization as far as preop. preparation and exploration of the patient, the way, how the day-surgery is organized and the postop. care for the patient at home and in the practice. We differentiate specific dressings, prevention of infection and thrombosis.

Degree-related therapy of the hallux rigidus—report of the Outpatient Foot Surgery Study Group

H Frobenius et al.

Outpatient-Clinic for Hand- and Footsurgery, Atos-Clinic, Bismarckstr. 9–15, D 69115 Heidelberg, Germany

INTRODUCTION: The therapy of the degenerative arthritis of the metatarso–phangeal (MTP) joint of the great toe depends much from the extent of the joint degeneration. So far, however, there is no definition of degrees of the degeneration of the MTP joint commonly agreed upon. Neither is there a standardized management of these joint disorders. This impedes any comparative or evaluating assessment of diagnostic and therapeutic procedures.
METHODS: Our foot surgery study group—a cooperative of five outpatient clinics—has worked out a differentiated, 3-level-scaling of joint alterations and the corresponding therapeutic measurements which are presented in this paper.
Degree 1: painful roll-over, radiological joint width >2 mm with sharp borders (and smooth surface).
Degree 2: strong pains when rolling over the great toe, reduced mobility, passive dorsiflexion painful, dorsal exophyte, radiological joint with 2 mm or less multiple exophytes.
Degree 3: very strong pain, almost completely impaired mobility, bulp-shaped exophytes, radiological joint with less than 1 mm or invisible.
THERAPY:
Degree 1: conservative.

Degree 2: surgical: cheilektomie, possibly with MOBERGS- or WEILL-osteotomie of the first metatarsal (shortening) and VALENTI-Procedure.
Degree 3: arthrodesis, cheilektomie with metal spacer, arthroplastik.
MATERIAL: The outpatient foot surgery study group has performed from 1st January 1995 until 20 January 1998 185 operative corrections of stiff great toes, ages ranging from 17 to all age groups. Degree 2: cheilektomie = 133, cheilektomie + osteotomie = 15; Degree 3: arthroplastik = 20, spacer = 17.
RESULTS AND CONCLUSIONS: All patients that had undergone the above degree-related therapy experienced the benefit of early weight bearing limb usage after 4–6 weeks. Favourable 2-year follow-up could be documented radiologically and clinically. A follow-up evaluation is to reveal the final conclusions.

Subconjunctival anaesthesia for day case cataract surgery

S Mongia, G Menon, U Bradley

Department of Anaesthesia, Mayday University Hospital, Thornton Heath, Croydon, CR7 7YE, UK

INTRODUCTION: The aim of this study was to demonstrate the simple safe and effective technique of subconjunctival anaesthesia in elderly unfit patients.
METHODS: One hundred and fifty-five patients were studied. Pre-assessment identified unsuitable patients. Topical anaesthesia was obtained with Benoxinate 4%. A subconjunctival injection of 0.25 to 0.4 mls of Xylocaine 4% with adrenaline 1 in 200,000 provided anaesthesia.
RESULTS: Twenty-nine patients required a peribulbar block. Sixteen of the 29 patients having a peribulbar block reported pain on injection of the local anaesthetic compared with 11 of 114 having subconjunctival block. This difference was significant. Fifteen patients undergoing surgery with peribulbar block required sedation during surgery while only 14 patients in the subconjunctival group required sedation.
CONCLUSION: Subconjunctival anaesthesia provides effective, safe analgesia for cataract surgery. It allows rapid patient turnover and complications are minor. We recommend subconjuntival anaesthesia be used more widely.

Ambulatory phlebectomy

M Pavkov

I-st Department of Surgery, University of Medicine and Pharmacy, Timisoara, Romania

INTRODUCTION: Ambulatory phlebectomy was initiated by Müller (1958) and today it is often used to treat varicosities and varices of the lower limb, upper limb, eyelid, neck, etc.
METHODS: We present a retrospective study of our first 40 ambulatory phlebectomies. We have done preoperative a complete anamnesis and clinical examination, linear Dopplerexamination followed by a clear and complete mapping of the varices. All operations were performed under local anaesthesia, lidocain 0.5%, by incisions of 2–4 mm, dissection of the underling varices and perforants, ligation with slow resorbable ligatures, followed by suture of the skin with thin monofilament sutures. After the operation, all patients resumed normal activity and had to use elastic contention for three days, but not all of them complied to that.
RESULTS: Our work presents an extensive documentation of the operated patients. The cosmetic and functional results are excellent. As complications, we could describe five epidermic decolations, four hyperpigmentations, one superficial trombophlebitis which resumed under therapy, no adverse reactions and no deaths. All patients were satisfied with their operations and remained registered for further evaluation and treatment.
CONCLUSIONS: Ambulatory phlebectomy is a simple and efficient surgical intervention which can be used with high success on a 'one day surgery' basis. We think that it can be done by general surgeons who have a certain experience in the field of vascular surgery and phlebology. This operation becomes very important if the medical unit has its main field of activity in phlebology.

Tumeszenz technique in ambulatory surgery

V Grablowitz

Krankenhaus Gottlicher Heiland, Chirurgie, Vienna, Austria

INTRODUCTION: To carry out ambulatory surgery it is necessary first to choose the right anaesthesia. To seek strategies to minimize complications pertaining to the surgery through optimal information and selection of the patient and use of available sterile o.p. units. We try to look at the results of our varicose veins tumeszenz technique in a purely ambulatory perspective.
METHODS: We have operated on 309 patients in tumeszenz technique. The preoperative testing is done by ascending phlebography, duplexsonography respectively the operation is done as per mach, where 1000 ml of tumeszenz solution is infiltrated subcutaneously by a pump. Local anaesthesia of the groin is done with 10 ml scandicain. Monitoring throughout the operation by pulsoxymeter, rr-reading. The hours after the operation complete mobility of the patient.
RESULTS: Of the 309 patients, in 112 patients there was an indication for a crosseltomy and stripping of the saphena magna. One hundred and ninety-seven patients showed merely a side-vein varikosity. In 13% of patients because of severe pain, it was necessary to change to tumeszenz/sedoanalgesie where 5 patients experienced a collapse and one patient suffered a bradycardia. During the operation there was not one complication through bleeding. The relevant number of postoperative haematoma was 22% where in two cases readmittance to the clinic was necessary.
DISCUSSION: The small number of complications makes us believe that the tumeszenz technique is suited for large scale application in ambulatory surgery. Patient selection and information is an essential prerequisite, since great mental discipline and stability is required during a crossertomy and vena saphena stripping. A simple side-vein varikosity, after optimizing surgical standards is a clear indication for ambulatory surgery.

Continuing quality control after ambulatory excision of perianal thrombosis and thrombosed external haemorrhoids under local anaesthesia

JHPM Jongen, Bock, N-P Nuernberg

Proctological Office and Department of Proctology, Park-Klinik, Goethestrasse 11, 24116 Kiel, Germany

Because publications about the treatment of perianal thrombosis are rare, we reviewed all patients with a isolated thrombosed perianal varix or a prolapsed thrombosed haemorrhoid, that were excised under local anaesthesia in the years 1995–97. Two hundred patients (average age 42 y. (13–81 y.), 97 males, 103 females, 19 women during pregnancy) were operated under local anaesthesia because of a thrombosed perianal varix (147) or thrombosed prolapsed haemorrhoid (53). Nine patients were operated 2–3 days before by other physicians because of the same disorder. All patients were treated as outpatients. The wounds after excision were left to heal by secondary intention. All patients were instructed to take sitzbaths and dressings with an astringent ointment.
POSTOPERATIVE COMPLICATIONS: Five patients developed a fistulous tract on bottom of the wound and needed additional surgery, three patients had a bleeding complication, that could be treated by local measures. Twelve patients developed a recurrence. In the autumn months of the year following the year of operation a standard questionnaire regarding recurrent symptoms, long-term

complications and patient's satisfaction was sent to all patients. The results of the follow-up by questionnaire (88% were returned) show that the ambulatory excision of isolated perianal thrombosis under local anaesthesia is justifiable and tolerable (most patients would have the operation done again under local anaesthesia, if necessary) and has few complications.

Is the mesh plug hernioplasty the future in the treatment of inguinal and femoral hernias: analysis of 180 consecutive operations

P Urbain, N Pelgrims

Clinique Louis Caty, Baudour, Service de Chirurgie Digestive 136, Rue Louis Caty 7331 Baudour, Belgium

INTRODUCTION AND METHODS: One hundred and eighty operations for inguinal or femoral hernias were performed from February 96 to November 98. The technique used is the mesh plug hernioplasty described by Gilbert in 1992 and by Robbins and Rutkow in 1993. This technique consists in the placement of a Marlex cone shape plug in the defect through a minimal dissection preserving the peritoneum. All the region is then reinforced in the second operative time by the placement of a onlay mesh, splitted for the cord, lying sutureless just below the anterior surface of the posterior wall of the inguinal canal. All patients were operated under spinal anesthesia.
RESULTS: Average operative time: 20 min., release day: 1.7, early post-op pain: 4, early cord pain: 2, late pain and need of infiltration: 6, late hematoma: 4, recurrence: 1.
CONCLUSION: This procedure preserves the residual anatomy and reinforces the sphincter mechanism of the internal ring. The nerve and vascular injuries are decreased by minimal dissection. The operative time is short, the cost in hospital stay and surgical equipment is low. Daily activities are allowed immediately and full activities within 10 days. The use of prosthesis reduces the recurrence rate as in laparoscopy and in the Stoppa technique. There is no need of general anesthesia. The procedure fits the requirements of ambulatory surgery. This technique needs a prospective evaluation compared to laparoscopy.

Artroscopic acromionplasty in out-patients by using a modified parascalenic block

N Confalonieri, E Spadotto, A Manzotti

Orthopaedic Dept. Ist. Clinici di Perfezionamento (CTO), Serv. di Anestesia e Rianimazione, Milan, Italy

In 1994, in order to overcome side-effects and complications in traditional Dalens technique for the brachial plexus anaesthetic block in our open or arthroscopic shoulder surgery, we perfected a different approach to the plexus modifying the needle directions and contact points for injection of anaesthetic. Aim of the study is to evaluate our preliminary results in arthroscopic acromionplasty in out-patients by using this anaesthesiologic technique.
MATERIALS AND METHODS: The patient is placed in a decubitus supine position with the head turned counterlaterally to the side to be blocked. The cutaneous access point is localized at the meeting-point of a straight line between the lower margin of the cricoid cartilage and the Chassignac tubercle with the lateral margin of the strnocleidomastoid muscle. A teflon needle of 25G, length 35 mm, connected to electrostimulators, is inserted at an angle of 15° in respect of the cutaneous surface and directed towards the third medium of the clavicle. We locate the clones in the antero–medial section of the shoulder at the depth of 20 mm. The needle is then directed laterally to find the clones in the posterolateral section and those relating to the sovrascapular nerve, outside of the plexus sheat, but affecting the shoulder innervation. Five millilitres of anaesthetic mixture (bupivacaina and mepivacaina) are injected for each of the clones located. During the operation we monitored by ECG, blood pressure and pO_2. We performed more than 100 open or arthroscopic operations. We report here only the arthroscopic acromionplasties.
RESULTS: All patients were evaluated by using the UCLA shoulder rating scale, before surgery and at the last clinical evaluation (mean follow-up: 22.4 months), we obtain 88% excellent or good results. Furthermore we assessed the patients with an anaesthesiological chart, classifying the results and the complications. From a subjective point of view, they were contacted, again, to fill a telephonic questionnaire in order anaesthesiological and surgical compliance.
CONCLUSION: Our experience with parascalenic block has provided us with a further procedures which permits a more reliable approach in shoulder surgery. Our results have encouraged us to keep on treating patients by day surgery.

Surgery for inguinal hernia: organization in day surgery and economic aspects

L Capitanucci, S Serafini, N Gulla', F Lazzanni, B Tristaino

Dept. of Surgery, University of Perugia, Perugia, Italy

Abstract not received.

Advantages of local anaesthesia for groin hernia repair in a day surgery unit

A Jiménez, MD Arribas, MJ Palacios, E Lagunas, A Vaquerizo, M Martínez

UCMA Hospital Universitario Lozano Blesa, Zaragoza, Spain

INTRODUCTION: Groin hernias, inguinal and femoral, are frequently treated in day surgery units. Although the recent advances in general and spinal anaesthesia allow a fast recovery with these techniques, local anaesthesia is increasingly growing in hernia repair surgery.
METHODS: Four hundred patients (85% men, median age 54) with 361 inguinal and 39 femoral hernias (66 bilateral, 16 recurrent) underwent surgery in the last three years. According to the type of anaesthesia chosen by 22 surgeons, patients were retrospectively divided into three groups: A) Local anaesthesia, 92 patients, B) Spinal anaesthesia, 242 patients, and C) General anaesthesia, 66 patients. Comparison among groups was established with Stat-View 4.1 program by applying ANOVA test with quantitative variables and Chi-2 test with qualitative variables, with a level of significance of 0.05.
RESULTS: All three groups were homogeneous in sex, distance to unit, premedication and length of surgery, but little differences were found in age, antibiotic prophylaxis, type of hernia and surgical procedure due to local anaesthesia being more common in femoral than in inguinal hernia, and uncommon in bilateral cases. Nine patients developed minor intraoperative complications without differences among groups ($p = 0.7$). The mean discharge time was lower in local anaesthesia than in the other two groups ($p < 0.0001$). Hospital admission was necessary in 8.5% of patients and readmission after discharge in 1.4%, with significant differences in favour of local anaesthesia, 5.4% and 0% respectively, ($p = 0.05$). Moreover, there were significant differences in minor complications in the first 30 days after surgery, 9.7% in local anaesthesia, 24.3% in spinal anaesthesia and 27.3% in general anaesthesia ($p = 0.006$). These differences in global morbidity were due to the different incidence of urinary retention, wound infection and nausea-vomiting.
CONCLUSIONS: 1. Local anaesthesia allows a time discharge lower than spinal and general anaesthesia in the treatment of groin hernia in a day surgery unit. 2. Unplanned admission is uncommon in groin hernia repair when local anaesthesia is used. 3. Minor complications in the first month after surgery are less frequent with local anaesthesia in this surgery.

Descomprehensive technique in the treatment of odontogenic queratocysts

J Fernández-Solís, JL Salinas, J Rojo, JD Sánchez, M Nuñez, E Valencia

Serv. de C. Oral y Maxilofacial, Hospital Virgen de las Nieves, Granada, Spain

INTRODUCTION: Queratocyst originate from the remains of the dental sheet. They owe their clinical importance to their locally vigorous growth and their strong tendency towards relapse. Their high degree of relapse is very well-known, no matter the therapeutical option chosen.
METHOD: We present a different therapeutical possibility in the treatment of OQ: a descomprehensive technique by means of the insertion of a drainage with the help of a polyethilene tube (Nielsen's Method). After the cyst's total or partial removal we fised a drainage tube which was introduced through an incision in the oral mucous membrane. During a period of time the patient herself washed it with physiological serum and clorhexidine gluconato 0.1%.
RESULTS: After the employment of the previously described technique, a clear decrease in the cyst's size was observed, and eventually it disappears.
CONCLUSIONS: The descomprehensive technique through polyethilene tube is a valid option for the treatment of queratocysts, proving a minor number of cases according to research.

Parents' prospective on obtaining same-day-consent for anesthesia drug trials in children

R Hannallah, K Hummer, J Finkel

Children's National Medical Center, Washington, DC, USA

INTRODUCTION: Previous reports suggested that most parents are willing to give consent to have their children enrol in anesthetic drug trials when the protocol is presented to them on the day of surgery.[1,2] Some agreed only after the proposed study was endorsed by the anesthesiologist or the surgeon with whom they have previously established rapport. This study examined parents' preference after the proposed study was already completed.
METHODS: Parents of 62 children who had participated in a phase III, double blind, randomized anesthesia drug trial of a new opioid at a major pediatric institution within the previous year were studied. All were first told about the study on the morning of surgery by a member of the anesthesia team. A questionnaire was sent to the parents inquiring about their overall satisfaction with being research subjects and specifically about their preference on the timing of being asked to enrol.
RESULTS: Eighty-nine percent of the parents continued to be pleased with their decision, and would consider participating again (or recommend the same to a friend) if the child requires similar surgery in the future. Although all the parents had agreed to participate in the research project when asked on the morning of surgery, 33% indicated a preference to be asked a few days earlier and 24% would have preferred to be informed about the study by their surgeon first.
CONCLUSION: Although it is possible to recruit patients for ambulatory anesthesia clinical trials on the day of surgery, many parents prefer to be told about the studies earlier.
REFERENCES: 1). Anesth Analg 1996;82:332–7. 2) Anesthesiology 1998;89:A30.

Extended recovery: the extended day surgery unit

J Healy, C Caballero, J Willison, R Souter, D McWhinnie

Department of Surgery, Milton Keynes General NHS Trust, UK

INTRODUCTION: New procedures in day surgery requiring up to 8 hours recovery stretches the traditional 12 hour day unit to the limit. Retrospective analysis suggested introduction of a 23 hour unit would potentially increase ambulatory surgery in our hospital from 63% to 83% of elective surgical admissions, saving in patient bed days.
METHODS: An Extended Day Surgery Unit (EDSU) was created by converting in-patient beds. The existing Day Surgery Unit remained unaltered. No formal age limit or maximal BMI was set and patients with ASA status I, II and III (stable) were accepted. Admission to EDSU was on the day of surgery and discharge was by a nurse within 23 hours, reducing the in-patient episode by at least one day.
RESULTS: From October 1997 to October 1998 a total of 833 patients were admitted to the EDSU. Of these patients 7.5% ($n = 58$) were not discharged within 23 hours. Unanticipated extended surgery was the most common reason for this.
CONCLUSION: This study demonstrates that over 830 bed days per annum have been saved in an District General Hospital by converting in-patient beds to an EDSU.

Ambulatory aesthetic facial surgery

F Nahai, T Rod Hester, M Codner, JK Joel

Paces Plastic Surgery, Atlanta, GA, USA

INTRODUCTION: A review of the safety and efficacy of ambulatory (outpatient) facial aesthetic surgery.
METHODS: One hundred consecutive face lifts performed at Paces Plastic Surgery were retrospectively reviewed. All were performed under general-endotracheal anesthesia in our free-standing surgical center.
RESULTS: All 100 patients were discharged from the facility following recovery from anesthesia. There were no complications necessitating hospitalization. Three patients were brought back to the facility for evacuation of post operative hematoma. There were no anesthesia related complications.
CONCLUSIONS: Outpatient face lifts in an ambulatory surgical center are safe and efficacious. We will present our criteria for selection of patients, anesthesia techniques, pre and post operative management to reduce the risk of complications and facilitate face lifts in the ambulatory setting.

Effectiveness of mesh plug repair of inguinal hernia: results of 468 cases

J Marín, A Gallardo, D Diaz, A Zulueta, JP Roldan, P Parra, S Marrero

Day Surgery Unit, Hospital El Tomillar (Hospital Universitario Valme), Sevilla, Spain

INTRODUCTION: Contemporary approach to inguinal hernia surgery is increasingly based on open mesh repair under local anaesthesia as day cases.
OBJECTIVE: To report the effectiveness, with short–medium term outcomes of open mesh plug technique for inguinal hernias performed as day surgery.
METHODS: Setting—day surgery unit (DSU) of a teaching District General Hospital where surgeons of different levels of skills perform the operations. A consecutive series of 468 patients (433 male, 35 female) who underwent PerFix® plug technique from December 1996 to July 1998. Ninety percent were primary and 10% recurrent hernias. There were 61 patients with bilateral hernias. Local anaesthesia in combination with propofol sedation was the standard technique in 93% of the operations. The patients were given appointments for 1 week, 4 weeks and 1 year later for clinical examination. Outcomes measures—times of discharge, unplanned admissions rate, early and late complications, postoperative pain, recurrence rate and satisfaction rate.
RESULTS: A total of 94.2% of patients left the hospital as day cases. Unplanned admissions rate 2.1%. Planned admissions 3.6%. Early

morbidity 0.5% (occurring during the DSU stay) and late morbidity 4.1% (within 1 month after surgery). There was no mortality. Eighty-six percent of the patients required oral analgesia for 3 days on average. The greatest number of patients returned to daily activities between 7 and 10 days. The overall recurrence rate was 0.7%. The follow-up rate was 91% at 1 month, and 61.5% in the first year.
CONCLUSION: The mesh plug technique is a safe and effective procedure highly suitable for most patients as day cases. It allows a fast recovery, and a low complication and recurrence rate. The results are reproducible by the average surgeon of an average surgical service. The standardisation of the anaesthesia-hernia repair technique improves the results and the quality of care provided.

The scope for day surgery in the treatment of breast pathology

L Roberts
Chairman, Australian Day Surgery Council

The more minor breast surgery operations should mostly be carried out as day surgery; however, an audit in Australia during 1994 showed that only 37.2% of simple biopsy and 38.6% of biopsy with frozen section or wire localisation were carried out as day surgery. In order to estimate best practice day surgery for breast pathology a series of 256 patients presenting for treatment of a breast lump or impalpable lesion is examined. All the operations were carried out by the same surgeon and the anaesthetics by the same anaesthetists. The results are discussed with comment on aspects of surgical technique. In summary, 95% of patients having operations for non malignant breast pathology and 61% of patients having operations for carcinoma of the breast were treated in day surgery.

Inguinal hernioplasty in patients over 70 years of age: ambulatory surgery vs short hospitalization

G Garau, C Moretti, B Boggio, A Deserra, M Pisano, A Cois, M Cagetti

Istituto di Chirurgia, Clinica Chirurgica, Università di Cagliari, Italy

BACKGROUND: Inguinal hernia repair by ambulatory surgery has a high patient compliance and lack of complications in the majority of cases. Common reasons for an inpatient procedure are bilateral repair, medical and social problems, mainly in elderly patients over 70 years of age. This study evaluates the reasons for an inpatient or ambulatory procedure in the elderly.
METHODS: From January 1995 to December 1998 84 patients over 70 years of age (range 70–99, average 76.2) underwent surgical treatment for 81 inguinal and 3 femoral hernias, among which were 10 recurrences and 7 performed for strangulation. A mesh repair was performed with tension-free or plug techniques in 74 cases; a Bassini procedure was applied in 8 patients, and a Shouldice technique in 2. Forty-nine procedures were carried out under local anesthesia, 25 under loco-regional and 10 under general anesthesia. An inpatient procedure was performed in 44 patients. Major systemic diseases were ascertained in 58 patients, 26 treated by ambulatory and 32 by inpatient procedure.
RESULTS: There was no postoperative mortality. Local complications included only 3 wound hematomas. One patient was treated for peritonitis due to a diverticular perforation on the second postoperative day. We had no recurrence. Inpatient procedures average hospital stay was 8.67 days (range 2–29), and average postoperative stay was 5 days (range 1–25). Reasons leading to inpatient procedure were represented mainly by our internal organizative difficulties. Nevertheless for 22 patients there were other personal or social problems, which prevented either an outpatient preoperative study or the patient's choice for the ambulatory procedure. This choice was also affected by the lack of an efficient medical domiciliary service.
CONCLUSION: Hernioplasty with one day surgery regimen is safe and effective and is applicable in the majority of elderly patients. Moreover it is much less costly than inpatient procedure. Every effort should be made to overcome problems which prevent a wide application of ambulatory surgery for inguinal hernia in the elderly.

Pneumatic balloon dilation for chronic anal fissure: 5 years of experience

L Masoni, M Gasparrini, G Pascarella, L de Anna, J Montori, E Ruggeri, AM Malgioglio, A Montori

III Dept. of Surgery University 'La Sapienza', Rome, Italy

INTRODUCTION: The pathogenesis of anal fissure is still unclear. Spasm of the internal sphincter plays an important role: non conservative methods of treatment are based upon stretching or sectioning of this muscle. The results of traditional treatment vary according to the technique and level of expertise. Incontinence has been reported in a substantial number of cases. Surgical internal lateral sphincterotomy (ILS) is simple and effective but its compliance is low. On the basis of our experience with achalasia balloon dilation in February 1993 we started to perform pneumatic dilation of the anal sphincters by using a Rigiflex Rectosigmoid 40 ml balloon in patients with chronic anal fissure.
METHOD: From February 1993 to June 1998, 187 pts have been treated using an anal block with 15–20 cc of local anesthesia; i.v. propofol is sometimes used. With the pts in the left lateral decubitus, the balloon is positioned through the anal canal inflated at 20 PSI and left in place for 5 minutes. No complications were observed. All pts have been followed for a minimum of 3 months with a median follow-up of 8 months. In 8 consecutive pts we performed anorectal manometry preoperatively and 6 weeks after treatment.
RESULTS: Healing of fissure has been verified in 94% and 97% of cases at 1 and 2 months, respectively. Recurrences were observed in 9 pts (5.3%) at an average 3.5 months interval from treatment: 4 pt successfully re-dilated, 4 underwent ILS with good satisfaction. The remaining 1 was lost to follow-up. In the 8 patients measured with the anorectal manometry, the resting anal pressure was reduced in all cases, while the maximum voluntary pressure was unvaried as compared with preoperative data.
CONCLUSION: Pneumatic balloon dilation is a simple and reproducible method for the ambulatory treatment of chronic anal fissure with almost no morbidity, immediate success and excellent patient compliance.

Postoperative recovery after ambulant vein surgery

B Roche, J Deléaval, A Forster, M-C Marti

Outpatient Clinic for Surgery, HUG, Geneva, Switzerland

Postoperative recovery is one of the most important indicators in outpatient surgery quality. We analysed the incidence of the causes of postoperative recovery in varicose vein surgery. From January 1997 to November 1998, 211 patients were treated as outpatients and submitted to varicose vein surgery. Seventy-four patients were recovered for one night after surgery: 56 for social reasons (alone at home), 18 patients from the general anesthesia group (98) were recovered because of nausea and for vomiting. No patient remained in hospital for reasons of pain control or operative complication. If we consider the general anesthesia (GA) group and exclude the patients recovered for social reasons, the incidence of hospitalisation after GA is 18/98 = 18.4%. This result is higher than the median result in literature. Due to these results, we have to reconsider our GA modalities.

Ambulatory versus inpatient Tonsillectomy. A comparative analysis of 404 consecutive cases

J Bjerkén, AT Pedersen

ENT-dep. Vejle Countyhospital, DK-7100 Vejle, Denmark

INTRODUCTION: In the period 1 January 1997 to 31 August 1998, 404 consecutive elective tonsillectomies were performed at the ENT-

dep. at Vejle Countyhospital. Of these 212 were performed as ambulatory surgery, whereas 192 were performed on an inpatient basis. Both groups were operated on by the same team of surgeons.
METHODS: Retrospectively the two groups were compared regarding age, diagnosis, type of operation (tonsillectomy/adenotonsillectomy/other), complications, treatment of complications, readmissions and 'bedtime'. Also an evaluation was performed of how many of the inpatients actually did fulfil the criteria set up for having ambulatory tonsillectomy, and why they nevertheless were operated on as inpatients.
CONCLUSION: Ambulatory tonsillectomy is a safe procedure, which, whit the inclusion criteria set up in our material, is not associated with higher complication or readmission rates than inpatient tonsillectomy, while the average 'bedtime' per tonsillectomy is 75% less. For approximately 40% of the inpatients, there were no apparent reasons why they did not have their tonsillectomy performed ambulatory.

Advantages of pylonidal 'closed' fistulectomy in ambulatorial surgery

M Cirillo[a], R De Falco[a], N Gennarelli[a], F Veneri[a], G Vivona[b], A Cauteruccio[b], R Lobello[a]

[a]*Fisiopatologia chirurgica apparato digerente*, [b]*Dipartimento anestesia*, *rianimazione*, *terapia iperbarica e antalgica*, *Universita 'Federico II'*, *Napoli*, *Italy*

INTRODUCTION: The term pylonidal points out a particular type of pathology, characterized from cystic formation located in coccyx region. It curtains to infect and to make an abscess with spontaneous drain in the intergluteus furrow through fistulas. The excision must be radical and include all the journey to avoid recidivist. The recovery for second intention determines evident uneasiness for the patient and notable costs for prolonged hospitalization and ambulatorial cares. Our group proposed studying an intervention with recovery for fist intention, acting particularly on the problem of the containment of the costs and using ambulatorial surgery.
METHODS: We have observed 30 consecutive excisions of pylonidal cystis (M:F = 2:5, middle age 25.6 years) with closing to layers. Local anesthesia is effected with a solution in equal parts of Bupivacaine 0,5%, Mepivacaine 2% and physiological solution, by infiltration of the line of the cutaneous incision and of the sacral band (15/40 ml). The first moment was the injection in the primitive orifice with blue of metilene to identify all the journeys. The excision foresees a large ellitical incision that reaches the bony layer up to the band, with removal of all the colored tissue; it follows an accurate hemostasys with reduced use of the electric scalpel. The residual cable came sutured with absorble for the band and subcutaneous, skin in silk and compressive medication with points band-skin, and application of aspirant kept drain for 24–48 hours. The duration was 20–30 minutes. The discharge of the patient happened after of 2–6 hours; ambulatorial medication to complete recovery.
RESULTS: In a least period of post-operatoria of one year the appearance of recidivist has not been observed. The recovery has happened in a period between the 10th and 16th day.
CONCLUSION: The intervent in local anesthesia with closing the layers curtails time of recovery, it allows a quick resumption of physical activity, and, if correctly realized it does npt present an increased number of recidivous.

The hernioplastic operation according to Lichtenstein in day surgery

M Cirillo[a], G Coppola[a], E Marciano[a], G Gargiulo[a], G Vivona[b], M Cibelli[b], R Lobello[b]

[a]*Fisiopatologia chirurgica apparato digerente*, [b]*Dipartimento anestesia*, *rianimazione*, *terapia iperbarica e antalgica*, *Universita 'Federico II'*, *Napoli*, *Italy*

INTRODUCTION: The authors report their experience in the treatment of the inguinal hernia with the technique according to Lichtenstein in 80 patients (66 males, aged from 22 to 81 years) operated in the period January–October 1998. A protocol was drawn up that foresees, after a first visit in which it has effected the diagnosis, a following appointment for the preoperatory evaluation (anamnesys, concomitant pathologies and associated therapy) and the execution of hematochemistry routine examination, of EKG, and chest X-ray. At the moment of the refuges, it has effected tricotomy and cleansed the skin with a solution of PVI, it has got antibiotical prophylaxis with administering 400 mg of Teicoplanine and if necessary an ulterior rate of 200 mg after 6 hours. The patient was premedicated with athropin 0.01 mg/kg. and midazolam 0.1 mg/kg. and vital functions were monitored (EKG, Arterial pressure, and O: saturation). The local anesthesia was effected with a solution of Mepivacaine at 2%, Bupivacaine at 0.5% and sodium bicarbonate for a total maximum of 60 ml. The intervention has a middle duration of around 30 minutes. Positioned drain does not come. In the post-operatorial time an ice-bag was applied on the wound for 2 hours and administered in case of necessity an analgesic (Ketorolac trometamine 30 mg I.M.). The discharge happens after 4–6 hours. A surgeon was always available for the patient also with the phone for any eventuality and counsel. No kind of complications have been observed to require following refuge. In the follow-up at 6 and 12 months no recidivous were observed.
CONCLUSION: Hernioplastic operation according to Lichtenstein for inguinal hernias is easy to carry into local anesthesia. This allows a faster recovery of physical activity, especially in the older, and it is the best prophylaxis of pulmonary and cardiovascular complications.

Lesions to the knee cartilage: arthroscopic surgical treatment

V Papic, A Gajic

Dept. of Orthopaedic and Trauma Surgery, *Banjaluka*, *The Republic of Srpska*

AIM OF THE STUDY: To present on our material value of an arthroscopic surgical treatment of knee cartilage lesions.
METHODS: By a prospective study 97 patients were examined in which, by arthroscopy, cartilage lesions were proved to be an exclusive cause of the complaints. The Jackons and Dzioba classifications were used. Arthroscopic treatment involved: lavage, debridement of the cartilage fragments, abrasion to the exposed bone and abrasive arthroplasty, according to the type of lesion.
RESULTS: In 79% patients improved condition, in 15% unchanged and in 5% deterioration.
CONCLUSION: Our results impose a conclusion that arthroscopic surgical treatment to the knee cartilage lesions gives success in a high percentage of cases, shortens the period of morbidity, procedure is performed under infiltration anesthesia and there is no need for hospital stay longer than one day.

Arthroscopies of the knee, diagnostic and operative in local anaesthaesia. Introducing endoscopis surgery of the shoulder in Banja Luka

S Bilbija, P Vladimir

University of Banja Luka, *Banja Luka*, *Bosnia and Herzegovina*

INTRODUCTION: Since September 1994, in Banja Luka, arthroscopic surgery of the knee was continued, having been stopped by the beginning of war in 1992. After a short period of performing arthroscopies in general and spinal anaesthesia from December 1994 we started arthroscopies in local anaesthesia and continue until today. For special demands only general or spinal anaesthesia is used. Recently we started with arthroscopies of the shoulder which we perform in general anaesthesia.
METHOD: Through two anterior portals after injecting 40 ccm Xylocaini 2% with adrenaline it is usually possible to obtain most activities within the knee. Besides the diagnosis we perform partial or total resection of meniscus, plicae or synovial adhaesiones, shawing bones or soft tissues, extraction of loose or foreign bodies, suturing

meniscus. We perform LCA replacement arthroscopically assisted using two kinds of grafting: bone-tendon-bone (BTB) and fascia lata graft. The patient is admitted in the morning to the hospital and after procedure goes home. Patients with LCA replacement procedure are kept in hospital more than one day. Concerning arthroscopies of the shoulder we performed 9 procedures and in 8 cases subacromial decompression was done. After recovering from general anaesthesia the patient went home.
RESULTS: Statistics of our clinic:

Arthroscpia diagnostica	303
Resectio menisci medialis	299
Resectio menisci lateralis	109
Resectio menisci medialis and lateralis	36
Shawing	93
Extractio corporis liberi	61
Resectio plicae sinovialis	39
Trimming menisci	19
Suture menisci	8
Adhaesiolysis	37
Shawing patelae	9
Resectio LCA	11
Extirpacio tumoris	2
LCA replacement arthroscopically assisted	27
Total	1043
Arthroscopies of shoulder	9

CONCLUSION: Arthroscopies in local anaesthesia without staying in hospital have shown good results, fast recovery and decreased expenses of curing.

Day Surgery experiences in the surgical treatment of mammary neoplasm

A Bezer[a], AM Pietrantonio[b], M Capalbo[b], G Tonto[b], C Giovanardi[a], F. Golinelli[a]

[a]Day Surgery Unit at Carpi Hospital, [b]Health Administration at Carpi Hospital (Public Health Services of Modena Province), Italy

INTRODUCTION: In November of 1997 an Operating unit of Day Surgery was set up at Carpi Hospital. This type of unit for Day Surgery can furnish an effective solution for a rational utilisation of hospital resources, attaining such aims as: shorter waiting times, less difficulty for patients and their families thanks to a shorter hospital stay and reduced costs.
PROCEDURES AND METHODS: From November 1997 to November 1998 there have been 310 surgery operations in the unit, of which 20 were for mammary neoplasm. Of these 15 were quadrantectomies with the removal of lymph nodes in the armpits, 4 were radical mastectomies and 1 simple mastectomy. The average age of the patients was 58; for each operation an antibiotic prophylactic treatment was administered.
RESULTS: Three or four hours after the operation the patients moved about without assistance and after six or eight they were visited by the anaesthetist and dismissed with appropriate drainage. Post operation complications were not higher in day surgery than in normal hospital stay.
CONCLUSIONS: Our case studies are very modest but we are certain that in the future breast cancer surgery can have a larger space in a day surgery hospital unit, but it is important to select the patients with criteria. They must be well informed about the operation, have the opportunity to choose the type of hospital stay and proper consideration and respect of the individual woman is due as regards her psychological and physical condition at the time of diagnosis.

Results and disability period after 'tension free' hernioplasty

GS Sica, P Rossi, P Sileri, N Di Lorenzo, F Riccardelli, A Forlini, AL Gaspari

Cattedra di Chirurgia Generale (Dir. Prof. Achille L. Gaspari) Universita di Roma 'Tor Vergata' Complesso Integrato Columbus, Roma, Italy

INTRODUCTION: In Western countries, inguinal hernia is best treated by two procedures: the so called anterior 'tension free hernioplasty' and the posterior hernioplasty that can also be accomplished with a minimally invasive technique. Both of these techniques are considered as one day surgery procedures; some authors report series in which the patients were admitted as Day Hospital recoveries. The authors present their experience in the treatment of inguinal hernia.
METHODS: In a 5-year period, 652 patients were operated by different surgeons (included residents) from the same institution. The follow-up has been made by phone after the first 2 postoperative control, up to 60 months (range 12–60); 437 patients answered. The technique was 327 times a tension free sutureless hernioplasty, 303 times a Lichtenstein type operation and in 22 patients a transabdominal–preperitoneal (TAPP) laparoscopic hernioplasty.
RESULTS: The recurrence rate after TAPP was 4.5% (0.15% of total); the recurrence after the tension free hernioplasty was 0.3%. The rate of minor complications is 4.9% and less then 0.5% represents the major complication. One patient died in the early postoperative period. The main recovery time for the tension free group was 36 hours (range 14–144) and 48 hours for the TAPP group (range 24–72). The disability period after discharge was 6 days after the tension free repair (range 3–22) and of 3 days after the laparoscopic procedure (range 2–8).
CONCLUSION: The inguinal hernia repair can be safely accomplished in one day surgery; however, the personal experience shows some resistance from patients to be discharged the day after the operation and only in a few cases it has been possible to perform the operation as a day hospital procedure.

Inguinal hernia repair by the 'mesh plug' technique

A Abu-Own, M Onwadike, H Kowsar, SG Barker

Department of Surgery, The University College London Hospitals, London, UK

INTRODUCTION: Increasingly, tension-free mesh repairs are now used in the management of primary inguinal hernia, as popularised by Lichtenstein. Introduced more recently, mesh 'plug' techniques may enhance further the benefits of such repairs.
METHODS: Twenty-six males attending for unilateral, primary inguinal hernia repair were randomised to have a Lichtenstein 'patch' repair or to undergo a mesh 'plug' repair (Perfix Plug, Bard-Impra Ltd. UK). Ease of technique and operating time were recorded. Patients were given a visual analogue pain scoring sheet and were asked to record the number of analgesic tablets taken per day. Patients were reviewed in clinic at one and six weeks postoperatively, when they were asked of time to return to 'normal' activity and time to return to work. Any postoperation complications were noted.
RESULTS:

	Operating time (mins)	Ease of operation	Return to work (days)	Return to normality (days)	Pain score (out of ten)	Analgesia (no of tablets)
Patch mean (+/−SD)	38 (7)	4.6 (2.1)	29 (18)	35 (12)	3.9 (1.8)	19 (10)
Plug mean (+/−SD)	29 (6)	2.7 (0.9)	22 (13)	25 (11)	2.1 (1.5)	13 (9)
P value	0.01	0.02	0.4	0.04	0.01	0.15

CONCLUSIONS: The recently introduced tension-free mesh 'plug' repair necessitates minimal dissection and is technically straightforward. Patients seemed to experience less postoperative discomfort and returned to 'normality' more quickly. A larger trial of this technique should be undertaken to confirm the results of our pilot study.

Arthroscopic ACL reconstruction in ambulatory surgery: 2 years experience

JM Glasson, B. Brahin, Cl Reboul

Valmedica, *Nîmes*, *France*

INTRODUCTION: Arthroscopic ACL reconstruction with bone-patellar-bone graft or with hamstring tendons are well accepted procedures since the early 80s. From June 1996 to June 1998, 223 patients underwent arthroscopic ACL reconstruction and 138 of them (61%) on ambulatory surgery bases. All of these 138 patients benefited from a precise 'hamstring tendon' reconstruction technique and went through a specific selection prior to surgery.
METHODS: Demographic study of this series was comparable to others in the literature, with a mean age of 34 years (15–62) and 70% male. Seventy-four percent of the ACL lesions were chronic with 31% medial and 25% lateral meniscal tears associated. Tourniquet time was 57 min (24–104) and 82% of the patient had rachianesthesia. The average time spent in the ambulatory clinic was 7 h 46 min. All the patients would leave the ambulatory clinic with full but progressive weight bearing under the temporary (2–3 days) protection of 2 crutches and a hinged brace. All of them had a subcutaneous drain removed at day 2 with a simultaneous articular evacuation in 90% of the cases. No conversion to usual hospitalisation was necessary in this series in the post operative week.
RESULTS: There was no difference in the clinical results after 1 year minimal follow up between these 138 ACL reconstructions and the usual other ones. Complication rate was comparable. Moreover, 94% of the patients were satisfied with the ambulatory surgery and 92% of them rated the security environment feeling as excellent or good. Return to ADL activities was possible for 91% of the patients between day 1 and day 7. The cost/effectiveness ratio regarding the acute perioperative phase was significantly different
CONCLUSION: Ambulatory arthroscopic ACL reconstruction is an efficient and economic option for the treatment of ACL tears, with the hamstring tendon graft and an associated accurate selection of the patient.

Daycase circumcision using bipolar diathermy scissors—a simple and efficient new technique

I Fraser, J Tjoe

Warwick Hospital, *Warwick*, *England*, *UK*

INTRODUCTION: Bipolar diathermy scissors cut and coagulate simultaneously. They can be used to remove the redundant foreskin during circumcision and coagulate local blood vessels. Any dangers from unipolar diathermy are avoided and ligation of individual vessels is unnecessary.
METHOD: The operation commences with correction of the phimosis by dilatation and division of glandular adhesions. The dorsal slit and removal of the foreskin is accomplished by simultaneous cutting and vessel coagulation using the bipolar diathermy scissors. Closure is completed with a few dissolvable sutures. Frenuloplasty may be included at any stage with the scissors.
RESULTS: Thirty (30) symptomatic patients between 1 year 7 months and 43 years (mean 6 years) underwent daycase circumcision by this method. All respondents to a subsequent questionnaire reported a resolution of pre-operative symptoms and a satisfactory cosmetic appearance.
CONCLUSION: We have enjoyed success with this simple and efficient technique for daycase circumcision and it is now our favoured method.

Day surgery in private practice for dental care and oral and maxillo-facial surgery: a 24-year experience with general anesthesia and intravenous sedation

C Procopio, M Sacrini, C Gatti, R Artusi, M Chiapasco

Narcodont, *Milano*, *Italy*

The authors present their experience in treating patients necessitating oral surgery procedures or dental care under general anesthesia or under local anesthesia with intravenous sedation with a day surgery regimen. Between 1974 and 1998, in a private center in Milan, Italy, 11 728 patients have been treated. Among these, 9929 have been treated under general anesthesia with naso-tracheal intubation and 1809 patients under local anesthesia with intravenous sedation. Among these, 1595 procedures (13.6%) were performed on handicapped patients. The remaining part was performed on children or on adult patients with compromised general health conditions, in case of traumatic surgery, difficult access, insufficient cooperation, prolonged operating times or abnormal pharingeal reflex. The mean duration of the procedures under general anesthesia was 3.7 hours (range: 1–8 hours). The mean duration of the procedures under local anesthesia with intravenous sedation was 1.6 hours (range: 1–3.5 hours). A total of 81.5% (9559) of the patients was discharged on the same day. Only 18.5% of the patients necessitated an overnight hospitalization. The rate of minor complications was 4.5% (523/11 728 procedures). The rate of major complications was 0.9% (103/11 728). Only two patients died (0.01%), one for malignant hyperthermia and one for cardiac arrest. The analysis of these results demonstrated that general anesthesia and sedation are safe and predictable methods of treating noncooperating or compromised patients with shortening of treatment and patient satisfaction.

Anaesthetic techniques for same procedures day surgery vs inpatient setting

P Saunders, J Krapez

Royal Hospitals Trust Day Surgery Unit, *London*, *UK*

INTRODUCTION: The ethos of day surgery requires extrapolation to the inpatient setting so that perioperative management can be standardised for same procedures.
METHODS: We reviewed three years of comprehensive intraoperative anaesthetic audit for same procedures (circumcision, varicose veins, inguinal herniorraphy, laparoscopy and nasal submucous resection) considered appropriate for day surgery but undertaken in both day surgery and inpatient setting.
RESULTS: Preoperative factors such as ASA status, age and weight had little influence on the choice of day surgery or inpatient setting. For the same procedure there was significant differences in anaesthetic technique in the use of premedication, induction agents, muscle relaxants, opiates and local anaesthesia.
CONCLUSION: Perioperative management should be standardised for the procedure and not the setting. The ethos of day surgery should be applicable to every patient, irrespective of the setting, so that all patients are well informed and encouraged self reliance in an ambience of proactive management.

Intravenous sedation is more cost-effective than intubation anaesthesia for ambulatory paediatric magnetic resonance tomography

P Kessler, Y Alemdag, S Kessler

Zentrum der Anästhesiologie, *J.W. Goethe-Universität*, *Theodorsternkai 7, D-60596 Frankfurt*, *Germany*

INTRODUCTION: Currently, both intravenous sedation (IS) as well

as intubation anaesthesia techniques (INT) are employed for paediatric magnetic resonance imaging (MRI). The present study was performed in order to compare patient safety, side effects, practicability, anaesthesia associated time intervals and total anaesthesia costs of IS with INT.
METHODS: Following informed parental written consent, 50 ambulatory children were randomly assigned to receive either IS with methohexital or an INT technique with methohexital, succinylcholin, isofluran/N_2O for MRI. Heart and respiratory rate, oxygen saturation (S_pO_2) and endtidal CO_2 ($P_{et}CO_2$) were continuously measured. In addition we compared anaesthesiologically relevant times, quality of induction and emergence of anaesthesia, motion artefacts in the scanning images and total costs of anaesthetics.
RESULTS: Both IS and INT kept ventilation and oxygenation stable throughout the scanning procedure, such that the mean $P_{et}CO_2$ under INT was 35.6 ± 2.0 mmHg, whereas $P_{et}CO_2$ under IS was 39.4 ± 1.8 mmHg.

	Sedation	Intubation
Age (months)	18.7 ± 13.9	20 ± 16.1
Induction time (min)	15.4 ± 7.8	25.8 ± 4.9*
Scanning time (min)	34.8 ± 12.3	37.2 ± 11.4
Discharge time (min)	9.9 ± 4.1	24.4 ± 7.2*
Total anaesthesia time (min)	64.6 ± 18.5	87.3 ± 14.9*
Anaesthetic drug costs (DM)	5.9 ± 2.3	21.9 ± 4.4*

CONCLUSIONS: IS with methohexital is equivalently safe to INT for ambulatory paediatric MRTs. Besides the lower total anaesthetic costs of IS when compared to INT a significantly shorter induction, emergence and discharge time was noted under IS. Therefore IS allows a higher patient turnover rate when compared to INT and offers a more cost-effective use of the expensive MRT-scanning procedures.

Ambulatory surgery of varicose veins recurred after CHIVA's treatment

F Campitiello, F Luminello, R Mainelli, V Lauletta, S Canonico

Institute of General Surgery, School of Medicine, II University Naples, Naples, Italy

From January to December 1977, 11 patients (all women; age range 24–41 years) were operated on for varicose veins recurred within one year from previous hemodynamic surgical correction (French acronymis CHIVA): 5 of these patients had bilateral recurrence and a total of 16 limbs were treated by us. Before previous intervention only 2 patients were assessed by Doppler US examination. Clinical and duplex scanning evaluation was performed by us in all patients: 5 limbs had incompetence of safeno–femoral junction branches, 4 limbs had double saphena, 3 limbs had unligated sapheno–phemoral junction, 3 limbs had no ligature along all saphena, and 1 limb had inguinal angiogenesis. All patients underwent total (2 limbs) or partial (14 limbs) stripping of the great saphenous vein under local anesthesia: twelve of these saphenectomies were performed by means of an external phleboextractor. We conclude that varices recurrence after CHIVA's treatment are to be related to inaccurate preoperative assessment of deep to superficial refluxes as to inexperienced surgeons.

Outpatient, endoscopic anterior cruciate ligament reconstruction

AK Aune[a], V Aasboe[b], J Raeder[b]

Dept. of [a]Orthopaedics and [b]Anesthesiology. Ullevaal Hospital, University of Oslo, Norway

This study was performed to evaluate the outpatient endoscopic anterior cruciate ligament (ACL) reconstruction in our department.
METHODS: Thirty patients, 20 male and 10 female, median age 26 (16–40) years were included. The operations were done using propofol-nitrous oxide-opioid anesthesia and endoscopic surgery. Fifteen patients had an ACL reconstruction using a patellar tendon autograft and 15 were reconstructed using a semitendinousus-gracilis graft. Thirty milligrams of ketorolac was administered intravenously before the surgical incision and before discharge. At the completion of surgery, 5 mg bupivacain was injected itraarticularly before tourniquet deflation and a cold-compression system was applied to the knee. The patients were instructed to take 1000 mg paracetamol and 60 mg kodein every 6 hours for the first 24 hours after the surgery and 50 mg diclofenac every 8 hours the first week after the operation. If this analgesic regimen failed to be sufficient, ketobemidon was administered by the patients to control the postoperative pain. The cold-compression system was continued until the first postoperative control after 7 days. Operating time, discharge time, supplementary analgesic use and patient comfort was registered. The registration was done during the hospital stay, the day after and after 3 months using telephone interview by an anesthesiologist.
RESULTS: Operating time was 72 (55–83) min and 29 of the patients left the hospital 405 (300–520) min after the operation. One patient was unable to leave until the first postoperative day. Eighteen percent reported problems on their home return, mostly because of nausea. Ninety-six percent reported normal sleep quality the first night postoperatively and only two patients were staying in bed the first day after the operation. A total of 77.5% did not need any family members to stay home for support. One case of a pretibial hematoma was the only postoperative complication the first week after the operation, but no additional treatment was needed. Nineteen patients needed ketobemidon the first 48 hours (mean 4.5 mg). Three patients contacted the department in addition to the usual appointments because of minor problems. All the patients were satisfied with the preoperative information. Eighty-three percent were satisfied with the outpatient treatment. Seventy-five percent would have selected the same procedure again.
CONCLUSION: In our hands' outpatient endoscopic ACL reconstruction is a well tolerated, safe and effective procedure.

Day surgery: a cost-effective strategy in gynaecology

M Franchini, V Giachetti, C Tomassini, L Cianferoni

Azienda 10 Firenze, Florence, Italy

In today's environment, health care organisations are expected to provide the best possible care at the lowest possible cost. Because day surgery (DS) produces outcomes equivalent to those of inpatients surgery considerable per-patient savings with increased levels of patient satisfaction more than 50% in USA, but only 8–10% in Italy, of all surgery today is done on DS basis. However we need to consider not only the reduction in costs achieved at the level of single patients but also those savings realised at the level of health care system. In fact, if health needs do not change significantly, the number of inpatients decrease in some proportion similar to the increase in DS procedures. This redirection could result in downward adjustments in inpatients staffing levels and hospital beds. At the present, even with less cost-savings, we privilege gynaecological surgeons to acquire the skills necessary to perform more procedures on DS basis.

Quality patient care in fast track medicine

A Dean

Anne Dean Associates, Deland, FL, USA

In ambulatory surgery centers time is of the essence and in the 'managed care' or restricted payment environment it is especially true.

The issue, then, becomes how to assure the patient receives quality care while processing him/her through the system as rapidly as possible. Ms. Dean will present an overview of patient flow from the pre-admission to the post-discharge processes to include staff times, costs, sample documentation forms and patients post procedural comments. This presentation will also provide time saving tips and quality assessment techniques.

Carpal tunnel release in 'one hour surgery': about a series of 357 patients

P Hoang, P Maldaguer, H Van Ransbeeck

Brussels Hand and Microsurgery Unit, Brussels, Belgium

INTRODUCTION: Endoscopixc carpal tunnel release remains a controversial technique. Started during the late 1980s, it progressively developed during the 1990s. Despite potential complications described in the literature (neurological and vascular lesions) it remains a technique of choice for carpal tunnel release. Regarding open carpal tunnel procedure, endoscopic release allows a faster reeducation in the early post-operative care.
METHODS: From January 1995 to October 1998, 357 endoscopic carpal tunnel release procedures were performed at the Brussels Hand and Microsurgery Unit. All the patients were operated by the same surgeon in an outpatient clinic setting. Patient selection for this surgery had no or minimal medical problem (ASA1 or ASA2) and with a carpal tunnel recurrent after steroid injection or distal motor latency >4.4 msec at the electromyography. All operations were done with local anaesthesy and tourniquet control.
RESULTS: Two hundred and eighty-four patients were in the series (317 carpal tunnel), including 230 females and 54 males. Age varied from 16 to 93 years. There was no vascular or neurologic complication, mild dystrophy was noted in 3 patients, recurrence of paresthesia occurred in 2 patients. Six percent presented a pillar pain.
CONCLUSION: Surgically, we observed a decreased number of post-operative complication such as Sudeck's dystrophy. Regarding the patient point of view, local anaesthesy and outpatient clinic setting decreased operative stress, time spent for surgery and preparation. The total cost of the surgery is drastically decreased with regard to hospital stay. Regarding our experience of 'one hour surgery', this notion was extended to 31 other additional procedures in hand surgery.

One day surgery hernia tension free repair (5-year experience)

P Pietrarota, MG Battistoni

II Dept. of General Surgery, Mayor Hospital of Verona P. le A. Stefani 1, Verona, Italy

Since Bassini performed the first hernioplasty, more than one hundred years ago, all types of surgical procedures to repair groin and femoral hernias have the common defect of tension on the suture line, the first pathological factor of recurrence. The sperimentated method of sutureless tension free repair popularized by Lichtenstein[1] and Trabucco[2] are simple, effective, rapid, the postoperative pain is reduced and it's possible to perform the operation with local anesthesia (one day surgery). Authors using these methods report their experience between January 1994 and October 1998. During this period, 651 inguinal hernias were repaired on 555 patients (96 bilateral), 493 male and 62 female, with a median age of 52 (range 20–95). The anesthesia was spinal, local and general respectively in 75, 20 and 5% of cases The morbidity (4%) included only minor complications and the recurrences rate was 0.3% (2 cases). Our experience emphatized the opinion that the treatment of groin hernias must be a sutureless tension free repair performed by local anesthesia with a day surgery procedure.

REFERENCES:
1. Lichtenstein IL, Shulman AG, Amid PK, Montlor MM. The tension free hernioplasty. Am. J. Surg. 1989; 157(2):188–193.
2. Trabucco E. The office hernioplasty and the Trabucco repair. Ann. It. Chir. 1993; 64(2): 127–149.

Short stay surgery for hernia repair

G Vasquez, G Zandi, M Bertasi, M Giacometti, CV Feo, P Zamboni, A Liboni

Institute of General Surgery of the University of Ferrara, Italy

The hospital stay of 669 patients, 594 males and 75 females, admitted to hospital for surgical repair of inguinal (706 procedures) and crural (45 procedures) hernias was analyzed. The mean age was 60.7 years (range 18–84 years), local anesthesia was the method of choice (495 procedures), it has suppressed post-anesthetic respiratory and urinary troubles. The mean hospital stay was 1.065 days. Two scrotal hematomas, two ischaemic orchitis and three prostetic infections were found. Local anesthetic intolerance occurred in one case and fever in three cases. Over 85% of patients were in favor of short stay surgery for hernia repair at 36 months mean follow-up. The authors conclude on the feasibility, acceptability, social benefits and usefulness of short stay and day care surgery for hernia repair.

Impact on postoperative pain and discharge criteria of different techniques of anesthesia in day-surgery inguinal hernia repair

Go Vasquez, G Zandi, M Bertasi, M Giacometti, CV Feo, P Zamboni, A Liboni

Institute of General Surgery of the University of Ferrara, Italy

Nowadays, inguinal hernia repair, because of the short operative time and low incidence and severity of postoperative complications, is best performed in day surgery. The side effects of local anesthesia are generally well tolerated probably because the patients can always make a free choice between general and local anesthesia and they are quickly discharged home after the operation. However, sedation could be adopted in order to control intraoperative pain and discomfort. In fact, new general anesthetic agents can be used, because of their peculiar pharmacokinetics properties, in day surgery anesthesia cases. Moreover, the Post Anesthesia Discharge Scoring System (PADSS) allows early and safe discharge home of the patients. Among the discharge criteria, most important are home readiness and street fitness.

Learning curve for ambulatory repair of inguinal hernia

G Vasquez, G Zandi, M Bertasi, M Giacometti, CV Feo, P Zamboni, A Liboni

Institute of General Surgery of the University of Ferrara, Italy

In the past decade, ambulatory treatment of varicose veins has been adopted at the Institute of General Surgery of the University of Ferrara with good results. In the past 6 years, such approach has been extended to the repair of inguinal and femora hernias. However, the patients are admitted to the ward, as we do not have specific rooms for ambulatory surgery. We compared the results, at our institution, of inguina hernia repair without (up to 1993) and with mesh (from 1993–1998). The latter (i.e., tension-free technique) represents, nowadays, our gold standard. Since the introduction of mesh, the repair of inguinal hernias has been greatly simplified. In fact, although the dissection remained basically the same, the repair of the hernia is much simpler then with the Bassini or Shouldice technique. Furthermore, we noticed that it is also easier for the residents to learn the tension-free techniques then the classic repairs without mesh. Therefore, it is possible adopt such techniques in ambulatory surgery with minimal discomfort for the patient, with early and safe discharge home.

Intraperitoneal Ropivacaina: new frontiers in postoperative videolaparoscopic analgesia

W Ciaschi, L Monti, M Ponzi, V Aversano, M Camposano, A Roma, FC Orrego, M Lucchetti

U.O. Anestesia e Rianimazione Ospedale di Frosinone, Primario Dr. Lucchetti A., Spaziani Testa S., U.O. Chirurgia Generale Ospedale di Frosinone, Resp. Dr. Sansoni B., Roma, Italy

INTRODUCTION: In spite of the fact that the patients stay time was reduced, and that the surgical stress was resolved, the videolaparoscopic colecistectomy has considerable postoperative analgesic problems, because of the distension of the peritoneum parietal layer.
MATERIALS AND METHODS: We have started an experiment, in double blind, involving 100 patients, and arranging them in two homogeneous groups (A, B) of 50 people each. Both groups were submitted to general gaseous anaesthesia. Just before awakening, 25 ml of intraperitoneal (diaframmatic layer of the peritoneum, and hepatic bed), intraoperative analgesia with Ropivacaina at 0.2%, and infiltration of the surgical wounds with the same anaesthetic substance, was given to the patients from the A group. The B group was submitted only to general gaseous anaesthesia, without any pre-, intra- and postoperative analgesia. We have considered both the resting and the incident pain, using the Visual Analogic Scale (VAS).
RESULTS: The A group has shown the resting VAS between 0 and 2, while the incident pain between 2 and 4. The mean duration of the analgesia has been about 12 h, without the need for any additional analgesic treatment. On the contrary, the B group has shown a certified VAS higher than 8 for both pains, requiring a supplementary analgesic treatment.
CONCLUSIONS: We consider the provision of intraperitoneal Ropivacaina at 0.2%, during the videolaparocolecistectomy in day surgery, useful to regulate the postoperative pain. This because it is free from collateral effects, and because it has reduced the stay in the hospital, and the costs of pain treatments to the minimum.

Primary inguinal hernia repair: which kind of technique in day surgery

G Ceccarelli, L Cerchione, P Benzi, G Alfonzo, L Forlivesi

Rimini Hospital, Department of Surgery, Rimini, Italy

In the last years the international experience in the field of inguinal herniorrhaphy has got, with the generally used techniques ('sutureless' and 'tension-free' repair), very good results and same widely accepted remarks: (1) The use of the mesh prostheses has widely reduced the number of recurrent inguinal hernias, that at present, in all common surgical techniques (Lichtenstein, Trabucco, Rutkow and Robbins) is under 1%; moreover the recurrence rate is generally due to wrong choice of technique or mistakes in performance. (2) The choice of a technique is made, by many authors, without distinction of the hernia type (the same operation is indeed used for: small indirect hernias, scrotal, sliding and pantaloon hernias). It follows that is very helpful to use a simple, clear and widespread classification system, that in our opinion may be the Gilbert's classification modified by Rutkow and Robbins. We think that in the Type 1 hernia Mercy operation is sufficient, in Types 2, 4 and 5, Rutkow–Robbins, Lichtenstein and Trabucco techniques may be used almost equally. In the Type 3 and 6 the new original prosthesis 'PHS' is an interesting alternative. (3) The different mentioned techniques undergo, in the different surgeons' 'hands', sometime substantial modifications, to doubt the authenticity of the right diction of the original technique. In conclusion we think that in all probability, at present, the best technique in day surgery is the Rutkow and Robbins that, performed in epidural anesthesia, needs a small incision, allows high respect of the elements of the spermatic cord, reduces operative morbidity and post-operative discomfort with rapid return to full activities. When Rutkow-R. is not indicated, other techniques may be used with good results.

Can hernioplastic surgery using a polypropylene plug obstruct arterial and venous flows?

M Preziosa[a], U Monestiroli[b], G Baldetti[c], M Fiume[c], G Lenna[c]

The use of a polypropylene mesh is currently the most common means of surgically treating a hernia, and the various techniques often involve placing the plug in Bogro's space very near to the iliac vessel. In 1997, we used Trabucco's technique to treat 142 patients (9 f, 133 m: mean age 69 years) with direct (67 cases) or indirect (75 cases) hernias. Indirect hernias were always treated by placing a polypropylene plug in the internal ring in order to reduce the hernial sac. The patients were followed up 1 week and 1, 3, 5 and 12 months after surgery. Twenty of the 75 cases of indirect hernia underwent colour echodoppler examination of Bogro's space in order to identify the position of the plug by means of a 10 MHz linear transducer, followed by vascular evaluation of arterial flow below the plug and any obstruction to venous downflow (including the presence of thrombosis). A scrotal evaluation was made of funiculo-eepididymis sign of hidrocele and varicocele in order to exclude inherent pathologies. The plug was clearly identifiable as an acoustic 'barrage' in 16/20 cases. None of the patients showed any sign of vascular compression nor obstruction (venous or arterial flow). The remaining four patients showed small age-related (mean age 68 years) and atheromasic-like alteration in arterial flow, three of whom had mild hernial epidiymitis on the operated side that was unrelated to the surgical procedure. We conclude that positioning of a polypropylene plug in the preperitoneal space does not affect the vascular axis.

The correction of prolapsed hemorrhoids with Stapler SDH 33. Technical notes

U Monestiroli, G Lenna, M Fiume, F Gandini, G Baldetti

Unità Funzionale di Chirurgia Generale, Casa di Cura IGEA Milano, Italy

The correction of prolapsed hemorrhoids of 3 and 4 degree with Stapler SDH 33 is a well established procedure. The intervention is made under spinal anesthesia with the patient in litothomic position. Anal divulsion is made and four Duval's tweezers are positioned on the mucocutaneous junctions; a light tractions is exerted to put out the hemorrhoids. A Parks retractor is introduced to recognize the pettineal line. A mucosal bursa is then created with polipropylene non absorbable ligature at least four centimeters above the pectineal line. The circular 33 SDH Stapler is introduced and the incus is positioned cranially to the bursa which is then closed. Suture device is closed, put in action, open again for about two turns and finally extracted. Hemostasis is checked and anal spongostan positioned. The removed anal mucosa is always sent for histological examination. The most important advantage of this method is observed shortly after surgery; in comparison with the usual techniques there are less troubles to the patient especially the pain is almost absent. Although we have no direct experience, we think that this method may be used in day surgery: in our experience a few hours after surgery the patient is almost free of symptoms and able to attend to their usual activities. Due to short follow up it is still impossible to evaluate the prevalence of recurrences. More cases of a longer follow up are needed for a more definitive judgement, but the preliminary results are very encouraging.

The correction of prolapsed hemorrhoids with Stapler SDH 33. Preliminary results in 55 cases

U Monestiroli, G Baldetti, M Fiume, F Gandini, G Lenna

Unità Funzionale di Chirurgia Generale, Casa di Cura IGEA Milano, Italy

The correction of prolapsed hemorrhoids of 3 and 4 degree with Stapler SDH 33 is a well established procedure. From April 1997 to February 1999 in our hospital 55 patients (35 males, 20 females) were treated. Mean age was 43 years; the operation is made under spinal anesthesia. The first operated patient was discharged 6 days after surgery and the remaining were all discharged after 2 days. All patients were canalized within 2 days. Three patients complained of postoperative pain from probable submucosae hematoma, easily controlled with the usual anti-inflammatory agents. A partial stenosis was observed in one case about 4 months after surgery and successfully treated with Hegart dilators. Two cases of anastomisis hemorrhage was observed 6 hours after surgery. All patients eliminated the agraffes within 6–10 weeks without problems. No important complications were observed.

Percutaneous treatments of shoulder

D Gasparini, M Sponza

S. Maria M. Hosp., Radiology Dept., Udine, Italy

Abstract not received.

Sciatic nerve block at popliteal fossa

S Iuorio, A Luzi, L Sinkovets, P Pelai

Ist. Delle Ermengenze Medico-Chirurgiche, Universita' di Ancona, Italy

INTRODUCTION: Sciatic nerve block at popliteal fossa associated with the use of Ropivacaine is specially indicated in surgical correction of valgus big toe. Due to its security, scarce invasivity, haemodynamic stability and good post-operative analgesia, its an excellent anaesthetic technique for the day-hospital procedures.
METHODS: The patient lying in prone position is invited to bend the interested limb so to put in evidence the apex of the popliteal fossa. This is the point of insertion of the needle (5 cm long) connected with an ENS. The direction of the needle movement is back-fore with light cephalic and external inclination. The needle must be moved 3–4 cm in this direction since the stimulation of sciatic nerve will be recorded as prone-supine movement and back-flexion of the foot. Saphena nerve, the branch of sciatic nerve, is blocked in median and low part of the knee at goos's claw level.
RESULTS: Sixty patients suffering from valgus big toe were subjected to sciatic nerve block at popliteal fossa. Their mean age was 54 ± 14 years, ASA 1–2. Ropivacaine 0.75% was used. Its dose is 1.25 mg/kg for sciatic nerve and 0.4 mg/kg for saphena nerve. The post-operative pain was treated with Tramadol in elastomeric pump at dose 12 mg/h. The length of the surgery was 91 ± 18 min. The onset time of sensorial block was 6.92 ± 2.8 min. The onset time of motory block was 11.12 ± 3.35 min. The motory block lasted 9.23 ± 2.24 h. The sensorial block lasted 11.11 ± 2.58 h. The discharge of patients was 6 h after the surgery.
CONCLUSION: Advantages of this method are lower invasion in comparison with other methods, minimal dose of anaesthetic and good patients' ratings. Ropivacaine demonstrated as a handly and safe anaesthetic with long duration of action, particularly of sensorial block. This property allows control of the post-operative pain with clear reduction of analgesic use.

Can sentinel node biopsy (SNB) in melanoma patients be performed under local anaesthesia?

CR Rossi, M Foletto, B Scagnet, A Vecchiato, S Mocellin, D Casara, MC Montesco, M Lise

Clinica Chirurgica II, Dipartimento di Scienze Oncologiche e Chirurgiche, Università di Padova, Padova, Italy

INTRODUCTION: In the surgical staging of melanoma patients, sentinel node biopsy (SNB) has been performed mainly under general anaesthesia The recently introduced intraoperative lymphoscintigraphy (IL) technique has made this procedure easier and more accurate. It should be established whether limited surgery under local anaesthesia can be equally effective.
METHODS: From 1993 through 1998, SNB was performed under general anaesthesia at Clinica Chirurgica II on 90 lymphatic basins (84 patients, Breslow thickness ≥ 1 mm and/or Clark $>$ III). In all patients, preoperative lymphoscintigraphy with 104.7 (99–150) MBq of 99mTc-albumin was performed the day before, and patent blue dye (PBD) was injected intradermically 20 minutes before, biopsy. The more recent 31 patients had associated IL. Triple counts per 10 seconds (CP10S) were made during three different phases: before skin incision (preoperative), after incision (intraoperative) and after lymph node(s) excision (extraoperative). All nodes were histologically processed (Haematoxylin & Eosin), which was routinely associated with immunohistochemistry (S-100 protein and HMB-45). This was followed by radical lymph node dissection in patients with metastases.
RESULTS: PBD associated with IL allowed the identification of 100% SNs, irrespective of their site. The mean SN(s):non-SN (s) ratio was 4:95, 6:9 and 5:9 in pre-, intra-, and extraoperative phase, respectively. The mean background value was 30.2 CP10S and 16.7 CP10S in the intraoperative and postoperative phases, respectively. The mean intraoperative time required for identification of the first lymph node was 33.5 (29–38) minutes in the laterocervical basin, 8.6 (2–19) minutes in the axilla and 5.2 (1–17) minutes in the groin.
CONCLUSIONS: PBD associated with pre- and intraoperative lymphoscintigraphy is crucial to the accurate identification of SN(s). An increased ratio between SN and non-SN CP10S can be useful for: 1) establishing preoperatively (before surgery) the exact site for skin incision; 2) identifying SN(s) intraoperatively, and determining procedure completion; 3) extraoperatively selecting of higher emitting lymph node(s) (true SN).
In view of the small radioguided skin incision made for node biopsy, and the short time required to identify SN(s), this procedure appears to be feasible under local anaesthesia in most melanoma patients. A prospective EORTC registration trial will therefore shortly be undertaken to evaluate whether this approach is feasible.

Ambulatorial surgical treatment for hemorrhoids: our experience

L Capitanucci, S Serafini, N Gulla', F Lazzarini, B Tristaino

Dept. of Surgical Sciences in Perugia, General Surgery and Emergency Section, Perugia, Italy

Abstract not received.

Microsurgery of varicocele in local anaesthesia with 'Ropivacaina'

A Serao[a], F Ricagni[b]

Department of [a]Urology, [b]Anaesthesiology and Intensive Care, S. Spirito Hospital, Casale Monf., Italy.

INTRODUCTION: Microsurgical ligation of spermatic vein in varicocele surgery is the most diffuse technique. We used this procedure for several years and in the last months we modified the anaesthetic approach from general to local anaesthesia.
MATERIALS AND METHODS: From November 1997 to September 1998 we performed microsurgical ligations of the spermatic vein in 38 patients from 14 to 44 years (mean age 25) in day hospital regimen. We used 'Ropivacaina' as anaesthetic drug in this way: 10 cc 1 cm medially ad below the antero-superior iliac spine (ileoinguinal and ileohypogastric nerves block) and 10 cc to the pubic tubercule (genitofemoral nerve block). In this site we place the drug from deep to superficial layers. We incised the skin in suprapubic region for about 2 cm, at the emergence of the spermatic cord from the external ring, 15 minutes after anaesthetic infiltration. We performed the microsurgical ligation with $4\times$ loups sparing arteries, linfatic vessels and nerves.
RESULTS: No complications (but one case of vagal reaction). Good analgesia and compliance of patients. Follow-up was of 4 months at least and we did not observe any case of relapse.

CONCLUSION: We think that the association of this surgical technique and local anaesthesia with Ropivacaina has economic and organizational advantages with good clinical results.

Closed stapled hemorrhoidectomy: personal experience

M Basile, GS Gidaro

Università degli Studi 'G. g'Annunzio', Chieti, Pescara, Cattedra E1a Divisione di Chirurgia Generale, Pescara, Italy

INTRODUCTION: Over the years, several surgical techniques have been designed to approach advanced hemorrhoidal disease. In the past open techniques were largely used also by our group. In those cases a long healing process is needed that is somewhat uncomfortable for the patients. As a consequence we found interesting the new closed technique recently proposed by Dr. Longo that, according to the premises, should be able to avoid most of the post-operative discomfort. We started applying this technique in June 1997. Our experience on the subject is reported in this paper.
METHODS: A consecutive group of 58 patients was selected. All grade III (circumferential) and grade IV cases of hemorrhoids were assigned to this procedure. Operative position was prone. Multiinjection infiltrative local anesthesia was always adopted. Stapled mucosectomy was performed by means of CDH 33 (Ethicon) and Cea Premium plus 34 (Autosuture) staplers. In no cases was double purse-string suture required.
RESULTS: Since the first application of this technique patient's compliance was excellent. At the time of the suture inspection, a slight hemorrhage was noted in 3 cases (5.2%) and a hemostat suture performed. Temporary post-operative urinary retention occurred in 4 cases (6.9%) and was solved by temporary catheterization. Immediate post-operative hemorrhage requiring surgical hemostasis occurred in 1 case (1.7%) 6 hours after the operation. Slight immediate post-operative pain was noted in the majority of patients, and was controlled by minor pain drugs. No sensible pain was reported after the 1st post-operative day except in 3 cases (5.2%). In 1 case (1.7%) 3 months after the operation a slight anal stenosis was observed, which was satisfactorily corrected by means of anal dilators. Since the starting of our experience a short follow-up was possible (< 18 months). During this period no recurrences were noted.
CONCLUSIONS: Due to the short follow-up period definitive conclusions are not allowed yet. Preliminary results seem to be satisfactory.

Regional analgesia for inguinal hernia repair: a new concept for ambulatory surgery

JJ Eledjam[a], J Giordan[b], B Bassoul[a], S Dareau[a], T Gros[a], B Roche[a]

Departments of [a]Anaesthesia and [b]Digestive Surgery, Clinique Beausoleil, 34000 Montpellier and University Hospital, 30029 Nîmes, France

INTRODUCTION: Inguinal hernia repair (IHR) represents one of the most common daycase surgical procedures on the abdominal wall. Combined blocks of the ilioinguinal (II) and ilio-hypogastric (IH) nerves offer a simple anesthetic approach. The aim of the study was to assess efficacy, safety and reliability of this method for ambulatory patients.
METHODS: One hundred and forty-eight adult patients, undergoing IHR following the Lichtenstein technique were prospectively included after informed consent. Blocks of II and IH nerves were realized using 40 mL ropivacaine 7.5 mg/mL, in 3 injection points using a 24G, 50 mm short-bevel (45°) needle. Anesthetic efficacy, onset and duration of block, failure rate, complications and satisfaction rates (3-point scale) were evaluated.
RESULTS: One hundred and forty-eight patients (132 M, 16 F), aged 62.4 years (21–95), mean weight 70.7 kg were included. Onset of block was 8.94 min (4–20), duration of analgesia was 10.05 hours (4–25). Failure rate was 10.8% with conversion to general anesthesia necessary in 16 patients. Complimentary local injection of ropivacaine was necessary in 13 patients (mean volume 8.2 mL). Complimentary IV injection of fentanyl was necessary in 41 patients (mean dose 46.9 μg (25–150). Complications were rare (26 patients; 17.56%): excessive vagal tone (9), inadvertent lumbar plexus block (9), hypertension (3), hypoglycemia (1), agitation (1), nausea (1), urinary retention (1), testis hematoma (1). Technique was scored excellent by the patients in 96.62% of the cases and 95.94% by the surgeon.
CONCLUSION: Combined II and IH nerves block appeared as an efficient, safe and reliable technique. It also appeared cost-effective and allowed treatment of the patient on an ambulatory basis.

Outcome of ambulatory patients following inguinal hernia repair under combined ilio-inguinal (II) and ilio-hypogastric (IH) nerves block

J Giordan[b], JJ Eledjam[a], T Gros[a], B Bassoul[a], E Viel[a], B Roche[a], S Dareau[a]

Departments of [a]Anaesthesia and [b]Digestive Surgery, Clinique Beausoleil, 34000 Montpellier and University Hospital, 30029 Nîmes, France

INTRODUCTION: Combined blocks of the ilio-inguinal (II) and ilio-hypogastric (IH) nerves offer a simple anesthetic approach for inguinal hernia repair (IHR). The aim of the study was to assess analgesic efficacy, outcome, safety and reliability of this method for ambulatory patients.
METHODS: One hundred and forty-eight adult patients, undergoing IHR following the Lichtenstein technique were prospectively included after informed consent. Blocks of II and IH nerves were realized using 40 mL ropivacaine 7.5 mg/mL. Duration of the block, failure and satisfaction rates (3-point scale) were evaluated. Complication and unscheduled hospitalization rates were studied. Efficacy and duration of analgesia were assessed before discharge, 24 hours after (telephone interview) and at 10 days (consultation with surgeon).
RESULTS: One hundred and forty-eight patients (132 M, 16 F), aged 62.4 years (21–95), were included. Failure rate was 10.8%. Complimentary local injection of ropivacaine was necessary in 13 patients (mean volume 8.2 mL). Complimentary IV injection of fentanyl was necessary in 41 patients (mean dose 46.9 μg (25–150). Duration of analgesia was 10.05 hours (4–25) and time for first analgesic intake (acetaminophen plus dextropropoxyphen) was 10.05 hours (5–25). Technique was scored excellent by the patients in 96.62% of the cases and 95.94% by the surgeon. Unscheduled admission was necessary for 33 patients (22.3%), related to social problems (12), old age (6), medical preexisting conditions (cardiology: 5), surgical drainage (6), late surgery (after 18 hr) (2), accidental lumbar 3-in-1 plexus block (2).
CONCLUSION: Combined II and IH nerves block appeared as an efficient, safe and reliable technique, providing long duration postoperative analgesia. It also appeared cost-effective by allowing most of the patients to be treated on an ambulatory basis.

The dynamic self-regulating prosthesis and unilateral spinal anaesthesia for the treatment of inguinal hernias

P Perrotti[a], M Antropoli[a], N Pedana[a], G De Stefano[a], F Ambrosino[a], P Lazzaro[b], G Cortese[b], G De Cristofaro[a], C Antropoli[a]

[a]U.O. di Chirurgia d'Urgenza Az. Ospedaliera 'A. Cardarelli' (Primario Inc. Dr Giovanni De Stefano), [b]I° Servizio di Anestesia e Rianimazione Az. Ospedaliera 'A. Cardarelli' Naples, Italy

INTRODUCTION: Today abdominal wall defect repair cannot prescind from the use of prosthetic materials and proper loco-regional anaesthesia. However, there is still some uncertainty on 'tension free' and 'suture less' techniques, about traction, tension and dislocation of plug and the consequences on the postoperative period. A new procedure by using a dynamic self-regulating prosthesis, by polypropylene, is proposed for inguinal hernia repair to resolve these problems (1). The prosthesis is composed of two layers superposed and fixed to some structures of inguinal canal on one side only, without use of the plug, to allow movements of aponeurotic and muscular structures.

METHODS: Sixty-nine consecutive non selected male patients, having primary inguinal hernia, were subjected to procedure with the dynamic self-regulating prosthesis and unilateral spinal anaesthesia, with 29-G Withacre needle and 10 mg of 1% hyperbaric bupivacaine injected in the subarachnoid space, lying in the side to be operated on dependent. They were followed-up from 18 to 24 months.
RESULTS AND CONCLUSIONS: No recurrences have been observed, and postoperative comfort improved (no cefalea or urinary retention have been observed after unilateral spinal anaesthesia).
REFERENCES: (1) Valenti, G., Testa, A., Capuano, G. Protesi Autoregolantesi Dinamica (PAD). Una nuova metodica per il trattamento delle ernie della regione inguinale: note preliminaryi su 153 casi. Minerva-Chir. 1997; 52: 1247–53.

Day surgery in the aged (treament of inguinal and femoral hernia)

S Saverio, M Bruno, M Carmelo, N Roberto, C Luigi, DV Danila, P Francesco, R Francesco, S Claudia, V Enrico, T Oreste

Clinica Chirurgica Geriatrica, Università di Padova, Padova, Italy

INTRODUCTION: The improvement of surgical techniques, which has by now led to the complete use of tension-free and suture-less methods in local or super-selective local-regional anaesthesia, has made it possible to treat even those patients who are over 80 years of age with inguinal and femoral hernia in day surgery.
METHODS: From January 1995 to December 1998, 1,031 inguinal and 32 femoral hernias were repaired in 948 patients (mean age 60.8 years; range 19–98). One hundred and two patients were 80 years or older, that is equal to 10.76% of the total, with a mean age of 86.06 years (range 80–98). The average hospital stay was 1.01 days, that of patients over 80 years was 2 days, that of patients under 80 years was 0.9 days. Longer hospital stays of 0–1 days dropped from 15% in 1995 to 5% in 1998 for those patients under 80 years and from 41% to 30%, during the same period, for those patients over 80 years.
RESULTS: In 1998, the rigorous application of DRGs in our department brought about a considerable reduction in the average hospital stay of the patients aged under 80 years (0.52 days), and had no significant effect in that of patients aged over 80 years (1.74 days). This difference is more evident if we consider that during the same year, amongst all the patients with a hospital stay of less than 0–1 days, the percentage of patients over 80 years almost doubled, increasing from an average in 4 years from 24% to 44% in 1998. However, we must consider that in patients over 80 years, hospital stay of more than 0–1 days during the considered period were respectively 24% and 75% in 1998, after emergency operations with intestinal resection or in high-risk anaesthesiologic patients (ASA III).
CONCLUSIONS: Even patients over 80 years of age, with inguinal and femoral hernias, can be treated in Day Surgery. Age has no influence on hospital stay. What does have an influence on hospital stay therefore is the presence of concomitant pathologies and, in urgent operations, frequent intestinal resection due to late diagnosis.

Rhinoseptoplasty and cosmetic breast surgery with intravenous sedation in a day surgery center

GD Bocchiotti[a], E Robotti[b], G Cantamessa[c], B Volpato[c]

[a]*U.O. di Chirurgia Generale, P.O. Nizza M.T.O. Asl 19 Asti,* [b]*U.O. di Chirurgia Plastica, Ospedali Riuniti di Bergamo,* [c]*Ambulatorio Chirurgico Logos, Bergamo, Italy*

INTRODUCTION: Monitored Anesthesia Care (MAC) or IV sedation associated with local anesthesia is well suited for rhinoseptoplasty and cosmetic breast surgery.METHODS: IV sedation by the anesthesiologist allows good cooperation, with a relaxed individual who loses cognition of time. Bleeding is reduced, without the risks of intubation, with the advantage of cost reduction. We employ Midazolam, Fentanyl and Propofol, with oxygen, antibiotic and cortisone. The patient is monitored by EKG, pulse oxymetry and Dinamap. A resuscitation and intubation trolley is available. Any rhinoseptoplasty, open or closed, primary or secondary, can be performed, lasting up to four hours. Cartilage grafts are liberally employed. Chin implants can be inserted and any septal work accomplished.
MAC for *cosmetic breast surgery is* associated with 'tumescent' infiltration, or intercostal block. Augmentations are carried out via an axillary or periareolar approach. A circumareolar or standard technique is our choice for mastopexy. We prefer an inferior pedicle for reductions, which usually average not more than 500 gm per breast. Pharingeal and laryngeal reflexes are preserved. Small bolus doses of Diprivan induce temporary loss of consciousness when necessary. Side effects, including nausea and emesis, are negligible. Patients are discharged between one and two hours after surgery. A responsible relative is charged with the initial 24 hours care.
RESULTS: We carried out 48 rhinoplasties and 32 breast cases under MAC. We had no infections, hematomas, or any complication requiring reoperation. No patient had to be admitted overnight. All were uniformly happy both with anesthesia and the outpatient modality.
CONCLUSION: MAC is well suited for nasal and cosmetic breast surgery, as well as blepharoplasty and cantopexy, forehead, midface and cervical lift, otoplasty and tumescent liposuction.

Inflexed stripping with a pin stripper in phlebologic ambulatory surgery

C Terlizzi, GD Bocchiotti, M Morelli

Ospedale Nizza Monferrato, Divisione Chirurgia Generale, Nizza Monferrato, Italy

We have been performing outpatient phlebologic surgical procedures in the Division of Surgery of the Hospital of Niza Monferrato since 1992. Our technique of choice is based upon the use of the pin stripper device, a specific type of stripper developed by Dr. Oesh of Berne, together with the accompanying hooks. Inflexed stripping remains a highly controversial issue, after having been first proposed by Dr. Van Der Stricht fifteen years ago. This is mostly due to the frequent problem of accidental rupture of the saphenous vein which precludes a subsequent proper stripping. The stripper consists of a rigid steel wire, gently angulated at one extremity, and a perforated head at the opposite end. The stripper is inserted from above into the divided saphenous vein, after the crossectomy is performed. With sufficient practice, one can then easily guide the probe distally to the desired length, and a gentle push demonstrates the tip of the stripper in its subcutaneous position. A small incision is then performed to extract the stripper from the skin together with the 'inflexed' vein. The presence of significant collateral branches may constitute a problem due to risk of rupture, but successful stripping remains usually possible if one exerts a gentle countertension on the skin and not on the stripper. Should a rupture of the vein still occur, placing a silk suture at the end of the stripper still allows a successful external stripping. Advantages of this technique are both the modest bleeding and the lack of postoperative pain, haematomas and neurologic sequelae. The surgical procedure is completed by varicectomies as described by Muller. We have so far performed 155 procedures of short stripping of the internal saphenous vein and 25 similar procedures for the external saphenous vein. In about 90% of cases the procedure was wholly successful. The patient is discharged in the afternoon in the usual uncomplicated case.

Ropivacain as local anesthetic in phlebology

D Misuri, G Giudici, A Becchio, P Fabbrucci

Ospedale S. Maria Nuova U.O. Chirurgia Generale, Firenze, Italy

During 1988, we performed 61 operation for venous pathology of the lower limbs under day hospital system. Forty-seven patients were operated under local anesthesia, using ropivacain as anesthetic. We have evaluated: the analgesic efficacy, duration of anesthetic action and safety of the drug. Each patient was studied evaluating 1) pain

intensity during surgery and at dismissal with the visual algic score (VAS), 2) possible concomitant use of other analgesic drugs and 3) side effects during surgery and afterwards. Every patient reported a score between 2 and 3, both during surgery and at dismissal. There was no need for analgesic and all patients were dismissed 4–5 hours after the operation. We did not find any complication related to the local anesthesia. Given these results it is our opinion that ropivacain is a drug with very few side effects. It guarantees a profound local anesthesia and, above all, an excellent post operative analgesia.

Surgical treatment in 'day surgery' for benign breast diseases: our experience

M D' Annibale, P Piovanello, P Bruno

Regina Elena Cancer Institute, Rome, Italy

Abstract not received.

Venous day-surgery: personal experience

R Lonardi, A Moisè; A Francescone, A Mascaro

Cattedra di Chirurgia Vascolare, Università degli Studi di Modena e Reggio Emilia, Modena, Italy

The evolution of venous surgical techniques or, more simply, the improvement of technical details to less traumatism of perivaricose tissue and minivasivity in terms of surgical approach permitted to phlebology to be quickly integrate in day-surgery concept. These besides the anesthesiological choice (peridural superselective anesthesia, 3 in 1 block, throncular anesthesia, pure local infiltration) that we can use. Even if this venous surgery is made in our institute from over thirty years. we preferred to evaluate data related to the last four years (from January 95 to December 98) because of their homogeneity. In this study, we considered 994 patients, 772 women and 222 men (49 years mean age). Forty-five percent of these patients had some relatives with chronic venous disease and 30% were habitual smokers. Thirty-six percent of women had never been pregnant while 23% had 1 pregnancy and 41% more than 1 pregnancy. Besides 38% of women were operated after menopause. These patients underwent to 1240 operations, in particular: 264 enlarged crossectomy and short stripping of internal saphenous vein, 712 enlarged crossectomy and short stripping of internal saphenous vein with phlebectomy, 33 enlarged crossectomy and long stripping of internal saphenous vein, 56 phlebectomy, 98 enlarged crossectomy and short stripping of external saphenous vein, 77 recurrent internal or external saphenous vein. In all patients we used femoral nerve anesthesia with a standard stimulus with an electric neuro stimulator. Nerve stimulators have allowed doses of local anesthesia to be reduced (4–6 cc of Mepivacaina 1%) and only in a few cases we added local pure anesthesia during the operation. The pre-operative study besides the usually evaluation of anesthesiological risk factors consists of Ecodoppler study of deep and superficial venous system. The definition of type of reflux, extension, grade and measurements of sapheno–femoral junction, sapheno–popliteal junction, external saphenous vein and internal saphenous vein are registered not only for preoperative mapping but also for the follow-up. The patients had been discharged from hospital three or four hours after the operation. We had registered no complications related to the type of anesthesia. The postoperative pain never required the use of antinflammatory and analgesic drugs. We made an elasto-adhesive bandage that patients hold for 7–8 days until we remove suture stitches. Then we made next clinical examination after a month from operation. Follow-up at 6, 18, 24 months never point out recurrent varicose veins. A determination of the tolerant and intolerant patients to local anesthesia was done by a questionnaire; of the patients tested 98% would choose the block anesthetic once again, and 2% regretted not having accepted that type of anesthesia.

Evaluation of the clinical condition of the patient at discharge, Results of a survey questionnaire filled in by 281 centers of proctologic surgery

F Gaj[a], N Buzzi[b], A Restifo[b], F Scardamaglia[a], F Tonelli[c]

[a]II Clinica Chirurgica, Policlinico Umberto I, Roma, [b]Centro Consulenze, Firense, [c]Dipartimento di Chirurgia Generale, Ospedale di Careggi, Firense, Italy

The SICP (Italian Society of Colon Proctology) has implemented, with the technical and organizational support of the *Centro Consulenze of Florence*, a Census of Proctology Surgery Centers at the national level. Data collection has been carried out in the May–October period of 1998 (data collected refer to the year 1997). A questionnaire has been sent to 1292 hospitalization centers, and to members of the two scientific societies in the speciality. The questionnaire includes sections on: patients' demographic data, available resources and activities in colon proctology, pre-operative procedures, anesthesiology evaluation and techniques, anesthesiology related risks. Data management and analysis have been carried out by means of a relational computerized database in Windows environment (Access). By 31 October 1998 we have received 302 completed questionnaires: of these, 281 were returned by the same number of Proctology Surgery Centers. The following table shows the responses to the set of items pertaining to the patients' conditions at discharge (regardless of type of hospital assistance provided).

When a surgical procedure is performed, are the following goals achieved at the time of discharge?	Yes (%)	No (%)	Not Av (%)	Total (%)
a. Full recovery of spatial–temporal orientation	97.5	–	2.5	100.0
b. Cardiocirculatory stability	97.2	–	2.8	100.0
c. Recovery of airway protection reflexes	96.8	–	3.2	100.0
d. Absence of respiratory complications	97.2	–	2.8	100.0
e. Absence of bleeding	95.7	1.4	2.8	100.0
f. Minimal sensation of nausea	79.4	13.2	7.5	100.0
g. Liquid intake capacity	91.1	5.0	3.9	100.0
h. Ambulatory capacity	96.1	1.1	2.8	100.0

Ambulatory surgery of non palpable breast lesions

G Canavese, M Gipponi, C Vecchio, A Catturich, C Di Somma, F Rosato, D Tomei

Division of Surgical Oncology, National Institute for Cancer Research, Genoa, Italy

The improvement of imaging techniques and the widespread use of mammographic screening of breast cancer have significantly increased the detection rate of non palpable lesions with a diameter less than 1 cm. They are mainly represented by: 1) a lump or a thickening of breast parenchyma; 2) microcalcifications; 3) a nodule with microcalcifications. Only one out of four non palpable lesions is expected to be malignant so their correct localization is fundamental to perform a very precise operation in order to remove only what is strictly necessary for diagnosis, with the best cosmetic re-

sult. From 1988 to 1997, 5940 patients underwent breast surgery at the Division of Surgical Oncology of the National Institute for Cancer Research of Genoa; 689 (11.6%) had non palpable lesion and treated with ambulatory surgery: a nodule or a breast thickening (n = 344; 49.9%); cluster of microcalcifications (n = 256; 37.2%) and diffuse microcalcifications (n = 50; 7.2%); nodule and microcalcifications (n = 39; 5.7%).The localization was done by stereotactic mammography (n = 502; 72.8%) or sonography (n = 187; 27.2%). Surgery was performed in local anesthesia periareolar incision was commonly used and the lesions were completely removed following the guide of sterile charcoal 3%. A different access was used only in cases of anchor wire localization or after sonographic centering with skin marking; a specimen radiography was usually performed before wound closure. Histologic findings were the following: benign breast disease (n = 482; 70.1%); preneoplastic lesions (n = 39; 5.9%); malignant lesions (n = 168; 24%). During 1997, 33 malignant lesions were identified out of 92 operations (35.8%); literature data report cancer in 6%–40% of cases. As regards clustered microcalcifications, 27 (55.1%) of 47 patients in 1997 had cancer and three of them had pathologic positive axillary lymph nodes (21.4%).

Shouldice hernioplasty. Our experience

LR Marcellino, SC Vaudo, E Sessa, MV Marcellino

Istituto III Clinica Chirugica, Policlinico Umberto I, Università degli Studi di Roma 'La Sapienza', Rome, Italy

Shouldice hernioplasty represents the surgery operation technique to repair inguinal hernia with the minimum risk of post operatory recurrences. We have applied such operatory technique in first aid herniae, using the other methods of Lichtenstein and Trabucco for the other recurrences on about 200 patients since 1984 and the follow up on our patients has confirmed the value of the method. We have preferred this method for the small collateral effects since the operation is effected in local anesthesy and the patient is immediately immobilized to avoid the formation of trombi. After using a metal line for a certain time, as suggested by the same Shouldice, we have been using successively number zero nylon lines (prolene) for the minor cost and for the easiness of availability. Our experience shows the final results does not change. We prefer to operate in local anesthesy to obtain a better cooperation of the patient. We give a 5 mg of Valium and a phial of meperidina respectively 1 hour and half an hour before operation, for the anesthesy we use 1% carbocaina for a maximum dose of 40 cc. With a Fruchaud cutaneous cutting we proceed to the operation. The respect for the anatomic structures is a fundamental characteristic for the reconstruction executed with a double plane paletot folding: fore and aft. After rebuilding the inguinal canal with the external inguinal opening laterally displaced, we close the closure with subcuticular suture in catgut both for the best aesthetic results and to avoid successive medications. After the operation the patient is kept under control for a few hours and then dismissed. In post operatory period antibiotics and anesthetics are given for some days. There have not been canalization problems and the patients can evacuate soon after the operation. The operation technique is well codified and can be executed without problems also clinically. We have not registered recurrences. This is the best technique as regards the terms of rapidity, execution, practicity and absence of recurrence.

Sinus pilonidalis in day surgery. Our experience

LR Marcellino, E Sessa, SC Vaudo, MV Marcellino

Istituto III Clinica Chirurgica, Policlinico Umberto I, Università degli Studi di Roma 'La Sapienza', Rome, Italy

Sinus pilonidalis, also defined pilonidal cyst or sacrococcigeal cyst, represents a post-sacral benignant pathology supported by a dermoid cyst whose eziopathogenesis is still being discussed. People around 18–35 years are principally affected by this phenomenon: male–female ratio is 3 to 1, it is also due to the pilifer system that is particularly developed in males. The treatment of sinus pilonidalis is surgical and its optimization implies to the complete absence of recurrences besides the operation and the elimination of post-operatory diseases. It also implies a reduction of sanitary expenses because of the day-hospital practice. During the operation the patient must assume a prone position with the pelvis lifted up by a cushion and the gluteals fixed by plasters to the operation bed. As regards anesthesy we utilize 20–30 cc lidocaina or 1% carbocaina with adrenaline (1/200000) and adding bicarbonato (1 cc). The local anesthesia is infiltrated locally next to the excision zone. After methylene blue stain and H202, patients are subjected to the total exeresis of the sinus, exsectioning cutaneous losanga and its fistula as far as the presacral band and rebuilding the planes in different points of reabsorbable materials. The operation needs an accurate hemostasis, leaving an exsanguinate side. When the operation is completed we clean with H202 sometimes adding rifampicina, to potentiate the cleaning and antimicrobic action of the solution. All patients have been discharged 24 hours after the operation with antibiotic and analgesic therapy. Complete excision of sinus and its fistula, as we have experimented, guarantees good results in terms of healing and absence of recurrences. The ambulatory operation, closing the bounds as first objective and, in local anesthesy, permits a decrease of the sanitary expense and of the time of sanitary cure.

Trabucco hernioplasty technique in one day surgery

LR Marcellino, SC Vaudo, E Sessa, MV Marcellino

Istituto III Clinica Chirurgica, Policlinico Umberto I, Università degli Studi di Roma 'La Sapienza', Rome, Italy

In this work we consider Trabucco hernioplasty technique. This technique can be executed in local anesthesy and using prothesis, and permits us to reinforce the wall without recurrences. The importance of the restoration of primary inguinal hernia with protests, without respecting the rebuilding of the anatomic planes, is in the fact that we can avoid undesired effects such as tissue laceration, ileohypogastric and ileoinguinal nerve bopping, hematomas. We must also consider that by using this method we can also obtain reduction of the operation time. We have been executing 110 hernioplastics in 95 patients for 6 years; among these 15 were bilateral. All the operations have been executed according to Trabucco's method with a double strafe plug and prothesis in Marlex. The authors describe the advantages of this technique for the following reasons: ambulatory treatment and the dismission of the patient 1 hour after the operation; use of local anesthesy; minimum post operatory pain; reduction of tissutal trauma; surgeon–patient cooperation; drastic reduction of recurrences with respect in the traditional techniques; the use of mono-dose antibiotic therapy. Considering our cases of Trabucco hernioplaty we have not registered any complications and after a 4 year follow-up we have noticed no recurrences.

Outpatient phlebectomy: our triennal experience

G Salvatore, G Ferraiuolo, R Di Palma, F Milone, A Cicala, G Mastrorilli

Ist. di Chirurgia Generale e d'Urgenza, Univ. degli Studi di Napoli 'Federico II', Italy

Abstract not given.

One-day surgery hemorrhoidectomy using CO_2 laser

G Ussia[a], S Cuccomarino[a], F Spinelli[b], S Musardo[b], B Moretti[c]

[a]Dept. Of Surgery 'A. Valsalva', University of Bologna, [b]Villa Giose Hospital, Crotone, [c]I Clinica Ostetrica Ginecologica 'Sfameni', University of Bologna, Italy

INTRODUCTION: The traditional surgical therapy of hemorrhoids usually leads to a painful and disabling postoperative course. In order to ameliorate postoperative course, we experienced some variants of the Milligan–Morgan operation.
METHODS: In the last 5 years, 254 patents, aged 22–81 years, underwent the operation of hemorrhoidectomy after diagnosis of forth-degree hemorrhoids complicated with anal fissure and/or thrombosis. The operation was usually performed in local anesthesia with Carbocaine 0.5% and adrenaline 1:1000; this procedure allows to obtain a complete analgesia of the operatory field, in association with a good relaxation of the anal sphincter. After infiltrating the anesthetic solution in the cutaneous and muscular fields and lifting the anoderm with a soft clamp, the anesthetic is infiltrated in the submucosal space, in order to isolate the internal sphincter of the anus and utilize the vasoconstrictive action of adrenaline. With the CO_2 laser (40 W continuous Sharplan Laser), the cutaneous plain was incised to expose the internal sphincter of the anus; then the anal mucosa was incised to expose the venous pedicle and obtain a mucosal edge to reconstruct the anal canal with. The venous pedicle was ligated with 2-0 absorbable suture, then resected; the submucosal field, including the venous stump, was covered with the mucosal edge, that was secured to the internal sphincter with 3-0 absorbable sutures. At the end of surgery an absorbable tampon soaked in antiseptic salve was introduced into the anal canal. Postoperative care comprehended frequent disinfectant washings, medications with anesthetics—antibiotics and alimentary regimen to obtain regular defecations.
RESULTS: The technique used allowed a precise and quick operation (mean operative time 40 min) with reduced bleeding. In the follow-up period (6 months to 5 years) no significant complications were observed; in 3 cases there was a postoperative bleeding at 1st and 7th postop. Patients satisfaction reached 94%: pain was very mild in 71%, moderate in 26% and severe in 2%; healing of the surgical wound was completed in 3 weeks.
CONCLUSION: It seems important to use specific surgical technique to take full advantage from the CO_2 laser capabilities; the use of laser has the advantage of being minimally invasive and respecting the tissues; the reconstruction of the mucosal flap and the possible biostimulating effect of the laser beam seems to exert an anti-inflammatory effect reducing edema and consequently pain and accelerating the healing process and the recovery time.

Saphenous vein sparing surgery: principles, techniques and results

P Zamboni, M Giacometti, CV Feo, C Cisno, MG Marcellino, A Liboni

Istituto di Chirurgia Generale, Università degli Studi di Ferrara, Ferrara, Italy

INTRODUCTION: Hemodymamic correction (HC) of chronic venous insufficiency (CVI) seems to be effective and, in addition, useful for future grafting. Such treatment, however, is still controversial in the literature. Therefore, we evaluated HC in terms of effectiveness and suitability of the saphenous vein for eventual bypass surgery.
METHODS: Three hundred and seventy-five patients selected using clinical and duplex scanning evaluations, and classified according to CEAP criteria, underwent HC. The outcome was evaluated with independent clinical and ultrasonographic examinations; pre and postoperative ambulatory venous pressure (AVP) and light reflex-rheography (LRR) measurements were assessed in 125 patients.
RESULTS: With a mean follow-up of 49 months, saphenous vein patency was 99% and overall recurrence rate 11%. AVP and LRR measurements improved postoperatively ($p < 0.001$).
CONCLUSIONS: HC procedure seems to be effective in CVI treatment. In addition, as compared to high ligation and distal stab avulsion reports, a higher rate of saphenous veins suitable for eventual bypass surgery was found out.

Treatment of lesser saphenous vein insufficiency: ambulatory crossectomy

M Di Giacomo[a], S Cisternino[a], M. Campagnol[b], O Papa[b], G Raimondi[b], A Cavallaro[b]

[a]Concordia Hospital, [b]I Istituto di Clinica Chirurgica, Università La Sapienza, Roma, Italy

Between August 1987 and October 1998, we performed 636 ambulatory venous surgery procedures for venous insufficiency. Ninety-five patients (130 legs) were operated for lesser saphenous incompetence. They were all female but nine, aged 21–81 (mean 46.4). None had been affected by deep venous thrombosis. Presenting symptoms were ankle oedema. heavy leg, -varices. Clinical and ultrasound examination was performed in all patients. In 40 cases, ascending phlebography was performed, owing to controversial ultrasound results. Standard crossectomy was carried out as follows: the patient was positioned prone and, after local anaesthesia. a transverse incision (3–4 centimetres) on the popliteal crease was performed. The fascia was then incised transversally and the lesser saphena isolated from the nerve. The vein of Giacomini was divided. The lesser saphena was followed up to the junction and there divided flush with the popliteal vein. In 37 cases this procedure was associated with flebectomy. No patient needed perioperative sedation. Antibiotics were administered for 5 days postoperatively. Complications consisted of mild wound infection, healed within 3 weeks in 4 cases, ankle and/or leg oedema in 9 and postoperative varicophlebitis in one. Long term results (12 months) included functional and cosmetic outcome. All the patients referred relief from symptoms 2–4 months after the procedure and good cosmetic results both for varices and wound. No recurrence was observed. This series adds further considerations to the approach to lesser saphenous insufficiency and its treatment. In the presence of sapheno–popliteal junction insufficiency, the patient should always be advised to undergo surgery since it provides very good results both in preventing varices development and relieving symptoms. When varices have already appeared, surgery is strongly indicated and often requested by the patient him/herself. As far as diagnosis is concerned, we believe that Doppler and Duplex-scan are not always enough in detecting junction insufficiency; contrast phlebography is a golden tool and it also gives sharp anatomical details. In conclusion. our data confirm that ambulatory lesser saphenous vein crossectomy provides very good results at low risk with high cost-effectiveness.

Breast ambulatory surgery: our experience

F De Francesco[a], U Torchia[b], O Geraci[a], A Querci[a], C Trimboli[a], F Lemma[a]

[a]Division of Surgical Oncology University of Messina, (Dir. Prof. F. Lemma), [b]Satellite Unit of National Institute of Cancer Research of Genoa, Italy

INTRODUCTION: Despite the big progress effected in the knowledge of breast tumors it is still not possible to effect a concrete perspective of prevention. Currently the possibilities of care remain above all tied up to its timely diagnosis, that allows a conservative surgical treatment.
METHODS: From 1995 to 1998, our Clinic has performed 294 ambulatory breast surgical operation, of which 56 were non palpable lesions. The selection of the patients has been performed through examination visit in our surgical ambulatory. In 68 cases has been effected cytodiagnosis on ENAB. Eighteen non palpable lesions were located with the free hand method, 20 through echotomografic cutaneous mapping, while in 18 cases has been performed an invasive procedure by location a special metallic threads through the guide of a needle. The 294 treated cases: 148 were fibroadenomi, 31 were mammary cysts, 10 were ductal papillomas, 6 were phyllode tumors, 16 were florid adenosis, 12 were galactophoritis, 30 were typical

ductal hyperplasias duttali, 25 were recurrences of breast carcinomas, 16 cases were infiltrating carcinomas non susceptible of conservative surgical therapy, that has undergone incisional biopsies (in 5 cases) and excisional biopsies (in 11 cases, of which 2 were bilateral tumors), for the pathological and biological typing, for the subsequently primary antiblastic treatment.
RESULTS: The discharge of the patient has always happened within two hours of the operation. The complication more frequently (9%) observed has been the formation of hematomas despite the accurate emostasis. In one case has proceeded to the evacuation and the apposition of aspiration drainage.
CONCLUSIONS: In relation to our experience we think that the One-day Surgery represents a valid option in the treatment of the breast lesions. This surgical procedure besides reducing the health care times and the onerous costs of hospitalization is favourably accepted by the patients for the least psychological and social repercussions otherwise existing for the ordinary hospitalization. Such advantages make even more positive the results of prevention and precocity of the diagnosis of malignant tumors.

The ambulatory surgery in the treatment of pigmented skin tumors

U Torchia[a], F De Francesco[b], A Querci[b], C Trimboli[b], O Geraci[b], S Lemma[c], S Mercuri[c]

[a]Satellite Unit of National Institute of Cancer Research of Genoa, [b]Division of Surgical Oncology University of Messina (Dir Prof F Lemma), [c]Dermatology Division Papardo Hospital of Messina (Dir. Prof A Puglisi Guerra), Italy

INTRODUCTION: The pigmented lesions of the skin always induce a certain worry in the patients, above are accompanied by clinical signs that can have of one degeneration of their thought. From 1996 to 1998 in the Surgical Oncology division we have performed in Day Hospital regimen the surgical excision of 214 pigmented tumors; 85 male and 129 female.
METHODS: All the patients submitted to surgical treatment were come to our ambulatory showing at least one of the signs of possible degeneration of the lesion (variations in the form, in the chromatic aspect, signs of inflammation, hemorrhage subjective symptoms like sense of tension, burning). For that concerns the anatomical location, we have had 87 lesions at head, 73 at neck, 20 at truncate, 12 at inferior arms, 22 at superior arms. The exeresi has always been performed maintaining a safety border of 3 cm around the lesion, where possible has been practised the direct suture of the surgical wound, using also the epidermic grafts or the skin flap.
RESULTS: Postoperative complications have consisted in 4 cases of wound dehiscence. The lesions have been submitted to pathological typing: 80 compound nevus, 113 intradermal nevus, 9 basal-cells epitheliomas, 8 blue nevus, 4 melanomas. The 4 cases of melanomas have been classified according to the stages of Clark and Breslow. In one case the lesion located to the thigh, has been classified to I stage of Clark and with the thickness inferior to 0.75 mm, re-entering so between the so-called low risk melanome according to Breslow's classification. In 2 patients tumors were of the II stage of Clark, located one to the back and one to the abdomen and with a thickness respectively of 1.8 mm and 2 mm. Another melanoma, located to middle third of the leg has been classified to the IV stag of Clark with a thickness of 12 mm.
CONCLUSIONS: We can affirm that the choice to practise the excision for all suspect skin pigmented lesions have allowed to evidence in precocious phase 4 case of melanoma and 9 cases of basal-cells epitheliomas. Notable importance assumes, finally, the treatment of the lesions in Day Hospital regimen; in fact the limited time of the hospitalization further having sure psychological reflexes on the patient allows to reduce the costs of the sanitary structure.

Bi-block (sciatic nerve and femoral nerve) versus selective spinal anaesthesia in the stripping of the saphenous vein in day-surgery

G Santamaria[a], N Loddo[a], G Caminiti[a], F Cutrupi[b], N Alberti[b]

[a]Anaesthesia and Intensive Care—Unit Service, [b]Vascular Surgery Division, Hospital 'Bianchi-Melacrino-Morelli', Reggio Calabria, Italy

INTRODUCTION: The A.A. in a period of two years, on 155 patients submitted to stripping of the saphenous vein in day surgery, have utilized for 84 patients selective spinal anaesthesia and 71 patients bi-block.
METHODS: Pre-anaesthesia: midazolam 0.035 mg/kg + atropine 0.07 mg/kg i.m. Bi-block: needles for electric stimulation 24G (150 mm for sciatic nerve and 50 mm for femoral nerve). Local anaesthetic utilized: ropivacaina 0.6% mg.3/kg for 48 patients and bupivacaina 0.37% mg.2/kg for 23 patients. Selective spinal anaesthesia: needles Whitacre 25G. Local anaesthetic utilized: iperbaric bupivacaina 0.50% with variable dosage between 7 and 12 mg.
RESULTS: We have recorded 3 failures with bi-block. The 100% of patients, submitted to selective spinal anaesthesia, were satisfied for efficacy of the block; 7% of them have as collateral effect cephalalgy; 2% hypotension and 1% retention of urine. Thirty percent of the patients submitted to bi-block have shown impatience during implementation of the block and the 20% also during operating. One hundred percent of the patients have appreciated the bi-block during the postoperative period for the duration of the analgesia.
CONCLUSION: The A.A. in their experience prefer the bi-block for the absence of collateral effects and for the higher comfort of the patients during the postoperative period and with respect of nervous central integrity.

The surgical therapy of the varices of the inferior limbs in day-surgery. Our experience

F Cutrupi[a], G Santamaria[b], N Loddo[b], N Alberti[a]

[a]Unit of Vascular Surgery, [b]Service of Anaesthesia and Reanimation, Azienda Ospedaliera 'B.M.M.' Reggio Calabria, Italy

INTRODUCTION: The surgical treatment of the varices has very good results in the condition of day-surgery since, thanks to the help of the modern instrumental non invasive diagnostics, the improvement of the surgical procedures, anaesthetic techniques have been developing, such as the selective spinal anaesthetic and the bi-block.
MATERIALS AND METHODS: During a period of two years 155 operations for varices were carried out in day-surgery. The most important problems have been: the selection, the preparation-coordination of the patient, the choice of the anaesthetic, the type of operation, the good compliance to the follow-up. All the patients have been subjected to a careful clinical instrumental valuation. The surgical operation is consisted in the long stripping of the internal safena (66.8%) or short (30.3%), the stripping of the external safena (3.2%), with the ligature of perforating.
RESULTS: The achieved results can considered good: intraoperatory complications or concerning the anaesthetic have not occurred.
CONCLUSIONS: In the field of the phlebological surgery the treatment in day-surgery of the varices is becoming more and more used because there are good clinical results, it cuts short the staying in hospital, and saves beds for more serious pathologies.

Surgical treatment of hemorrhoid in day-surgery

R Nonnis, GF Fancello, V Loi, G Satta, M Trignano

Institute of Patologia Chirurgica, Sassari, Italy

INTRODUCTION: The need to reduce costs, times of admission in hospital and give to the patients the opportunity to return to their working activities as soon as possible, bring us to codify a hemor-

rhoidectomy operation that can be performed in day-surgery (DS).
METHODS: All patients underwent a Milligan–Morgan operation with transacral and local anesthesia associated. The aim was to enable the patient return home on the same day of the operation. To reduce postoperative pain the anesthetist administered to the patients a long time action anesthetic, associated with a vasoconstrictor, and NSAID that reduces oedema and local inflammation. Also pain caused by sphincter hypertonus is reduced with administration of those drugs. The indications of this operation in DS are hemorrhoid of grade II, III and IV, with patients in good general conditions and without disease that contraindicate a surgical operation. In our opinion an accurate selection of patients is the key to obtain good results. Between 1994 and 1998 we treated 71 patients of age range 25–84 years (average 45.9). Six patients were affected by grade II, 28 by grade III and 37 by grade IV hemorrhoids. All patients leave the hospital after 6–8 hours from the operation and were taught about drugs to relief pain, diet, how to dress wounds and about the most frequents complications. For the first week after treatment there was a daily telephonic conversation between surgeon and patient. A clinical examination was performed at 7, 14, 30 and 45 days after the operation.
RESULTS: The postoperatory pain was low in 38 patients (54%), mild in 25 (35%) and severe in 8 patients (11%). Average time of onset of pain was 12 hours after intervention and was treated with good results with NSAID. The time of first evacuation was 2 or 3 days after operation. We have a very low incidence of complications: one case of bleeding and one case of necrosis of mucosal bridge.
CONCLUSION: We obtained good results with this traditional technique for treatment of hemorrhoids in DS. In our opinion with the introduction of new techniques hemorrhoidectomy in DS will become more safe, quick and satisfactory for patients, surgeons, and sanitary structure.

Pathophysiological implications in day-surgery treatment of the varicoses syndrome

R Boatto, F Sanna, MR Satta, P Soro, M Trignano

Istitute di Patologia Chirurgica, Sassari, Italy

INTRODUCTION: We believe that the surgical approach to the lower leg varicosities could be managed with outpatient procedures on condition that you have had a former suitable hemodynamic and pathophysiologic framing.
METHODS: At this aim we performed in all patients with chronic venous insufficiency an Eco-Doppler study of the sapheno–femoral junction and an Eco-velocimetric identification of the reflux points, and in a little group of patients (17.3%) we performed a phlebographic study. Thus we subdivided the patients into same groups according to pathophysiological characteristics: 1) simple sapheno–femoral junction insufficiency; 2) sapheno–femoral junction insufficiency associated with perforating and/or communicating veins incontinence; 2a) sectorial troncular dilation of great saphena vein; 2b) extra-saphena dilatation; 2c) troncular dilatation of great saphena vein in thigh and leg; 3) post-trombosis varicose vein with mixed reflux. The best therapeutic surgical strategy derives directly from a preliminary pathophysiological remark and could just be a simple interruption of the sapheno–femoral junction or the traditional stripping that is in our opinion the best treatment for saphenous trunk varicosities due to mixed reflux.
RESULTS: We reviewed the last six years (1992–1998) of surgical treatment of varicose disease. More than 60% patients (575) underwent outpatient procedure with local anesthetic; with surgical treatment focused on the specific pathology (crossectomy, valvuloplasty, CHIVA, short stripping, intrasaphenic ligature and sclerosis, etc.) with a minor complication rate of 2.4% (18.7).
CONCLUSION: Our trend is to also perform long stripping and varicectomy in day-surgery.

Intra peritoneal injection of local anaesthetic: the key-role to laparoscopic cholecistectomy as a day surgery procedure

S Spaziani Testa[a], B Sansoni[a], N D'Emilia[a], N Venturi[a], N Apice[a], R Arca[a], S Santangeli[a], B Sansoni[b], W Ciaschi[b]

[a]U.O. di Chirurgia Generale Osp. Frosinone, Resp., [b]Servizio Anestesia e Rianimazione, Italy

INTRODUCTION: Many published series confirm the feasibility of laparoscopic cholecistectomy as a Day Surgery procedure. The only problem to make the procedure acceptable to the patients is the control of postoperative pain, which can be rather disturbing during the first 24–48 hours. Complete relieve of pain therefore is in our opinion the most important tool in order to generalise the practice of laparoscopic cholecistectomy in Day Surgery.MATERIALS AND METHODS: From Jan. 8 to Dec. 1998, 100 patients have been submitted to laparoscopic cholecistectomy in our unit. Fifty of them (study group) were randomised to local treatment of pain with Ropivacaine injected intraoperatively in the hepatic bed and in the inter hepato-diafragmatic pace. The remaining patients (control group) were not treated with local infiltration of anaesthetic drugs and the relief of pain was achieved, postoperatively with the usual pain killers.
RESULTS: Average time of operation was 45 minutes (28–70). All the patients were anaesthetised with the use of gases only, without any NSAID medication. At the end of the operation through a small catheter in the 50 patients of the study group, 25 ml of Ropivacaine 2% were poured in the peritonea cavity, 10 of which in the interhepato-diafragmatic space and 15 ml in the hepatic bed. Five more millilitres were ejected in the subcutaneous tissues underlying the surgical incisions. The evaluation of the study group of patients was performed with the VAS method. In all of them were reported resting pain values between 0 and 2 while incidental pain scored 2–4. All the patients in the study group were discharged within 24 hours from the operation. In the control group the reported values of resting pain was >8 controlled with NSAID medication. Discharge time was delayed to 48–72 hours.
CONCLUSIONS: A thorough preoperative evaluation and a sound surgical technique were not enough o allow generalisation of laparoscopic cholecistectomy as a Day Surgery procedure. Prevention of pain using intraperitoneal anaesthesia with Ropivacaine was able to get a good control of postoperative pain relieving anxiety from the patient giving him the psychological support in order to accept the early discharge within 24 hours from the operation. Therefore laparoscopic cholecistectomy can be safely performed in Day Surgery, provided good control of pain can be achieved. In our experience, intraperitoneal injection of local anaesthetic seem to realise almost complete relieve of pain, without any need of supplementary use of parenteral drugs in the postoperative period.

Experience of day surgery in hand surgery

A Vespasiani

Milan, Italy

The speaker presents his 10-years experience in the treatment of the most frequent and complicated types of trauma and hand diseases, treated at the Hand Surgery Centre of Istituto Ortopedico 'G. Pini' of Milan and in private clinics duly structured and equipped for the ambulatory surgery. He will also deal with the main aspects of the day surgery, whose milestones are: independent units; skilled and well-trained personnel; accurate patient selection; team of surgeons of proved experience; excellent surgery and patient care.

Anesthetic technique for inguinal herniorraphy

G Della Rocca, C Giorni, F Pugliese, L Pompei, C Coccia, F Ruben, M Lucchetti, S Monaco, S Lescai, S Siligardi, P Di Marco, M Giampalmo, M Antonino

Istituto di Anestesia e Rianimazione Dir Prof A. Gasparetto, University of Rome 'La Sapienza', Rome, Italy

INTRODUCTION: Improvement in anesthetic and surgical techniques for inguinal herniplasty significantly reduced duration of the procedure and postoperative length of staying (LOS).
METHODS: From 1995 to 1998, 239 patients (mean age 55 ± 15) underwent inguinal hernioplasty. Four anesthetic techniques were used: surgical field infiltration (SFI) with carbonated lidocaine 1% + bupivacaine 0.25% (113 pts); epidural anesthesia with lidocaine 2% + fentanyl 100 μg (90 pts); general anesthesia with $O_2 + N_2O$ + isoflurane + fentanyl (25 pts); intrathecal anesthesia with hyperbaric bupivacaine 1% 30 mg (11 pts). Statistical analysis was performed with Student's T test and $p < 0.05$ was considered significant.
RESULTS: The results are reported in the following table.

Anesthesia	N	Duration (min)	Foley	Sedation	Intraop hypot	Intraop hypert	Postop analgesia	Postop LOS (days)
SFI	113	72 ± 16	0	31*	0	2	23	1.5 ± 1.7
Peridural	90	81 ± 30	2	8	2	1	25	2.4 ± 2.2
General	25	87 ± 19	0	0	0	0	6	2.3 ± 1.7
Intrathecal	11	82 ± 20	1	0	1	0	1	4.5 ± 4*

* $p < 0.05$.

DISCUSSION: No difference in intraoperative complications was observed between epidural and local anesthesia. Postoperative LOS in local anesthesia group was shorter than in the epidural anesthesia one. Postoperative LOS for intrathecal anesthesia was longer than the other groups. In conclusion the improvement in anesthetic (local and peridural) and surgical techniques reduces postoperative LOS without intraoperative or postoperative complications.

New developments about the early breast cancer: the biopsy of the sentinel lymph node identified with the radioisotopic technique

R Tasinato, M Biral, C Mascarin, R Barina, L Griggio

General Surgery Department and One Day Surgery Service, 'Villa Salus' General Hospital Mestre, Venezia, Italy

At the present time the lymph nodal stage is still considered the most important prognostic element referring to the remote prognoses of patients affected with breast cancer. The grading of the lymph nodal growth depends on many factors but mainly on the size of the original cancer and on its biological grading. With regard to the early cancers (T1) the lymph nodal presence is individualized in 15–19% of the patients; the consequence is that in this little group of patients, 80% of them are subjected to an axillary lymph node extirpation even with the absence of lymph nodal metastasis. Recently many authors have proposed the utilization of the biopsy with the radioisotopic technique to reveal the warning lymph node in order to distinguish, in the pre-surgical stage, the group of N− patients from the N+ patients. We report our casuistry related to 44 patients affected with stage 1 breast cancer and subjected to tumorectomy and biopsy of the sentinel lymph node in one-day surgery activity in our division. In all the patients the cancer cytological diagnosis has been confirmed by next histological research on the extirpated nodule. We have used human albumin as tracing marked with Tecnezio 99 and injected hypodermically near by the nodular lesion a few hours before (usually 3–4) the biopsy. We use a usual meter as noticing probe. The histological examination of the extirpated lymph node was done after a paraffin inclusion and with a multiple microsections technique to locate micrometastasis. In 39 patients the extirpation of the sentinel lymph node has been done at the same time of the breast tumorectomy. In 16 patients we have verified a lymphnodal positivity.

The surgical treatment of the umbilical hernia with preperitoneal prosthesis in the one day surgery activity. Our experience

R Barina, R Tasinato, C Pozza, L Polese, L Griggio

General Surgery Department and One Day Surgery Service, 'Villa Salus' General Hospital Mestre, Venezia, Italy

Analogically to the treatment of the hernia in the inguino–femoral region and to the surgery of umbilical hernia, more and more surgeons tend to use non-reabsorbical prosthesis in the preperitoneal region. The use of prosthesis instead of the direct suture of the fascial strata reduces the incidence of relapses to a period of 3–5 years between 14 and 21% depending on the analysed cases. This method can be used with local anaesthesia and in the one day surgery activity for little and medium hernias. We report our experience about the surgical treatment on 39 patients observed between March 1995 and March 1998 and operated for umbilical hernia. In the 39 patients there were 26 men and 13 women between 23 and 74 years old (the average age was 57.3). We have found an inguen hernia while treating the umbilical hernia that has been operated later in the one day surgery activity in 6 of them. We have excluded from these cases relapsed hernias and the patients treated with umbilical herniaplastic during other surgical procedures. We had to operate urgently two of them due to an obstruction of the hernia. Now we report the results got on 28 patients except 11 of them because their follow up is not over 12 months or because they did not come for the following controls. The medium follow up of the remaining patients is 30 months. Thirty-eight controlled patients (97.5%) did not have any sign of a relapse, in one of them (2.5%) we have discovered a sub acute rejection of the prosthesis, that has been extirpated; the fascia has been directly suturated. The remaining patients did not have problems with this procedure and have taken back their normal functional activity. In two cases (5%) there has been a little and momentaneous reddening of the cutaneous wound, that has regressed spontaneously; in 3 cases (7.5%) a modest lymphocele has risen undercutaneously. We had to do some aspirations.

Development of the pre-shaped mesh and plug in the tension-free and sutureless Trabucco hernioplasty

R Rollino, R Pagella, M Maimone

Department of General and Minimally Invasive Surgery, Clinica 'Salus' Alessandria, Italy

INTRODUCTION: The results of the tension-free and sutureless Trabucco hernioplasty are connected to the correct selection and use of the prostheses material. For this reason we feel convenable to point out the development of the pre-shaped mesh and examine the reasons which induced the author to design the new flat plug T4 used in the indirect hernias.
METHODS: In our department from December 1993 to January 1999 we carried out 780 Trabucco hernioplasties. Since February 1996 we use the polyprophylen pre-shaped mesh with suitable rigidity and controlled memory (Hertra) which does not require the positioning of anchoring point, without void spaces as when soft prostheses are used. The void spaces delay the fibroblastic infiltration giving rise to the sequestration (mechanical prosthesits), infections and recurrences. About this matter we point out among the complications in our case study two mechanical prosthesits with shaping of sinus tracts; it obliged us in one case to remove the prostheses. In both cases we used soft mesh of one coat prophylene. Near to the pre-shaped mesh. we developed two plug types: T1 is a development of the previous and flat plug T4. T1 plug is obtained from a polypropylene disc 5 or 7 cm diameter like the Gilbert plug and is shaped as an arrow by the fingers. New plug T1 and Gilbert plug are designed to open under the transver-

sal fascia, after having cut it and dried with a small plug the under-fascia area over the epigastric vessels. The flat plug prevents the risks arising from the compression of iliac vessels. Really at the level of inside ring the distance between iliac vein and transversalis fascia lies between 0.8 and 1.2 cm. These values measured by R. Benddavid, surgeon of Shouldice Hospital and author of studies about the Bogros espace, are in conformity with our surveys made on 10 patients. Consequently a rigid and long plug anchored at the bottom can push the iliac vessels.
RESULTS AND CONCLUSIONS: Though our follow-up of indirect hernias treated with T4 plug is limited to 11 months only we feel it assures through a stimulation of local fibrosis a positive containment of hernia bag and prevents the compression of iliac vessels.

One-day surgery treatment of inguinal hernia pathology: results of 2-year Color-Duplex Scan follow-up

A De Martino, W Testi, M Belcastro, A Coratti, A Lucenti Fei, A Genovese, F Mantovani

Institute of General Surgery and Surgical Specialties, University of Siena, Italy

INTRODUCTION: The authors describe their surgical technique in inguinal hernia surgical repair, and their 2-year Color-Duplex Scan follow-up.
METHODS: The authors describe their hernioplastic technique employing a 1 cm by 3 cm, 1/2 cm-thick polypropylene plug, buried between the fibers of the transversus muscle, and secured by suture points. The boat-shaped mesh is posed on the internal oblique muscle and on the *fascia transversalis*, 2 cm medially from the pubic tubercule and 2 cm from the internal orifice of the inguinal canal. Patients are then studied with a Color-Duplex Scan follow-up on day 1, 7, at 4 months, at 1 and 2 years, evaluating prosthetic material behavior and plug and mesh morphologic change with respect to surrounding tissues and to funicular vessels. From January '97 to January '99 we have treated 55 patients (age 28–85) with this technique.
RESULTS: From this preliminary study we have observed how it is not possible to visualize the plug or the mesh on day 1. From the first week until the first 3–4 months both plug and mesh are well identifiable, while after the fourth month they are no longer visible, due to fibroblastic tissue proliferation in the meshwork, favoring an increased area resistance.
CONCLUSIONS: With this technique we have observed no recurrence after a 2-year Color-Duplex follow-up, with minimal postoperative complications and a good fibroblastic infiltration of the pillow-shaped plug.

Loco-regional anesthesia in inguinal hernia surgery

A De Martino[a], F Tani[a], A Coratti[a], M Belcastro[a], W Testi[a], F Mantovani[a], A Lucenti Fei[a], S Criscuolo[b], A Genovese[b]

[a]*Institute of General Surgery and Surgical Specialties*, [b]*Institute of Anesthesia and Resuscitation II, University of Siene, Italy*

INTRODUCTION: Since a few years we have adopted as a first option, loco-regional anesthesia (LRA) in inguinal hernia surgery, since we have been convinced of the low cost/benefit ratio typical of this technique.
MATERIALS AND METHODS: We hereby indicate the following exclusion criteria: age under 18 years, ASA IV, severe cardiac disease, psychologically unstable or neuropsychiatric patients, strangled or recurrent hernia, refusal of LRA. After an initial pre-anesthesia using 0.5 mg of atropine, and 10 mg of diazepam, i.m., using 25–40 ml of a mixture of 1% mepivacaine (40%), 0.5% bupivacaine (25%), sodium bicarbonate (10%), normal saline (25%), we infiltrate and block the ileo-hypogastric (D12–L1) and ileo–inguinal nerves (IL) at the level of the superior anterior iliac spine, the 11th and 12th intercostal nerves towards the umbilicus, the genital branch of the genital-crural nerve (L1–2) at the pubic tubercle; we then infiltrate skin and subcutaneous tissues where we plan to incise. It is essential to leave a 15–20 minute interval to allow for the anesthesia to take place before commencing the operation; during the operation, it is generally necessary to infiltrate the hernia sac and the internal inguinal orifice (mepivacaine, 0.5%). Whereas indicated or required by the patient, we induce a light general sedation with propofol (so-called 'blended anesthesia').
RESULTS: From the beginning of 1996 until today we have performed 280 operations using this technique: only in 25 patients (8.9%) was light general anesthesia with propofol necessary (in four cases due to patient request). In no case was it necessary to convert to general anesthesia. Complications: Interstitial hematoma secondary to infiltration (12 cases, 4.2%), bradycardia and vagotonic hypotension in 16 cases (5,7%).
CONCLUSIONS: We believe that LRA bears a primary role in inguinal hernia surgery, due to its low cost/benefit ratio, and particularly due to the fact that it allows for a reduction of perioperative risks, patient mobilization and early dismissal, and a lowering of sanitary costs.

Sentinel node role in the treatment of breast cancer: our experience

E Procaccini[a], AP Laprovitera[a], R Ruggiero[a], A Ferrara[a], PF Rambaldi[b], V Cuccurullo[b], M Scarano[b], L Mansi[b]

[a]*Institute of Experimental Surgery—S.U.N. (Dir.: Prof. G Viola)*, [b]*Institute of Nuclear Medicine—S.U.N. (Dir.: Prof. L. Mansi), Naples, Italy*

Sentinel node is the lymphatic drain of tumors. This concept, well established with the melanoma, has also been extended to breast cancer. The aim of our study, still in the earlier stage, is to evaluate the efficacy of sentinel node technique in modulating the axillary dissection in breast cancer. From December 97 to December 98, 18 patients underwent to a lymphoscintigraphy after peritumoral injection of Tc99m colloidal albumin. All of them were clinically N−, although 6 had an increased axillary uptake shown at the Tc99m-TF scintimammography. Sentinel node, shown in vivo through a radiouptaking probe and vital stain, has predicted the lymph nodes status in all the cases, also in those 3 in which two sentinel nodes were detected. The use of this technique in all the clinically stage I patients should drastically reduce the morbidity associated to the full axillary dissection and the hospital stay costs.

Total intravenous anesthesia for laparoscopic varicocelectomy

B Donà[a], F Cappi[a], S Pianalto[b], M Gambardella[a], F Griffoni[a], M Lanzieri[a]

[a]*Istituto di Anestesia e Rianimazione*, [b]*Clinica Chirurgica 4, Università degli Studi di Padova, Italy*

INTRODUCTION: The success of outpatients laparoscopic surgery depends on a careful selection of patients and the ability of anesthetic technique to ensure a rapid emergence from anesthesia with a satisfactory control of postoperative pain, and the absence of side effects. This study was undertaken to investigate the influence of a total intravenous anesthetic management on the recovery process after laparoscopic surgery.
PATIENTS AND METHODS: Thirty-seven ASA 1 patients aged 12–49 years (mean 27.4) scheduled to undergo laparoscopic varicocelectomy as day surgery procedure were included in this study. Propofol was used as inductor agent and in variable-rate infusion (170–100 μg/kg/min) to maintain anesthesia supplemented with Fentanyl (FNT) before endotracheal intubation, incision surgery and if the patient manifested clinical signs of inadequate analgesia. Ten minutes before the end of surgery, Tramadol 100 mg and Ketorolac 30 mg were administered to delay the onset of the post operative

pain. Pain was evaluated a self-rating visual analog scale (VAS) ranging from 0 to 10 at 0, 0.5, 1 ,2 hrs postoperatively and every 2 hrs until discharge. At the same time nausea was (PONV) clinically evaluated using a scale ranging from 0 to 3. Postoperative pain and nausea treatment were standardized. Patients were discharged by Post-Anesthesia Scoring System (PADS).
RESULTS: Mean operating time was 40 min (range 10–100 min) and total required amount of FNT was 5.6 μg/kg. Mean time of postoperative recovery from anesthesia was 13 min. At time 0 all patients had VAS pain score ≤ 3; at the same time 4 patients were treated for mild PONV. Mean time, from recovery to first request for postoperative analgesia treatment in 92% of patients was more than 6 hrs, 3 patients required pain treatment in a mean time of 200 min. Using the PADS system, 22% of patients were discharged at 3 hrs and 79% at 6 hrs after surgery. One patient was admitted to hospital for an overnight stay for lipothymia; another was readmitted for surgical complication.
CONCLUSION: This results suggest that the proposed anesthetic management provided adequate pain control with minimum postoperative nausea and a good recovery rate. This permitted a short postoperative hospital stay without compromising in safety, efficacy, or patient satisfaction.

Ultrasound guided sclerotherapy (UGS): an interesting alternative to surgery

P Pavei, E Giraldi, D Rubiconi, C Castoro, G Spreafico, U Baccaglini

Clinica Chirurgica IV, *University of Padova*, *Italy*

INTRODUCTION: Ultrasound guided sclerotherapy (UGS) of varices is an effective and safe method and an interesting alternative to surgery. This technique was born in 1989 and its aims were to reduce the risks of traditional sclerotherapy and to widen its indications.
Methods: UGS was performed on 176 varices between May 1993 and October 1998 (101 great saphenous veins; 21 short saphenous veins; 30 recurrent varices and 21 thigh perforators). The diameter of all veins varied between 3 and 8 mm and patients underwent from 3 to 6 sessions of UGS. The veins were scanned with an Esaote IDEA AU4 instrument with a 7.5 MHz linear probe. As sclerosing agents 6–8 or 12% Iode iodine or 3% sodium tetradecyl sulfate solutions were used. All patients were fitted with a second class compression stocking or an elastic bandage. Patients follow up varied between 24 and 48 months and all patients were evaluated both clinically and with a duplex scanner after 6, 12, 24, 36 and 48 months.
RESULTS: We considered a good result the complete occlusion of the vein with absence of flow, as detected by duplex. Such a result was observed in 151 patients (86%) after 2 years; in 134 patients (76%) after 3 years and in 88 patients (50%) after 4 years.
CONCLUSIONS: UGS is safe, effective and an interesting alternative to surgery. Most patients prefer to repeat UGS instead of being operated.

Biomaterials and rational use of meshes in hernia repair

A Coda

Osp. Gradenigo, *Ente Autonomo*, *C. so Regina Marghenta*, *8*, *10154 Torino*, *Italy*

Abstract not received.

Out patient treatment (Day Surgery) of chronic venous ulcers of the lower limbs. Resistant to traditional (refractory to standard/conservative) therapy, by means of autologous dermoepidermic skin grafts

E Giraldi, P Polo, S Penzo, P Pavei, D Rubiconi, S Spreafico, C Castoro, U Baccaglini

Day Surgery, *Clinica Chirurgica IV*, *University of Padova*, *Italy*

INTRODUCTION: A correctly applied standard phlebological therapy does not heal all venous ulcers (VU); approximately 10–50% do not heal within 6 months of therapy (refractory VU). In these types of ulcers, autologous skin grafts are a valid therapeutic choice; however, the obtained results depend on the characteristics of the graft (thickness and dimension) and the local and general conditions that favour or impair grafting. Partial thickness dermoepidermic grafts (0.2–0.6 mm) seem to favour the grafting process. Taking into consideration the characteristics of the VU and the need to carry out the treatment in an out patient setting, seven female patients (age 39–83 years, mean age 66, median 74) with a total number of 8 VU, underwent 2 types of partial thickness autologous dermoepidermic skin grafts: split skin graft and pinch skin graft.
METHODS: The venous origin of the 8 treated ulcers was confirmed by echodoppler; they had been present for at least 6 months or more (mean 28 weeks, median 25) and were of wide size (min 2.5 cm^2, max 47 cm^2, mean 23 cm^2, median 20.5 cm^2). Four ulcers underwent autologous grafting according to the pinch skin graft and 4 according to the split skin technique. The skin flap sample was taken from the outer surface of the thigh, under local anaesthesia, according to the 2 above mentioned techniques; split skin graft type by means of dermatome; pinch skin graft by means of the free hand knife. The split skin grafts were attached to the ulcer using autologous fibrin glue while pinch skin grafts were simply covered with a vaseline gauze. An adhesive bandage was subsequently applied.
RESULTS: Twelve months later only the ulcers that had undergone pinch skin grafting (4/4) healed completely, whereas with the split skin graft technique, only 3 partially healed and 1 had no response at all. In all cases, however, not all the applied skin samples grafted 100%. The therapy was well tolerated to the patients and in those cases in which VU were accompanied by pain, this regressed immediately after grafting.
CONCLUSION: Autologous dermoepidermic skin grafting represents a valid therapeutic procedure in the treatment of VU resistant to traditional therapy particularly in larger and deeper ulcers of more than 6 months duration. In our opinion, the pinch skin graft was better than the split skin graft technique due to the particular characteristics of the VU. Grafting is surely favoured by an adequate preparation of the ulcer prior to therapy, but it is also possible in cases in which the granulation tissue is poor.

Treatment of hemorrhoids and mucose prolapse with circular stapling

G Milito, F Cortese, D Venditti, CU Casciani

Unità di Colonproctologia RM3, *Catt. di Cl Chirurgica*, *Università Tor Vergata*, *Osp. Sant'Eugenio*, *Roma*, *Italy*

Abstract not received

Adverse outcomes in ambulatory anesthesia—what can we improve?

F Chung

Department of Anesthesia, *University of Toronto*, *Toronto*, *Ontario*, *Canada*

Ambulatory surgery, as it is currently practiced, has an excellent safety record. Major morbidity is infrequent, and deaths are extremely rare events during or following ambulatory surgery. Less serious, non life-threatening perioperative events, such as intraoperative cardiovascular events, and most frequently postoperative pain and PONV, are occurring with higher incidence. These minor events may result in prolonged postoperative stay, unanticipated hospital admission, or hospital readmission, and they also affect patient satisfaction and postoperative functional level. The occurrence of these minor adverse events is now the major area of quality assessment and an area where improvement could be targeted. The goal of lowering the incidence of these minor adverse events related to ambulatory surgery could be achieved by development of less invasive surgical techniques, use of newer shorter acting anesthetic drugs with fewer side effects, and improved postoperative pain management.

Varicose veins day surgery: review of one-year work

P Pavei, E Giraldi, G Spreafico, C Castoro, GF Petrin, A Bologna, U Baccaglini, E Ancona

Clinica Chirurgica IV, University of Padova, Italy

INTRODUCTION: In recent years there has been an increasing interest in Day Surgery both for economic reasons, according to the public health guidelines, and thanks to new possibilities of anaesthesia. Since 1992 our Department (IVth Clinical General Surgery of Padua University) has a Day Surgery Unit. Surgical procedures for varicose veins, inguinal and crural hernias, minor breast diseases and proctological problems are carried out mostly under monolateral spinal or local anaesthesia.
METHODS: We considered all the surgical procedures for varicose veins carried out on Day Surgery from January to December 1998, in order to evaluate safety, morbidity and results. Clinical and Duplex examinations were performed in all cases before the intervention. Patients returned to our Unit on the 3rd and 7th day after surgery. We did not made any selection as regards the extension of the varicose disease, while we considered eligible to Day Surgery all the patients ASA I and II and some patients ASA III, after anaesthesiological evaluation. Great care is taken with patients information before, during and after surgery. In fact patient anxiety levels are related to the quality of information they are given. We performed 364 high ligation and stripping of the long saphenous vein; 28 ligation and stripping of the short saphenous vein; 339 phlebectomy and 6 operations for recurrent varicose veins. The surgical procedures time varied from 35 to 70 minutes (mean 50 minutes). In case of spinal anaesthesia complete recovery of sensitivity and motility occurred after less than 3 hours. The stay in the postoperative room until discharge varied between 4 and 6 hours.
RESULTS: These 703 patients (404 females and 299 males) had an age ranging from 18 to 72 years (mean age 55). Six hundred and eleven procedures were done under monolateral spinal anaesthesia and 92 under local anaesthesia. Two patients were retained in the hospital overnight: 1 for urinary retention following spinal anaesthesia and 1 for a serious decrease in blood pressure with important bradicardia (< 20 pulse per minute). Two cases had an unanticipated hospital admission for postspinal headache with nausea and vomiting. We had no unexpected hospital admissions for surgical problems. Some patients required one additional clinical control for compression bandage related problems. In the last 8 months we used graded compression stockings instead of compression bandages and that allowed to reduce most of the unanticipated ambulatory admissions. Cosmetic and functional results are good with high patients satisfaction.
CONCLUSIONS: The results obtained are encouraging. We did not observe relevant complication after discharge from hospital. In our opinion safety, tolerability and results of varicose veins Day Surgery depend on good patient selection and information and on the experience of both anaesthetists and surgeon in this particular field.

Ambulatory surgery for cutaneous melanoma

A Bono, C Bartoli, D Moglia, A Maurichi, T Camerini

Instituto Nazionale, Tumori, Via Venezian 1, 20133 Milano, Italy

INTRODUCTION: The results of a prospective study conducted in our Outpatient Department showed the safety of ambulatory narrow excision for cutaneous melanoma up to 2 mm thick. In that study a group of 168 consecutive patients with primary invasive melanoma underwent ambulatory surgery with excision margins of 1 cm. In a median follow up of 5 years, the crude cumulative incidence of regional and distant metastases were, respectively, 5.6% and 1.5%. No local isolated recurrence was observed, this indicating that ambulatory narrow excision is justified for melanoma up to 2 mm thick.
METHODS: This therapeutic approach has become common practice in our institution. Presently, patients with invasive melanomas up to 1 mm thick are treated under local anaesthesia, with skin excision margin of 1 cm, and the subcutaneous fat cleared to the deep fascia, which is generally conserved. Loss is made good by direct tissue closure except rare cases requiring reparative plastic surgery. Patients with melanomas more than 1 mm thick after excision.

Tension-free sutureless hernioplasty under local anesthesia, personal experience

VM Greco, A Conti, R Casadei, F Minni, M Taffurelli, HU Okoro, D Marrano

Clinica Chirurgica I Policlinico S. Orsola, Bologna, Italy

INTRODUCTION: In recent years, hernioplastic surgery has been revolutionized by the introduction of new highly biocompatible prosthetic materials.
METHODS: Between June 1997 and 1998, 218 primary hernias were treated using Trabucco's tension-free sutureless technique: 154 (70.6%) were indirect hernias and 64 (29.4%) direct hernias. In all cases, the repair was carried out using pre-shaped prosthesis. Indirect hernias were treated using a T1 plug in 144 cases and a T4 plug in 10 cases, direct hernias were treated using a T1 plug in 23 cases. The operations were carried out under local anesthesia using a mixture of 1% Lidocaine (40 cc), 0.25% Marcaine (40 cc) and sodium bicarbonate 0.84% (8 cc).
RESULTS: Post-operative pain was moderate. All patients resumed walking the same day and were discharged from hospital the day after the operation. Local complications were limited to 1 case of orcheitis (0.4%), 2 of hematoma (0.8%) and 3 of seroma (1.3%). There were no relapses during the short follow-up period.
CONCLUSIONS: Rapid remobilization and local anesthesia enable the surgical indications to be extended to geriatric and high risk patients.

Wrist arthroscopy in day hospital: our experience

R Testoni, N Collini, CI Falco, S Bolongaro

Unità Funzionale di Chirurgia della Mano, Casa di Cura Polispecialista, 'Dott. Pederzoli' Peschiera d/G. Verona, Italy

Abstract not received.

Prosthesitis in herniary surgery

R Rollino, R Pagella, MR Naimone

Casa di Cura 'Salus', Alessandria, Italy

Abstract not received.

Nursing

Child-friendly ambulatory ENT surgery

S Decreton, K Hanssens, K Bataillie, M Cenens

Brussels One Day Clinic, Brussels, Belgium

INTRODUCTION: The Brussels One Day Clinic has set up a child-friendly ENT ambulatory surgery program by introducing non-sophisticated but very important details throughout the whole program.
METHOD: A child-friendly ambulatory surgery approach starts in the ENT-surgeons private practice. The child receives a colouring book with orientational material, depicting the entire hospitalisation period. Increasing parent participation takes place at home, when the mother spends time with her child to complete the colouring tasks in the workbook. The workbook is illustrated with animals, who are also represented in the clinic. The child brings the colouring book

along to the clinic for the pre-operative examinations and on the day of the surgery, where it will be referred to by the different staff-members. Child-friendly organization is achieved on the one hand by the use of pharmacological techniques, such as a local anaesthetic cream preparing the child for the blood test and the intravenous infusion, and the use of pre-medication to help with the separation of the child and its parent. On the other hand non-pharmacological techniques are used, such as child-friendly design of the examination equipment and some toys and books to spend the time prior to surgery. Feeling better, the child can watch a video or cartoons before being discharged from the clinic. At the control visit in the surgeon's practice, the child gets the opportunity to report about its experiences at the clinic, which doesn't seem to have been traumatic in any way.
CONCLUSION: The child's story demonstrates that a child-centered philosophy of care reduces the anxiety of children and their parents in ambulatory pediatric surgery.

Patient information

M Edmondson

Director Day Surgery Kent and Canterbury Hospital, Ethelbert Road, Canterbury, Kent CT1 3NG, UK

Efficiency drives demand a reduction in waiting times with a proposal that 70% of surgical procedures be carried out as day cases. Appropriate written information is therefore essential for patients and carers. The following are some concerns highlighted by patients prior to admission: (1) Loss of identity, personal vulnerability; (2) how will the outcome of treatment affect their future?; (3) Fear of diagnosis/death; (4) will they be discharged too soon/will carers manage?; (5) Will pain be severe?; (6) Will they receive and understand information given?; (7) Will help be available? These and many other concerns can be addressed by using the information discussed in the presentation. It will show how to provide information that is simple and easily understood. Information is control, by thus empowering patients, they can be proactive in their own care and treatment, free from the fear of being made to feel foolish. By providing written information that is easy to understand, the patient's stress and anxiety levels can be considerably reduced by the provision of links with hospital staff prior to admission. So, how and where to start and how far to go on the 'information highway'? When providing information, the patients must at all times be considered as individuals with the information given being specific to their needs. Experience shows that leaflets designed to be multipurpose lead only to confusion and anxious patients. The design should be pleasing to the eye and easy to read. The involvement of a Print Company and the Simple English Society at an early stage is useful, for it is easy to produce a factually correct leaflet that has too much medical terminology to be fully understood by the patient. We must ensure that information leaflets do increase the patient's understanding—resulting in an informed patient.

Psychological preparation for patients undergoing day surgery

M Mitchell

Senior Lecturer, Department of Nursing, University of Salford, Eccles House, Albert Street, Eccles, Manchester, M30 ONN, UK

INTRODUCTION: Information provision, an essential component of anxiety management, has recently been highlighted as a considerable problem for day surgery patients (Mitchell 1998). New evidence has suggested that the ability to cope with a stressful event such as day surgery can be improved if the preparatory information is matched with the individual's coping style i.e. provision is made for patients with a desire for increased levels of information (vigilant coper) and with a desire for minimal levels of information (avoidant coper).
METHOD: Convenience sample of day surgery 120 patients were contacted and randomly assigned into two groups (i) tended information booklet and (ii) simple booklet.
RESULTS: Patients with a desire for increased levels of information who only received the simple information were more anxious than those who received the extended information ($0.025\ p \leq 5\%$). The majority of patients required both written and verbal information 1 to 3 weeks prior to surgery. Good information in day surgery led to the overall satisfaction ($0.0000\ p = 1\%$). Better adjustment to surgery also resulted in less contact with the general practitioners following discharge from the unit ($0.0065\ p \leq 1\%$).
CONCLUSIONS: Explicit guidance is provided for information provision and a new, pioneering anxiety management plan is outlined specifically for day surgery use. Furthermore, conncise and compact documentation is outlined to assist with implementation.

When the nurse holds the scalpel

G Erickson

Theatres, Clatterbridge Hospital, Bebington, Wirral, UK

INTRODUCTION: The role of the nurse has altered radically in the past decade. These changes have occurred not only on the ward but, in my own case, in the operating theatre.
METHODS: I have been trained to do minor operations; my training included local anaesthetic techniques, suturing techniques and incision planning.
RESULTS: This leading edge scheme has developed financial and operational benefits by the release of surgeons from routine work to better utilise their skills in more complex procedures, significant reductions in waiting list, more effective utilisation of theatre time and day ward beds.
CONCLUSION: A patient satisfaction survey has been carried out with positive results. Assessment and evaluation of Consultant Surgeons will continue to be maintained. I have performed over 2,500 procedures to date and an audit of 100 patients, with excellent results.

Nurse practitioners: first class nurses or second class doctors?

H Cahill

Acute and Critical Care, Department of Health Studies, University of York, UK

The practice boundaries between nurses and junior doctors have become less distinct over the last decade in the UK and it is therefore not surprising to find evidence of role change within the field of day surgery. This paper questions both some of the assumptions upon which role extension is based and the ways in which the Scope of Professional Practice (UKCC, 1992) is being interpreted in some day surgery settings. Despite suggestions by health economists Richardson and Maynard (1995) that between 30 and 70% of all medical tasks *could* be done by nurses, accepting tasks discarded by medicine is not the way for nursing in day surgery to develop. The paper argues that establishing care pathways, optimising pre-admission assessment services in the community, and strengthening discharge liaison and outreach services should be the focus of nursing development in day surgery. Considerable impact on care quality would be achieved if nurses concentrated their efforts in building and developing these services. The future of nursing is concerned with health and healing, not taking on jobs that doctors no longer want.

Automatisation of standard nursing-planning

P Vanhoonacker, L Van Outryve

Volkskliniek, Tichelrei 1, 9000 Gent, Belgium

The systematically increasing administrative workload within our Belgian healthcare system progressively hinders the actual patient-care. Besides, everything has to go faster and faster (bigger turn-over) which consequently may result in loss of quality. To overcome these problems we had to find alternatives. Automisation had to alleviate the day-to-day administrative burden; nursing files were standardised and automised and a network was established to make all data easily accessible. This resulted in a well established communication line which enabled us to co-operate interdisciplinary, quickly and with high quality. Gradually healthcare becomes unthinkable without automisation and it definitely improves: communication; supervision; managing strategy; administration.

Nurse led pre-assessment in day surgery: an audit re-visited

D Lakeman, Z Fright, E Bradshaw

INTRODUCTION: A previous audit 1997/8 of day care patients (presented at B.A.D.S. June 1998) showed that the introduction of nurse led pre-assessment reduced the rate of patients failing to attend on the day of surgery (D.N.A) from 10% to 5% despite an increase in patient numbers. However, the cancellation rate on the day of operation remained stubbornly at 6%.
METHOD: Measures have since been taken to improve these rates. Notes of any patients for whom there is any doubt of suitability for day surgery are scrutinised by the individual anaesthetist responsible for the list. All patients are sent a reminder 1 month before the planned operation date. A further 6 month audit for 1998 is being undertaken. All general surgical, gynaecological and orthopaedic cases that attend the clinic are included in the audit.
NUMBER OF PATIENTS: 1. A 6 month sample cancelled on the day of surgery: 1997/8 6% = 69 patients; 2. A 6 month sample not attending on day of surgery: DNA rate remains at 5% (81 patients) in spite of 373 more patients being seen than in 1996/7 period.
RESULTS 1997/8: The results of the 1998 audit will be presented.
CONCLUSION: Nurse led assessment has been successful in reducing the DNA rate. Cancellation on the day has been a challenge. Views and suggestions are invited on how to attack this problem.

Global nursing approach in day surgery

E Jouniaux, A Dubois, L Lesoil, MC Ceran

C.H.U. A.Vesale, Montigny-le-tilleul, Belgium

INTRODUCTION: In a one day clinic, teamwork is mandatory. In a short time, the patient lives through all of the surgical stages. The patient is the first priority. Only an organisation with this priority will be able to meet the patients needs.
METHOD: We want to enjoy a new idea "the day surgery spirit". This spirit is intensified with a global approach of the ambulatory concept. Every member of the medical and nurse's team works with the same interest: the patient and the same goal: total success of the ambulatory practice. All the techniques in day surgery must be accompanied with human factors: reception, patient information and quality assurance. Nursing skills in a one day clinic are very large and important: operating room, recovery room and hospitalisation room approach are different in practice and philosophy. In our service, the nurses practice in all structures of the unity. Our nurses work weekly in the operating room, in the recovery room and in the hospitalisation room.
RESULTS: A polyvalent nursing team, possible substitution between all nurses of the team when it's needed, complete patient information by a good knowledge of all stages of the ambulatory practice, consistency of physical and emotional practices with polyvalent nurses, the patients satisfaction is excellent: everyday evaluation of the quality gives us a result between 92% and 97% of the total satisfaction and a perfect score for our nursing approach.
CONCLUSIONS: Our nursing approach in one day surgery is a priority. We defend this concept despite the evolution of the surgical techniques. So we can guarantee a quality assurance to our patients with our 'one day surgery spirit'.

Anterior cruciate ligament repair as a day case procedure

L Skelton

Northern General Hospital Trust, Sheffield, UK

Anterior cruciate ligament repair as day surgery is a regular part of the day surgery repertoire in the USA. This in itself is not a good enough reason for taking on the process here in Britain, however with the rationing of health services becoming an increasingly visible and problematic aspect of healthcare. Innovators in day surgery are able to take a leading role in the practices of surgery for the future. At the Northern General hospital day surgery unit we have commenced a trial of ACL repair as day surgery. My talk will not be focused on the surgical or anaesthetic techniques for obvious reasons but on the nurses role in the planning and implementation of the trial and the areas of concern for the staff working in the unit.

Administration of medication to a protocol

E Joel

Northern General Hospital Trust, Sheffield, UK

The Day Surgery Unit at the Northern General Hospital is a free standing and predominantly nurse-led unit. I found that, because of this, there were many occasions when we needed medication prescribing and there was not a doctor in the unit. This led to a delay for the patient in either receiving analgesia/anti-emetics or being discharged home; and also led to unnecessary in-patient admissions. This problem and ways to resolve it, were discussed. I found that wording in the Medicines Act 1968 provided an opening for the development of nurse administration to a protocol. In this presentation, I intend to describe how we set up a protocol to allow nurses to administer medication to a protocol. I will discuss the advantages of the service, and any problems encountered.

Personalized handling of patients in children's day care unit: the nurses visit

S Beeharry, P Michel, P Huin, MO Zimmermann

Day Unit, GHPCA, 5 Av Joffre, Colmar, France

The goal of humanisation of children's day care is to diminish anxiety during the stay and thus reduce inherent complications. From January 1996 to October 1998, 1500 children had a consultation at the nurses' office eight days prior to surgery. This visit led the patients and parents through the children's day care unit with presentation of the different stages of their stay. During this visit, the nurse enquires about the child's habits and way of life, about the parents capacity to cope with post operative treatment and also to verify if the information given by the surgeon and anaesthetist are understood. In this study we have analysed the results of a questionnaire filled out by the parents, at the end of treatment. The criteria studied were: quality of the reception and the stay, familiarity with the environment, the quality of the nurse's final and patient satisfaction. The final assessment of these results led us to believe that the nurse's consultation prior to surgery is a must in day cases.

Creating a continuum of ambulatory care

KE Doyle, M Furlong

Wyong Hospital, NSW, Australia

INTRODUCTION: This hospital is in an area of growth, and we expect to triple our through put by the year 2002. To be proactive, we examined the processes of 'home–hospital–home' and streamlined them into one continuum.
METHOD: A clinical pathway, or managed care plan, was developed via consultation with a multi-disciplinary team. We trialled the document with 50 patients, and rated: Patient satisfaction, user satisfaction; department of health clinical indicators; and length of stay (in hours).
RESULTS: The patient and user satisfaction rate was 99. 8%, compared to pre-implementation rates of patient satisfaction at 92% and user satisfaction of 54% (to previous processes). The length of stay in hours decreased from 9 hours to 6 hours, with tests of significance indicating the introduced process was pivotal in the change ($x2 = 3.2$, $p < 0.5$). More significantly, there were no incidents of missed treatments.
CONCLUSION: The use of a pathway that reflects the needs of the users in conjunction with the needs of the patient process can significantly reduce the length of stay in hours. Staff satisfaction increases with the security of being able to safely match a patient's needs to the institution's process. Streamlining the ambulatory continuum of care, from GP contact to return to GP care, utilizing a multi-disciplinary team approach engenders effective and efficient service to the patient and hospital.

Follow-up visit at the day surgery unit

Y Bergström, A Jonsson, A Olforser

Hand Plastik ENT-centre, *University Hospital*, *Uppsala*, *Sweden*

INTRODUCTION: Patients who have had Tonsillectomy and Uvulapharyngo-palatoplasty in local anastesia often experience difficult pain postoperatively. The pain increases after the patient gets home and gets worse at night. We started the follow-up visit to evaluate the patients pain-medication and nursing.
AIMS: To get the patient safe and pain-relieved and to feel an active participation in the nursing care. To measure the patient's experienced pain. That she/he gets an information both written and oral. To prevent a big initial loss of weight depending on postoperative pain in mouth and pharynx.
METHODS: During the period 26th February 1996–26th February 1997, twenty-two adult patients participated in our study. The limit of the study was to observe the patients experienced pain and the effects of the drugs during the time in the Day Surgery unit and at home. The nurse informed the patients about how to use VAS-scale. Every patient was given a pain-diary to write in and was also informed about the drugs. Weight and length were documented. Written nutrition advice was distributed. Pain measuring started before surgery and continued during the day of operation. Follow-up visit was one week after surgery and a telephone call after 4–8 month.
RESULTS: According to the VAS-scale the median of pain was 3 (max 10). The most used drugs were Paracetamol and Diklofenac and the most painful days are the 4–7th day and it remained for 7–10 days. Paracetamol had the best result in pain relief. The patient regarded the information they had received as perfectly satisfactory. The initial weight loss was 2–5 kg, after 4–8 months everyone had their original weight.
CONCLUSIONS: The trend we can see in this study are that pre-and postoperative information, pain-medication/education to the patient go hand and hand. The preoperative information together with the drug information help to reduce the level of pain as they prepare the patients mentally to cope with the postoperative pain. We have seen that every patient is satisfied with the nursing-care and pre-and postoperative information both written and orally. We cannot account for the weight-control in this study.

Professional nursing tasks to patients undergoing a tonsillectomy in the day surgery clinic

J Elgoe, C Christiansen

Day Surgery Clinic, *Vejle Hospital*, *Denmark*

INTRODUCTION: The Day Surgery Clinic was founded in 1990 at Vejle Hospital and is constantly developing both when it comes to new therapeutic options and expansion of the patient clientele. As per 1st September 1996 all the functions related to day surgery are placed geographically close to each other. This leads to continuity in the treatment of the patients and to a high level of commitment among the staff. Since 1996 it has also been possible to offer tonsillectomy to patients in the Day Surgery Clinic. In addition to the precautions applying for all other day surgery patients, special precautions must be taken for this patient group, such as the distance between the hospital and the home as well as the family network.
METHODS: In the nursing of patients undergoing a tonsillectomy in a day surgery clinic we will show that also this patient group is suitable for treatment in a day surgery clinic. In the course of treatment we focus on the following precautions: thorough information about the operation orally as well as written, information and instructions about pain and pain control, postoperative nutrition, the necessity of the family network, postoperative precautions, follow-up telephone contact by the nursing staff.
RESULT: From August 1996 to October 1998, 275 patients had a tonsillectomy in the day surgery clinic. The registration of the follow-up contact to the 275 patients has shown that most of the patients had no substantial postoperative inconvenience. In very few cases is has turned out that treatment within the framework of day surgery has been inappropriate.
CONCLUSION: The analysis has shown that it is appropriate to offer tonsillectomy within the framework of day surgery for most patients.

Nursing to patients with diabetic retinopathy coming for examination, diagnostics and treatment in an out-patient clinic

SG Lind, J Lind, A-G Knudsen, D Reese

Department of Ophthalmology, *Vejle Hospital*, *Denmark*

INTRODUCTION: The aim is to insure a consistent high level of professional nursing in connection with examination, diagnostics and treatment of patients with diabetic retinopathy. For several years, the nurses have been engaged on improving the nursing for the group of patients with diabetes, a group with severe complications, affecting strongly the quality of life for these people. Often these people are loaded by their chronic disease with late complications to other organs, one of these complications could be an affected faculty of vision. The patients are very anxious not to loose the ability to see. Until now the quality of nursing offered these patients has varied quite much. The level of information has been insufficient both when it comes to the oral and the written form, although no documentation of these assertions are available. This Spring, new photo equipment was introduced in our department and this equipment has had and will to a still larger extent influence the initiation and the course of treatment. Now the patients can be examined and treated on the same day.
METHODS: We will document and insure the quality of nursing for patients with diabetic retinopathy by preparing informative calling in letters, informative leaflets, standards and guidelines.
CONCLUSION :Together with standards and guidelines, the written and oral information will raise the level of the professional nursing and the patients will become more aware of the course and treatment and thus be able to take an active share in the choice of treatment.

"Wounderland" access to wound assessment in an ambulatory surgical center in conjunction with a home care setting

C Wyndham-White, C Robin, S Decosterd, B Roche, M-C Marti, V Petoud

Outpatient Clinic for Surgery, Geneva University Hospital, and SAS-COM (Home care) Switzerland

INTRODUCTION: 7 500 patients with wounds are admitted to our center each year. Nursing and medical teams need precise tools to evaluate and measure wound healing in order to choose the most appropriate dressing in a variety of situations. In literature, different evaluation scales are proposed but need to be adapted to local use.
OBJECTIVE: Improve wound assessment by nursing and medical staff; promote common language to describe wounds in our center and home-care follow-up; provide carers with a reference base for the choice of wound dressings.
METHODS: (1) Creation of a reference chart (colour scale/nomenclature) for wound evaluation; (2) creation of a wound graph and photographic method to ensure nursing and medical follow-up; (3) elaboration of a reference frame to choose rational wound therapy. These methods are chosen to facilitate rapid visual tools for objective wound evaluation and to document quality and quantity studies.
RESULTS: Fifty cases were studied showing: (1) the advantage of common nursing and medical language for wound evaluation and transmissions; (2) the use of a wound graph to QUALIFY/QUANTIFY wound care; (3) rationalization in the use of wound dressings; (4) positive impacts on home-care follow-up. Our presentation aims to present the different reference documents and evaluation tools used in our center for wound treatments.
CONCLUSION: common language, reference documents, evaluation tools in wound care greatly facilitates nursing and medical collaboration and inevitably promotes quality and contributes to reduce health costs.

Wound management; a rationalized range of dressings for optimal results

C Wyndham-White, S Decosterd, M-C Marti, B Roche, M Papaloizos

Outpatient Clinic for Surgery-CH, Geneva University Hospital, Geneva, Switzerland

INTRODUCTION: 7 500 patients are admitted to our ambulatory center per year, with a variety of surgical wound situations. Since many years, medical and nursing staff are confronted with a wide range of products for wound dressings having to make the best choice rapidly, to meet with patient exigency ambulatory specificity and rationalised health costs. The challenge in a surgical ambulatory setting is to conciliate: comfort, practical aspects and security for the patient; rapid recovery and efficiency in the choice of treatments with the least effect on the patients active life; low cost treatments (human resources and material). Our objective was to determine the effectiveness of: Hydrocolloid dressings (Varihesive®, ConvaTec/Confeel®, Coloplast); Hydrofiber dressings (Aquacel®, ConvaTec); Semi-permeable films (Opsite flexigrid®, Opsite post-op®/Smith & Nephew), versus the 'standard' paraffin gauze and cotton gauze which had uncomfortable, painful and high wound adhesive properties.
METHODS: The above dressings were evaluated on four types of surgical wounds: donor sites; post-operative sites (general surgery); post-traumatic finger pulp amputations; burns (2nd degree). The above were chosen to represent typical delicate situations (leakage, adhesion, dryness, pain and difficult dressing sites). A multi-centered study was conducted to evaluate the performances of these dressings using the following parameters: wear time, peri wound skin condition, exsudate level, ease of use, frequency of change, patients and staff satisfaction.
RESULTS: This presentation will focus on the advantages, disadvantages and limits in the use of these dressings.
CONCLUSION: A reference frame for the use of wound dressings in ambulatory surgery is a precious instrument to promote efficiency, influence quality/quantity issues (research) and overall health costs.

Advantage of a nurse consultation in ambulatory surgery

Ch Robin, B Roche, MC Marti

Outpatient Clinic for Surgery, HUG, Geneva, Switzerland

The organisation of a classic preoperative assessment consists in a surgical and anaesthetic consultation. Mostly the pathology, type of surgery and anaesthesia are considered. We realised that there was a lack of information given to the patient concerning social aspects, concrete facts about the type of preoperative preparation, what an operating theatre looks like and how operative procedure is carried out. 7.7% of the patients were not attending the day of surgery. 40% of the patients presented a bad preoperative preparation like depilation or hygenic problems. Many of these problems result from misunderstanding, language problem or fears the patient may have. From March 94 to October 98, we included 100 patients in a new preoperative assessment program. Each patient received information, from the operative nurse staff, during the anaesthetic consultation. This visit included a short anamnesis about illness, social aspects, prosthesis and equipment. The patients received complete information about the preoperative preparation and type of operation. Language and fear problems were taken care of. Considering the answers of these 100 patients, the index satisfaction was 99%. The only unsatisfied patient feared to go back home after the operative procedure. 98 patients would undergo another operation with the same procedure or would recommend the establishment to friends or family. The non attending patients diminished from 7.7% to 0.97% in 1997. Only 5% of the patients presented a preoperative preparation problem. Considering this study and the benefit for the patients, we established a nursing visit for all patients in the ambulatory department of the hospital. Moreover, this visit has the advantage or instilling a real motivation of the whole operative room team and a better collaboration between the different members.
CONCLUSION: This new type of patient approach has many advantages generating: better security for the patient, human aspects of the operative room, new motivation for the operative team, better and efficient collaboration between all the members of the team.

Meeting the needs of children in the day case setting

C Kirkcaldy

Edinburgh Sick Children's NHS Trust, Edinburgh, Scotland

INTRODUCTION: Scottish Office Guidelines recommend that when considering day surgery for children, special provision should be made to meet their needs.
Aims: To establish a quality driven service which puts the needs of children and families first.
METHODS: This was done by introducing a Philosophy of Care, personalised selection criteria for day case surgery, the provision of pre-admission information for children and families, preparation 'parties', a child friendly environment, a single multi-disciplinary documentation folder, providing support, information and education for parents while in hospital, strong cohesive teamwork, post-discharge follow up.
RESULTS: These measures have resulted in an individualised planned package of care for each child from pre-admission to discharge.
CONCLUSION: Child and family satisfaction; Nomination for British Government Quality Award.

Day surgery: communication needs

AFD Salerno Gennaro

Ospedale "S.M. della Misericordia", Sorrento, Napoli

The report talks about the operating system which humanizes and rationalizes the assistance, optimizing its resources: the 'Day Surgery'. Studies have been made throughout all the Wards and the writings regarding the matter and the following questions have been considered: (1) Which is the best system, considering also its costs and benefits?; (2) Which are the most frequent operations made and that can be carried out?; (3) How do patients find the change and how do they cope with the nursing system? Some suggestments have been made to improve the assistance, especially regarding the way sanitary operators works, how they help their patient, how much they are able to give them all these things together can create the humanization in a hospital.

Dimensions of a new perioperative nursing nomenclature

SVM Kleinbeck

University of Kansas, Kansas City, KS, USA

INTRODUCTION: Before nurses can develop a clinical database capable of evaluating quality of care or validating their impact on health or illness, they must describe the basic dimensions of their speciality. The purpose of this study was to define the dimensions of clinical perioperative nursing practice for a new speciality nursing language.
METHODS: Experienced perioperative nurses (N = 239) were mailed a survey and asked to rank the frequency that specific patient diagnoses occurred in their daily practice (1 = never occurs; 5 = occurs almost all the time) and the priority of treatment each diagnosis required (1 = never requires attention of the nurse; 5 = demands immediate attention of the nurse). Completion of the form indicated consent to participate in the study.
RESULTS: Following a principal component analysis and theoretical discussion by perioperative experts, four dimensions of perioperative practice were delineated: (a) patient and family behavioral responses to surgery (26.7% of variance, $\alpha = 0.92$) (b) perioperative patient safety (10.1% of variance, $\alpha = 0.89$), (c) perioperative physiologic response to surgery (5.7% of variance, $\alpha = 0.87$), and the (d) Health Systems required to deliver perioperative care. A conceptual framework for a new perioperative nursing nomenclature was developed based upon dimensions extracted in this analysis.
CONCLUSION: The dimensions of perioperative nursing were extracted and a new perioperative nursing nomenclature defined to facilitate the documentation of nursing actions with a uniform vocabulary. Standardized terms and codes recorded in the medical record as a routine part of giving care will provide the data necessary to substantiate the nurses' influence on patient outcomes.

Patients expectancies about ambulatory surgery: preliminanry results of a questionnaire

M Baroni, A Fusé, C Capra

C.D.I. Centro Diagnostico Italiano, Milan, Italy

INTRODUCTION: The ambulatory surgery practitioners (surgeons, anaesthetists, nurses) know little about patients feelings concerning the perioperative period. We wanted to evaluate those expectancies by means of a rapid questionnaire that investigated the anaesthesia procedure, the surgery and the postoperative pain and/or discomfort. We reported our preliminary results.
METHODS: All patients 18–60 years old submitted to ambulatory surgery, including orthopaedic, plastic, gynaecological, general and eye surgery, from November 1998 were asked to answer a questionnaire about patient feeling during the perioperative period.
RESULTS: At that time we examined 58 questionnaires. Ten patients was submitted to general anaesthesia and 48 to loco-regional anaesthesia. All patients, previously well informed about the procedures, accepted without any problem the anaesthesia and surgery performed. Ninety-three percent of patients submitted to loco-regional anaesthesia answered that nurses' and anaesthetist's information given during the procedure are satisfactory and limited the anxiety. Twenty-six patients (55%) experienced pain at the end of surgery that they estimated in agreement with their expectancies. The time spent in the recovery room after the procedure was indicated in agreement with patient expectancies by 98%. All the patients were glad they could stay at home with their parents during the postoperative period. Fifty patients (87%) would recommend this kind of surgery, if asked to.
CONCLUSION: Our preliminary data suggests that ambulatory surgery meets patients' expectancies. Careful attention must be paid by the staff to information given during the perioperative period staff in order to limit patients' anxiety. Ambulatory surgery allows the patient to spend his postoperatory period with his parents, limiting the worries due to an unusual place like hospital.

Future trend in job organization within the operating room

C Damasio

E.O. Ospedali Galliera, Genqva, Italy

INTRODUTION: Converting a Government Health System into a company-like system requires from operators more responsabilities reliability, efficiency, quality control, saving and more professionally autonomous areas. This in order to create organizational systems apt to meet and, possibly, improve, the existing standard.
METHODS: Procedures to test and modify quality, quantity and cost of activities.
RESULT: Planning of Quality Control in asepsis, laying out of instrument tables, list of operations, timing, operator's responsibilities, security of operating room, computer-based management.
CONCLUSION: A change in working methods is a must.

How far we've come. How far to go!

A Dean

Anne Dean Associates, Deland, FL, USA

Ms Dean will present a brief review of the history of ambulatory surgery in the United States, the types of centers and specialities represented initially and now as well as the types of procedures initially performed, currently performed and planned. This talk will also compare the design of a center in 1970, to the design of a new millennium center to include the possibilities for procedures heretofore considered unthinkable on an ambulatory basis.

Benchmarking overhead costs in the ambulatory surgery environment

A Dean

Anne Dean Associates, Deland, FL, USA

In this presentation Ms. Dean will present an overview comparison of the overhead expenditures collected from twenty ambulatory surgery centers across the United States as compared to the caseload of the centers. Average costs/care, staffing patterns, ratios and other issues impacting overhead, to include inventory and cost-cutting techniques, will be explored.

Set-up of a day surgery pediatric unit: relevant difficulties and possible solutions

A Cosi, F Dallapé

Chirurgia Pediatrica, Ospedale S.Chiara di Trento, Italy

INTRODUCTION: With this study we intend to highlight the typical problems arising when starting up a 'Day Surgery Unit' at the same

time supplying a set of possible solutions that may be used on a large scale. Our case sample is a 'Pediatric Unit' while from a technical/organizational point of view we have decided to adopt an unusual (but more effective for this specific example) model, that for reasons of simplicity we have called 'Day Case Pediatrics Unit'. This model in characterized by a multi-function unit operating within a Pediatric Surgery Division. This model allows us to have qualified personnel as well as technical/organizational structures (surgery areas hospital facilities) entirely dedicated to the clinical psychological and assistance needs of the child (and the parent). The higher the functional and operating independence of this unit, the greater the cost savings achieved by the Hospital, these are resulting in a large usage of this method.
METHODS: This study has been completed adopting the Pareto Method and the Cause/Effect Diagram which are able to highlight all significant events that may determine problems and spot which are the areas of intervention. All problems that A.A. consider as obstacle to the realization of a Day Surgery Pediatric Unit have been analyzed. We isolated the events originating problems.
RESULTS: We therefore evidenced advantages arising from the opening of a Day Surgery Pediatric Unit both to patients and to the society. We then highlighted possible solutions in order to establish a 'No problem' method for the set-up of a Day Surgery Unit.
CONCLUSION: These very encouraging results allow us to state that 'Day Surgery' represents an advantageous methodology in assisting child patients with its usage becoming increasingly desirable in any Surgery facility, "not with standing the legitimate Company expectations". However, if this does not happen it is obviously the consequence of a cultural barrier that some people may have in abandoning old and consolidated methods of assistance and not of difficulties linked to the Surgery practices (and not even of the pragmatic essence of these technical organizational and assistance methods).

Day surgery unit management. problem and solutions

N Spacci

Department of Urology of the University, Hosp. Maggiore, IRCCS, Milan, Italy

Abstract not received.

Patient selection and pre-assessment in day care

C Leary

Campbelltown Hospital, NSW, Australia

Patient selection, assessment and education are paramount to successful day surgery. The goal of selection and pre-assessment is to ensure that the episode of surgical intervention is free of unexpected complications, the patient is fully informed and that planning for the post discharge period is undertaken. To enhance this process Quality Assurance monitoring must be undertaken, thus ensuring continuous improvement and a high standard of care for all day surgery patients.

Accommodation and facilities

C Leary

Campbelltown Hospital, NSW, Australia

Day Surgery Units have largely been responsible for changing the traditional style of hospitals which were built in the past towards designs which have a more relaxed hotel style atmosphere. This trend helps to promote a feeling of wellness and is less stressful to the patient, the family and particularly to children. Examples of accommodation and special features will be shown and some of the pitfalls to be avoided in future planning and re-development will be explained.

Day-surgery in a general surgery department: personal experience

O Bonfiglioli, P Musso, M Maurizio, P Lugani, F Falchero

A.S.L. 02 Savonese-Ospedale SM. Miscericordia, Albenga, Savona, Italy

The surgical activity in a Day-Surgery Unit started in our Department in March 1996 until 31.12.1998, 303 surgical operations were carried out, with two monthly surgical sessions. The following disorders where treated: hernial disorders, 102; breast disorders, 16; lymphatic nodes, 98; proctological disorders, 26; urologic disorders, 41; venous disorders, 20. From an organization point of view, the staff that were put in charge of the care of such patients was made up of two Professional Nurses, who also look after the Divisional out-patient activity. The firsts contact with the patient takes place during the surgical examination, when the doctor makes a general evaluation of the subject; if he/she was judged to be suitable, we proceed to the planning of the pre-surgical exams. Afterwards, an information card is handed over, concerning the behaviour to be kept the day before hospitalization and the time of admission. On the operation day, the correct execution of such directions is to be controlled. After the patient has returned from the operating theatre, we check the vital parameters and dressing. In the early afternoon, after an accurate medical examination, we decide about discharging; before that, the patient is given an information card, concerning the behaviour to be kept in the post-operation period, an anonymous questionnaire and discharging letter with the date of his next check. It is right to underline the confident and collaborating relationship that arises between the nursing staff and the patient, since the latter is overseen during the whole process. To get the best result, several factors are important: the team work, the autonomy of the nursing staff, an effective organization and the involvement of the family doctor. The analysis of the questionnaire filled out by the patients pointed out the high grade of appreciation for such kind of procedure due to several reasons: the short hospitalization, 95%; the lack of anxiety for this kind of hospitalization, 97%; precise information, 100%. Our future aim is the organization of a multidisciplinary Day-Surgery.

Day surgery–day hospital: compatible realities?

M Barbieri, B Barbato, C Bortolin, M Cogo, A Daniele, M Fasolo, A Franchin, C Longo, M Mazetto, D Rizzato, C Rossetto

Ospedale S. Antonio USL 16, Padua, Italy

The General Day Hospital was founded on 1st December 1995 at Ospedale S. Antonio USL 16 in Padua with the characteristics of combining Day Hospital and Day Surgery in a single centre, autonomous both in seat and management, under the direct responsibility of the "Dirigenza Medica". The authors present a reality in which 6 operative surgery unities (general surgery, ophtalmology, otoralinghology, neurosurgery, orthopedy, dentistry) and 5 operative medical unities (2 medicines, cardiology, pain therapy, physiotherapy) live together every day in structure detached from the wards. It has been proved how it is possible to run the Day Hospital and the Day Surgery by utilizing the nurse form, procedures and sheets created on purpose according to the needs, and how they permit to program, run and assist each patient in his individual course. The staff operating in this service (1 head nurse, 6 nurses and 4 part-time nurses) show the results of a three-year-activity; it has proved how such a structure has increased the number of services, reaching by 1998 a number of 8096 accesses, with about 2100 plurispecialistic operations. The nursing staff explains the method and the organiztion criteria used in the management of the bedspace, in the planning of diagnostics and in the organization of the operations and of the other services. This article shows how these two very different typologies of Day Hospital and Day Surgery can be compatible in a hospital thanks to the use of human and structural resources, examining some positive or negative aspects of the service.

Post-operative pain therapy in day surgery

C Boetto, F Bano, B Baraldo, G Grigoletto, G Mancino, L Mozzato, G Nicoletto, C Vardolin

Day Surgery, Clinica Chirurgica IV, University of Padova, Italy

INTRODUCTION: Post-operative pain therapy plays an important role in the management of day surgery patients.
METHODS: A protocol was designed with the aim of evaluating the post-operative oral administration of analgesic drugs for the following surgical operations: varicose veins of the lower limbs, inguinal hernia, and proctologic diseases, normally performed under local or loco-regional anaesthesia. Ketoprofene 150 mg (Orudis R), Tramadolo 100 mg (Contramal) and Paracetamol plus Codeine (Cofferalgan) were used alone or in association. The drugs were administered following a predetermined scheme, without medical consultation. The evaluation of pain control efficacy was based on the monitoring of spontaneous pain (using scale of adjectives), the patient's walking ability and own opinion on discharge from hospital.
RESULTS: The protocol began in June 1998 and was tested on 350 patients. None of the patients were hospitalised for lack of pain control. In only 2 cases, it was necessary to exceed the maximum therapeutic schedule. No significant side-effects due to the analgesic treatment were observed. The most common problem was a previously referred allergic reaction to the analgesic drugs.
CONCLUSIONS: The administration of analgesic drugs according to a protocol without direct medical prescription, resulted effective, safe and optimal from an organisational point of view.

Operating room management

L Rigon

University of Padua, Italy

INTRODUCTION: The organization and management of the operating room for day surgery consists of two main issues: (1) general normative aspects, Italian and international; (2) organization with respect to the complexity and specificity of nurses activities into the operating room for day surgery.
METHODS: Based on the definition of guidelines for health services.
RESULTS: The classic management models and the specific behavioural models are stressed as follows: (a) quality of health services to users in the operating room; (b) satisfaction and professional motivation of physicians and nurses as key factor; (c) for day hospital activity in the operating room; (d) productivity of health services in the day hospital setting which particular reference not only to budget and economic convenience, but also to the excellence of the institution.
CONCLUSION: This service has benefited the patient on the care team.

New Frontiers in Day Surgery

Laparoscopic second-look after bowel resection under local anaesthesia

G Ögünç, S Tekin

Department of General Surgery, Akdeniz University Medical School, Antalya, Turkey

INTRODUCTION: A second-look operation is usually indicated when an embolectomy or bowel resection has to be done in patients with mesenteric vascular occlusion.
METHODS: A 65-year-old male with acute abdomen who had had severe generalised abdominal pain was admitted to the hospital. Extensive small bowel resection and right hemicolectomy were performed for mesenterial infarction. On the postoperative first day, diagnostic laparoscopy was performed under local anaesthesia with maximum pressure of 8 cm H_2O. There was no problem on his bowel and anastomotic side on laparoscopy.
RESULTS: Operating-time was 30 min. There was no morbidity. Patient was discharged on the 14th day.
CONCLUSION: We conclude that diagnostic laparoscopy must be preferred in the indication of second-look operation after bowel resection in scope of mesenterial infarction.

Minimally invasive antireflux surgery performed in an outpatient setting

JB McKernan

Advanced Surgery Center of Georgia, Canton, Georgia

INTRODUCTION: Experience with 1003 procedures (968 patients) in an outpatient setting suggests that minimally invasive antireflux surgery can be done safely in an outpatient setting in patients with refractory gastroesophageal reflux disease (GERD).
METHODS: Depending on the patient's underlying defects, we performed Nissen and Toupet fundoplications, paraesophageal hernia repair, and Collis fundoplasty repair in an outpatient setting in patients ranging from 17 to 84 years old.
RESULTS: Average 33-month follow-up revealed one death 3 days post operatively from myocardial infarction; a complication rate of 2.7%; long-term dysphagia, $<1\%$; and demonstrated recurrence, 3.8%, with an associated 3.4% reporting GERD symptoms. Patients requiring admission following surgery was $<2\%$.
CONCLUSIONS: This relatively large series (most earlier studies involved <75 patients) appears to confirm that antireflux procedures can be done safely and effectively in an outpatient setting.

Surgical management of biliary calculi in the laparoscopic era

S Gürer[a], M Gürel[b]

Surgery Departments of [a]Akdeniz University Faculty of Medicine and [b]Ankara University Faculty of Medicine, Antalya/Ankara, Turkey

INTRODUCTION: There is a coexistence of calculi within the biliary tree, which somehow need clearance, in about 7-20% of the patients who undergo cholecystectomy. In this presentation, we introduce our initial experience in the surgical management of biliary calculi by laparoscopic surgical techniques.
METHODS: Among the 505 patients who underwent laparoscopic cholecystectomy between January 1993 and December 1996, intraoperative cholangiography was performed in 25 patients due to suspicious clinical or laboratory trial and failure in the performance of preoperative ERCP. Calculi within the biliary tree were shown in 20 of these patients by cholangiography and laparoscopic biliary exploration was attempted. Successful biliary exploration and clearance of the ductal calculi was achieved in 18 of these patients. Transcystic cholangioscopy was performed in 6 patients and cholangioscopy via choledochotomy was performed in 12 patients. The operation had to be converted to open surgery in 2 patients due to technical problems. Standard trocar sites for laparoscopic cholecystectomy were used for biliary exploration. The clearance of the calculi was confirmed by cholangiography in the same session.
RESULTS: After a minimum 1.5 year follow-up of the patients, no evidence of biliary calculi was observed.
CONCLUSION: Laparoscopic biliary exploration is as effective as open surgery in the clearance of ductal calculi and is a strong alternative to ERCP. But these interventions should be performed by a dedicated surgical team which has sufficient experience and technical equipment.

Does laparoscopy make splenectomy a safe ambulatory operation?—preliminary results

J Joffe, AJ Voitk, L Grossman

Department of Surgery, The Salvation Army Scarborough Grace Hospital, Scarborough, Canada

INTRODUCTION: Laparoscopy has enabled many operations to be done on an ambulatory basis; our aim is to explore the feasibility of this for laparoscopic splenectomy (LS).
METHODS: Data was gathered prospectively. The first LS was not considered for ambulatory surgery but observed in hospital. Patients requiring conversion or an abdominal incision to retrieve intact a laparoscopically removed spleen were excluded from review.
RESULTS: Since 1995, 11 LS have been done. The first patient, observed overnight, was stable and required no specific hospital care, similar to our experience with other laparoscopic procedures, now done on an ambulatory basis. The remainder were booked as ambulatory cases. Two required admission because of conversion and two because of an abdominal incision to retrieve the spleen intact for pathology. The remaining six patients had a successful LS and were felt to be suitable for ambulatory care. Patient characteristics: age 44 (18–71); 1 male; ASA 1–1, 2–3, 3–1, 4–1; diagnosis ITP–3, misc–3; operating time 128 min (101–180). Four (67%) were successfully completed on an ambulatory basis. One of the ambulatory patients developed a splenic bed hematoma, treated symptomatically as an outpatient. Two patients (33%) required admission to hospital, one for pain control and one because of oozing with a low platelet count. Both remained stable overnight, required no specific treatment and were discharged well the next morning.
CONCLUSIONS: This early experience suggests that LS can be a safe ambulatory operation.

Esophageal and colic operative endoscopy in day hospital

P Granelli, C Siardi, A Carazzone, G Fichera, F Zennaro

Department of General Surgery and Surgical Oncology, *Ospedale Maggiore Policlinico*, *I.R.C.C.S.*, *Milano*, *Italy*

INTRODUCTION: Operative endoscopy covers about 25% of the total endoscopic procedures performed at the Endoscopy Unit of the Department of General Surgery and Surgical Oncology of the Ospedale Maggiore, Milano. A great deal of these procedures are performed on a day hospital basis, at present. In our Endoscopy Unit operative endoscopy consists mainly of esophageal dilatations, esophageal prostheses, laser therapy, polypectomies and endoscopic percutaneous gastrostomies (PEG). Intubation is usually performed under hospitalization.
METHODS: Patients were admitted to the hospital early in the morning. After the endoscopic session, the patients were followed up for some hours to control vital parameters, to detect the occurrence of possible complications, and to treat pain.
RESULTS: From January 1, 1997 to October 31, 1998 the following procedures have been done in day hospital: 536 esophageal dilatations (522 bougienages and 14 pneumatic dilatations), 21 Nd:YAG laser treatments, 30 PEG, and 25 polypectomies. Esophageal dilatations with bougies were performed in patients with caustic injuries (29.3%), peptic (22.4%), neoplastic (7.5%) and anastomotic stenosis (40.8%). Pneumatic dilatations were all performed in cases of achalasia. Laser treatments and polypectomies are usually done on an outpatient basis. In the cases performed in day hospital, poor general conditions of the patients (ASA III) or particular features of the lesions (such as large polyp size) required anesthesiologic assistance, the operating theatre and some hours of follow up after the endoscopic procedure. Complications occurred in two patients after dilatation in esophageal stenosis due to severe caustic injuries: one perforation was cured with conservative treatment; the second patient required surgery.
CONCLUSION: Most operative endoscopic procedures can be safely performed on a day hospital basis, which implies lower costs for the hospital compared to hospitalization.

Laparoscopic cholecistectomy: day surgery or 'short hospital stay'?

M Strinna, M Venturi, P Boccasanta, A Orio, F Zennaro

Institute of General Surgery and Oncological Surgery, *Ospedale Maggiore Policlinico IRCCS*, *Milan*, *Italy*

INTRODUCTION: At the present time laparoscopy cholecystectomy is considered the first choice in the surgical treatment of gall bladder diseases, while laparotomy is performed only in case of complications of laparoscopy. In order to reduce costs, some authors have recently performed laparoscopic cholecystectomy in day surgery, discharging patients the same day of the operation. Other authors prefer a short hospital stay.
METHODS: from January '95 to October '98, 141 patients (30 males, 103 females, mean age 48.2 years) were operated on in our department. Before surgery the patients were carefully selected, with exclusion of those with cardiovascular diseases, diabetes, obesity or previous abdominal surgery. All patients were studied in preoperative day hospital with clinical examination, blood routinary tests, ECG, EGA and anesthesiological evaluation. In 74.5% of cases admission to hospital was in the late afternoon before the operation. A short time prophylaxis and a preanesthesia were performed. The operation was carried out in general anesthesia. The mean duration was 75 ± 15 minutes. The sites of trocars were infiltrated with 10 cc lidocain 1%, to reduce postoperative pain, and a nasogastric tube was put in place and then removed in the evening, after an injection of metoclopramide.RESULTS: Three patients were converted to laparotomy for peritoneal adhesions in the area of gall bladder, and 1 patient had a large hematoma of the trunk, due to anticoagulant therapy. No wound infection or cardiopulmonary complications were observed. On the 1st, 2nd and 3rd postoperative days 24.1, 41.8 and 31.9% of patients were discharged, respectively.
CONCLUSIONS: In our opinion the 1 day surgery is not a good choice in the laparoscopic ablation of the gall bladder, due to the high incidence of nausea and pain in the 1st operative day, the importance of early identification and treatment of major complications, and to the absence of an effective home care service by nurses and general practitioners. The best approach is the short hospital stay (65.9%), with 1 or 2 nights spent in hospital after the intervention. In this way it is possible to considerably reduce costs, without any unforgivable lack in patient postoperative care.

Discharge within 24 hours for elective VLC

C de Werra, S Condurro, V Cerbone, A Marano, E Genovese, F Ciccone

University of Naples 'Federico II' Chair of Onclogic Surgery, *5 S. Pansini Street 80131*, *Naples*, *Italy*

INTRODUCTION: Discharge within 24 hours for laparotomic colecistecistectomy has proved to be an attainable goal. Some important rules are to be satisfied. Preservation of gastrointestinal function and immediate full enteral nutrition were surely major steps toward reduction of hospital dependency. These two principles seem to be more applicable with laparoscopic approach, which provides, if no complication interferes, rapid resolution of abdominal distension and pain related with surgical wounds.
METHODS: We have performed 15 laparoscopic colecistectomies on a day surgery regimen. It was possible evaluating with critic spirit and consciousness preoperatory, intraoperatory and postoperatory patient conditions. They had been randomly selected. Age was between 25–60 years; psycofisic condition had to be good. There had not been concomitant disease and serious biliary tract sinthomatology; previous anesthesiologic check-ups had been made. Of great importance was a preoperatory ecographic control which gave us the opportunity to exclude 'thickened gallbladder' or gallbladder with strong adhesion in side.

CONCLUSION: Medium range of operation was 40 min, anesthesia time was 75 min with optimal induction and reawakes; no problems occurred after pneumoperitoneum. At the end of the operation all the gas was completely aspirated, no drainage was positionated. All the patients were administered for short term prophilaxis with Amox/Clavulanic acid at the anesthetic induction, FANS to reduce postoperative pain, and 8–10 hours of parenteral nutrition. Pain was completely erased the day after the operation; alvus gas pervious, peristalsis was present, there was autonomic deambulation, and no diuresis related problems. The day after the operation the patients were administered with some liquids without any problems. After an ecografic control, which did not show enlarged VBP and/or liquid in abdominis, patients were realised under controlled discharge.

Outpatient laparoscopic fundoplication for gastroesophageal reflux disease

E Trondsen[a], O Mjaland[a], J Raeder[b], T Buanes[a]

Departments of [a]Gastroenterological Surgery and [b]Anaesthesiology, Ullevaal Hospital, University of Oslo, Norway

INTRODUCTION: With an experience of more than 300 successful outpatient laparoscopic cholecystectomies up to January 1997, we then decided to introduce laparoscopic fundoplication for gastroesophageal reflux disease as an outpatient procedure. We report our initial results.
MATERIALS: Until November 1998, 21 patients (10 females, 11 males, mean age 41 years, range 25–60 years) have been included. They were all ASA score I–II and lived within 30 minutes from the hospital. Continuos infusions of remifentanil and propofol were used for general anaesthesia during surgery; rocuronium was given before intubation and fentanyl before the end of the procedure. Against postoperative pain and nausea, ketorolac, propacetamol, droperidol and ondansetron were given prophylactically to all the patients. Surgery was performed a.m. Nissen Rosetti. The patients left the out patient unit 3–7 hours after the operation. All had enjoyed a meal before departure. They were followed during the first days by telephone calls, and later by an outpatient control.
RESULTS: One patient was admitted due to pain and fatigue. Five patients found the journey home strenuous, the rest found it acceptable. Eight patients reported an uneventful course of first days after surgery; twelve experienced nausea, pain, dysphagia and fatigue. One of them was admitted because of severe dry vomiting, and stayed one night in hospital. There were four minor port site infections. On a VAS scale, 14 patients were very satisfied with returning home the same day and five patients were satisfied. One patient would definitively have preferred an inpatient procedure. Fifteen patients would recommend outpatient surgery to others, if asked.
CONCLUSIONS: Laparoscopic fundoplication as day surgery seems safe and well tolerated, and has now been established as our routine for patients fulfilling our selection criteria.

Aerotherapeutic wound management for ambulatory surgery

G Polyakov, J Boyle, D Courtemanche, A Salvian, L Franciosi, A Bain

Department of Surgery, University of British Columbia, Vancouver, Canada

INTRODUCTION: The US patented aerotherapeutic wound management system (ATM) was assessed for safety, patient acceptance and prospective of ambulatory care use as an alternative to conventional wound management in burns and vascular wounds.
METHODS: The study represents a case series which occurred between September 1993 and May 1996. The ATM equipment, a microprocessor-controlled air system and disposable plastic chamber ('Cocoon') that provides wound visibility, was used on adults and children. With a consent signed, a sterile ATM Cocoon was placed on the limb using aseptic techniques. ATM settings were: temperature 32°C, pressure 5–15 mm Hg, and relative humidity 20–65%. The pressure and humidity were adjusted daily according to the physician's wound evaluation. Observations included: wound, body core temperature, bacteriology, serial photography, pain assessment, patient satisfaction, time and material consumption, duration the period of possible ambulatory care. Seventeen adults and 4 children divided in two groups were treated. Group I was composed of 11 burn patients, II–III degree. Group 2 was composed of 10 vascular patients with post-fasciotomies or ischemic wounds/ulcers.
RESULTS: Group I (6 females, 5 males) ranging in age from 5 to 68 years (mean = 35); the extent of burns was 1–32% (mean = 13%) TBSA—received ATM for a mean period of 6 days. Group 2 (9 males, 1 female) aged 6–83 years (mean = 50)—received ATM for a mean period of 18 days. There were no withdrawals from ATM in either group. ATM did not affect body core temperature or post-operative wound management. No mortality or morbidity related to a prospective ambulatory wound management were observed. ATM reduced at least 225 dressing changes. Children had benefited the most due to avoidance of painful procedure and easy ambulation.
CONCLUSIONS: ATM is a safe alternative to conventional wound management and is advised for ambulatory care. It was well accepted by both patients and medical staff.

Our percutaneus endoscopic gastrostomy experiences

Ş Aktan, A Ramazanoğlu, A Büyükkeçe, F Işţıan, C Ertuğrul, C Aslan

Akdeniz Üniversity Medical Faculty, Antalya, Turkey

INTRODUCTION: Percutaneus endoscopic gastrostomy (PEG) is a preferred method of choice for long-term enteral feeding. It is a very safe and easy technique, that can be performed with the patient sedated and under local anesthesia at the bedside since the introduction of PEG by Gaudere in 1980, several modified techniques have been described.
METHODS: The insertion of PEG, which requires a surgeon and gastroenterologist and endoscopy nurses, is described and monitored in full. There were 10 PEG performed in our Surgical Department of Akdeniz University Medical Faculty between March 11, 1996 and September 15, 1998. The patients were: 1 female (10%) and 9 male (90%). All were intensive care unit patients. Only one procedure was performed for the major head and neck surgically ill patient. The procedure was performed with the patients sedated and under local anesthesia, antibiotics were given before this procedure.
RESULTS: Our long term results were excellent. There were no major complications in those ten patients. The gastrostomy tube was removed in only one patient, twelve months later. One patient had to undergo tube exchange at two months, due to chronic infection.
CONCLUSION: Our experience with PEG tube insertion confirms that this procedure can be safely performed in ICU patients and head and neck surgical patients under local anesthesia. Our patients were managed by the ICU nutrition learn for the better prognosis of nursing.

Echo-enhancing agents improve the outcome of percutaneous ethanol injection under color Doppler control of autonomously functioning thyroid nodules

S Spiezia[a], G Cerbone[b], AP Assanti[a], G Chiacchio[a], M Siciliani[a]

[a]Echoguided Surgery Unit, SMdP Incurabili Hospital, ASL Napolil; and [b]Department of Clinical Endocrinology and Oncology, 'Federico II', University of Naples, Italy.

INTRODUCTION: Echo-enhancing agents in ultrasound procedures have greatly improved the diagnostic accuracy of ultrasonography, since they are able to modify the acoustic properties of the structures in which they are injected; galactose microparticles echo-enhancement improves echogenicity in US-B mode and amplifies the Doppler signal, allowing the detection of flow in very small vessels and at low velocity,

and can realise a sort of echogenic mapping of body cavities. The aim of our study was to evaluate the diagnostic accuracy of echo-enhancers, namely Levovist, in visualising residual vascular signals in hyperfunctioning thyroid nodules soon after percutaneous ethanol injection (PEI).
METHODS: We have investigated 13 patients affected with pretoxic adenoma, 8 of whom were harbouring nodules of 2.7–19.3 ml (group A) and 5 with nodules of 20.7–30.5 ml (group B). All patients were subjected to PEI under color Doppler ultrasound control.
RESULTS: Group A patients were subjected to 2–4 PEI sessions, whereas group B patients underwent a 'single session' PEI; the amount of ethanol injected per session ranged between 0.5–1.5 ml/ml nodular volume. When complete treatment was achieved (no more vascular signal inside the treated nodules at CD) the operator performed an i.v. injection of Levovist© 2.5 gr (300 mg/ml) in bolus during 20 s. CD was not able to detect, in either group, any vascular signal in the treated nodules at the end of treatment; conversely after the Levovist injection, one patient of group A showed residual perilesional and intralesional vascular spots whereas two showed peri intralesional vascular spots, whereas two showed perilesional vascular signals; similarly, among the group B, two patients showed peri and intralesional vascular spots and one showed perilesional vascular signals. On the basis of these findings, we could perform one further ethanol injection biting the nodular areas showing residual vascular signals.
CONCLUSION: Echo-enhancing agents can be very useful in detecting the persistence of vascularized nodular areas during PEI treatment of autonomously functioning thyroid nodules, improving the diagnostic accuracy of the color Doppler ultrasound procedure. In addition, their application could be of great usefulness during the follow-up of the treated nodules.

Tracheal stenoses: endoscopic surgery

F Cicconetti, S Brun, M Melillo, P Macauda, C Paparelli, MS Pino

I Department of Surgery, Pol. Umberto I, University of Rome 'LaSapienza', Rome, Italy

INTRODUCTION: From 1988 to 1998, 238 laser treatments out of 201 clinical cases were performed; in 61.8% the stenosis's localization was tracheal, in 12.4% it was tracheo-bronchial and in 25.8% it was tracheo-laryngeal. Patients' mean age (66.3% males, 33.7% females) was 52 ± 19 years (range 9–84, median 56); 69.7% were affected by benignant stenoses, 30.3% by malignant tumours (74.1% primitive, 25.9% secondary).
METHODS: Our experience is based on the endoscopic treatment using Nd-YAG laser therapy with a rigid or flexible bronchoscope, and the use of 46 stents (29 Dumon, 9 Montgomery's tubes, 5 Long Term Cannula, 3 Tracoe Cannula). The use of a flexible bronchoscope permits the treatment in day surgery without hospitalization. In the benignant stenoses, an Nd-YAG laser was principally used with the contact method. Coagulation, incision or vaporization can usually be performed successfully with low power levels. Moreover, our patients were submitted to periodic microbiological monitoring and specific antibiotic therapy.
RESULTS: Perioperative morbidity and mortality was irrelevant; perioperative massive haemoptysis occurred in 1 patient only, with malignant patology, who was submitted to radiotherapy at the same time. Among the patients with benignant stenoses 14.52% died, for causes not due to the stenosis, whereas 85.48% are living and present a minimum follow-up of 18 days, maximum of 2985 days (mean 1328.82, S.D. $\pm$ 825.15, median 1167). Among the patients with malignant patology 95.8% died and presented a minimum survival of 20 days, and a maximum of 1326 days (mean 167.74, S.D. $\pm$ 274.93; median 83). The follow-up of the living patients is: minimum 68 days, maximum 1620 days (mean 824.75, S.D. $\pm$ 649.09, median 805.5).
CONCLUSIONS: In all patients, an improvement in haemogasanalysis and in the respiratory parameters was observed, with a significant reduction of the hig dispnea's classes to favour the lower classes and with a sensible improvement in the quality of life. Therefore, the Nd-YAG laser therapy, with or without endoluminal stents, can be considered in the benignant stenoses a propedeutic or alternative treatment to traditional surgery.

Which place for a water-jet dissector in a one day surgicenter?

C Rausis

Diollymed One Day Surgicenter, Sion, Switzerland

INTRODUCTION: Following the new creative concept of minimal traumatic hepatic parenchyma dissection by a water beam published in 1982 by Papachristou and Barters, a **water-jet dissector,** Aquatom, has been developed since 1987 throughout general surgery, including the Ambulatory one out of hospital.
METHODS: From the technological point of view, the Aquatom is an air pressure driven pump that delivers a fine water jet stream at a very high pressure, adjustable between 0 and 1000 Bar. As the water jet's force is adjustable, it can remove diseased tissue due to the biological effect of the varying resistance between the parenchymal and the more resistant connective tissue, and also clean and treat wounds. Because of the innovative possibility to add **pharmacological agents** to the ejected operating liquid, the Aquatom allows a deep penetration of efficient medicaments into pathological areas, such as are met with septic cutaneous diseases in phlebology, proctology or plastic and reconstructive surgery.
CONCLUSIONS: Even if belonging to minor cutaneous surgical procedures, high pressurised water-jet dissection is a painful technique which necessitates general or loco-regional anesthesia, being well executed on an ambulatory basis out of hospital only with a multidisciplinary approach in a qualified one day surgicenter.

Oxygen ozone therapy in the percutaneous treatment of lumbar disk hernia

B Petralia, G Tommasini, A Lavaroni, G Fabris

Service of Neuroradiology, Az. Osp. S.M.d. Misericordia, Udine

INTRODUCTION: We have evaluated the efficiency of oxygen–ozone therapy in nerve root discal pathology with percutaneous intradiscal and intraforaminal approach, and its ambulatory cost–benefit rate.
METHODS: From July 96 to December 98 we treated 156 patients with intradiscal and foraminal O_2–O_3; we have evaluated 100 patients from 6–30 months follow-up. From January 97 to December 98 we treated 113 patients with intraforaminal O_2–O_3 therapy only: we analyzed the first 50 cases from 6–12 months follow-up. Intradiscal treatment indications were low-back pain, sciatica prevailing over lumbago with small-medium hernia and post-surgery hernia recurrence. Intraforaminal treatment indications were lumbar pain with arthrosis, facet joint pain, foraminal stenosis or post surgery fibrosis. The outcome has been evaluated with a telephone poll of patients' symptoms and with the Mac Nab method. The intraforminal treatment is performed in ambulatory conditions because of its low invasivity; this wasn't possible with the enzyme treatment, which requires some days on the ward.
RESULTS: Good results were found in the 68.0% of patients intradiscally treated; the results became better in small hernia patients. Very good results of 70.0% were achieved in the intraforminal therapy, in particular on post surgical fibrosis patients.
CONCLUSION: O_2–O_3 treatment should be considered a good alternative to the other percutaneous methods because of its very convenient cost–benefit rate (the treatment is performed in the ambulatory), a very low risk and a high tolerance. A high percentage of low-back problems could be treated and resolved with ambulatory therapy such as O_2–O_3 and/or intraforminal corticosteroids. Hospitalization and surgery should be necessary in particular cases only.

Ambulatory surgery and stomatological (= oral), maxillo facial and plastic surgery. Six years activity. More than 4000 patients treated

Pierre Perucho[a], Claude Payrot[b], Claude Pellequer[b]

[a]*Service de Chirurgie ambulatoire and* [b]*Service de Stomatologie maxillo-faciale et plastique, Centre Hosptitalia Général, 20, av. du Languedoc, 66046 Perpignan Cédex, France*

The authors report their six year's experience of stomatological (= oral), maxillo facial and plastic surgery. Ambulatory surgery has been applied to more than 4000 patients. It is perfect adapted to and can be largely used in oral, maxillo facial and plastic surgery for the following reasons: (1) young population and majority of stage I and II in the ASA classification; (2) short tired acts; (3) easy port-operative cares and (4) improvement in local, regional as well as general anaesthesias. An analytical assessment concerning anaesthesia and each of the three surgical disciplines has been carried out. Age, sex, and types of operations have been examined. The control of the distribution of in-patients shows that 50% of oral, maxillo-facial or plastic surgery is performed on one day surgery practise. The authors conclude on the advantages of ambulatory surgery applied to these surgical disciplines and insist on the necessity of a permanent assessment of the criteria of quality available. This experience was the starting point for the implementation of a multidisciplinary ambulatory surgery department with a capacity of 24 authorized places. It is working a the present time.

Pas–Port for central vein infusion in medium term therapies

G Festa, U Tommasino, A Frezza, W Craus

Università di Napoli, Istituto di Oncologia Dip. Med. Chir., Naples, Italy

INTRODUCTION: Patients for whom it is not advisable to have cannulation of subclavian vein, the greatly deteriorated, cancer sufferers and/or immunodepressed, with a life span of between 3 and 6 months, could benefit from the positioning of a totally implantable peripheral central venous system.
METHOD: Fifteen patients were selected, who then had a passport system inserted for chemotherapy and/or total parenteral nutrition. Camera in polysulphone titanium, cath in polyurethane fluoro free and as introduction through the cephalic vein, either isolated surgically or cannulated with the Seldinger method, under local anaesthesia; the subcutaneous pouch was placed 2 cm below the bend in the elbow. The cath finder was used to check the catheter in the precava.
RESULTS: Five patients (33%) finished the treatment with no problems connected to the system. In four cases (27%)it was necessary to remove the aetheter due to complications, such as phlebitis, necrosis or rejection. In the remaining six cases (40%) it was possible to complete the medical treatment, but with difficulty, due to local complications.
CONCLUSIONS: In our experience the use of Pas-Port is advisable for a medium term therapy, even though the positioning of the catheter in the forearm causes a high incidence of local complications, due to the continuous traumatising of the catheter while bending the arm. A brachial location coup reduce this.

Endoscopic palliation of colo-rectal cancer: yag laser therapy

L Norberto, R Ranzato, S Marino, I Angriman, F Erroi, A D'Erminio, M Donadi, E Urso, DF D'Amico

Surgical and Gastroenterological sciences Department, Digestive endoscopic Unit, University of Padua, Italy

INTRODUCTION: Surgical endoscopical YAG laser treatment is currently used for palliation of colo-rectal malignant tumour sin patients (pts) not suitable for surgery.
METHODS: Our laser instrument is an Nd:YAG laser MBB Medilas 2, with a maximum power of 100 Watts at the tip 'not contact' laser fibers. Patients were premedicated with benzodiazepines. Stenotic malignant lesions have been treated with endoscopic dilatation before laser treatment. Administrated at each session were 4,000–12,000 J of energy; all pts received an average of 5–6 laser sessions (range 1–28). Follow-up laser sessions have been performed every two months.
RESULTS: From November 1st, 1992 to December 31st, 1998, 186 pts (110 M and 76 F), with an average age of 67 years (range 39–93) underwent YAG laser therapy of colo-rectal adenocarcinoma for a total of 1001 laser sessions. One hundred and thirteen pts (61%) were considered inoperable due to cancer diffusion and 73 pts (39%) for the high anesthesiological risk. In 109 pts the tumor was located in the rectum, in 35 at the colo-rectal anastomosis, in 27 at the recto-sigmoid joint and in 15 at the sigmoid colon. The recanalization was obtained in 90% of treated pts, with a mean survival of 6 months. Other treatments in pts with cancer include YAG laser therapy associated with: diathermo-therapy in 26 pts, dilatation in 15 pts, radiotherapy (RT) in 12 pts, chemiotherapy (CT) in 5 pts, radio-chemotherapy in 2 pts and high dose rate RT (HDR) in 2 pts. Severe YAG laser therapy complications occurred in 2 pts (1%) who underwent surgery without hospital mortality.
CONCLUSION: Due to the little trauma produced, YAG laser appears to be particularly useful in elderly pts; it may be repeated and associated to other endoscopic procedures, such as diathermotherpy, dilatation and endoscopic stenting. In our experience YAG laser therapy had very low complication rate and no hospital mortality. YAG laser therapy both reduces the volume of the tumor and enables the hemostasis of the bleeding neoplasm, allowing a good remission of invalidating symptoms related to cancer in 90% of the cases.

New treatment for non-healing chronic ulcer

R Lonardi, L Manzoni, D Maffei, G Tuscano

Cattedra di Chirurgia Vascolare, Università degli Studi di Modena e Reggio Emilia, Policlinico, via del Pozzo 71, Modena, Italy

INTRODUCTION: The trophic lesions of the legs are relevant to many vascular pathologies. These are different from vasculopathy concerning to pathogenesis, symptornatology and therapy. Arteriopatby coexists with chronic venous insufficiency in 5% of the cases. In this case we talk about mixed ulcers. These ulcers, though not frequent, are an important field of vascular pathology. The reason is that this pathology, due to the numerous diagnostic and therapeutic problems, becomes chronic almost in every case and is very rarely cured. The aim of this work is to evaluate the effectiveness of autologue cell culture on a selected group of trophic lesions where the traditional conservative therapy and/or skin transplantation showed to be useless.
METHODS: The authors analyse the real effectiveness of autologue transplantation using the Tissuetech method. This method uses a fibroblast and keratinocytes culture on a HYAFF matrix (biopolymer derived from yaluronic acid). These cells originate from a dermo–epidermis separation from a previous byoptic sample. HYAFF fibres are a scaffolding where the fibroblasts proliferate. This structure is able to reconstruct a well organized new derma Its autologue nature assures a perfect bio-integrafion. The following keratinocytes graft enables the new derma to receive cells which are in a proliferation active phase. These cells are able to take root on the lesion and assure a fast riepithelization. During our experience we have been treating for a 6 months period 11 patients: 3 women (27%) and 8 men (73%). The patients' average age was 67, and average lesion life was 29 months. The observation average period was 3 months. Before treatment all patients underwent a vascular functional study by Ecocolordoppler, Laser-Doppler and Video-Capillaroscopy.. All the patients were treated in day-surgery from the day of biopsy to the day of the keratinocytes transplantation.

RESULTS: The average number of admissions was 3 per patient and the average period between one admission and the other was 15 days. After transplantation every patient has been followed in ambulatory with 5–7 days interval between one check and the other. After 3 months observation period 9 patients (82%) showed improvements or complete heating of the chronic ulcers with a complete absence of simptomatology. Two patients showed no improvement but only a stationary state of the lesion. For one patient only (9%) it was necessary to use a peridural pump for anthalgic purposes and after a temporary spinal cord stimulation which was removed after 30 days when the ulcers were healed.
CONCLUSIONS: In conclusion, the autologue cell culture are a valid alternative to the traditional conservative therapy because of the following reasons: it is possible to have a proper strip from small skin biopsy; it gives the opportunity of many treatments on the same patient without new biopsy; it does not require hospitalisation of the patient, therefore it has a good cost–benefict ratio.

Venous chemotherapy port-a-cath implanted in day surgery

B Mussa, S Sandrucci, F Trombetta, R Moscato, C Zanon

Dip. di Oncologia, Serv. di Chirurgia Oncologica, Torino, Italy

Long time or continuos endovenous treatment or an impossibility of periferal venous access are indications for central vein catheter and totally implantable system offers the best esthetical result, less patient's activity limitation and monthly flush necessity. International major casistics report a 7.5% rate of complications like infection 2.7%, catheter dislocation 2.4%, haematoma 1.8% and pain 0.6%. Seldinger venipuncture permits a safe central venous catheter positioning without surgical vein exposure and with minimal trauma or pain for patients. It is necessary to have an expert surgeon and a well equipped operating room. Atraumatic action and need of sterile area meets them in day surgery. We implanted 266 venous port-a-caths over 5 years, in day surgery. The complication rate in our series is 15.4% divided into 10.2% related to surgical technique and 5.2% related to postoperative device's management. We suggest also an original safen vein catheterization for all patients not suitable for subclavian access. Port-a-cath implantation is confined to oncological day surgery.

Vascular accesses for hemodialysis in DH

M David, A D'Angelo, Ga Romano, Gi Romano, M Romano

Division of General Surgery, P. Giaccone Policlinic, University of Palermo, Palmero, Italy

INTRODUCTION: Since the beginning of this century it was felt the possibility to replace renal function in uremic patients. The first hemodialyzer became a reality thanks to Kolff in 1944, and, at the same time, began to grow the first techniques of artero-venous fistulas to be performed preferably in day hospital. In 1960 Quinton and Schribner conceived an external shunt using Sylastic's tubes, but this procedure was not free from complications, such as obstacle in movements, infection, thrombosis, and displacement of the catheter with consequent hemorrhaging, sometime deadly. Owing to the high incidence of complications, in 1966 Cimino and Brescia described internal artero-venous fistula (AVF): complications became less common and less serious, and mostly consisted of infections and thrombosis. Moreover, this new type of shunting made possible the appearance of false aneurysms on venous districts for a higher range of pressure. So the surgeon of dialysis had to find other procedures and the prostheses were born. The first were natural (umbilical vein, bovine carotid, and, above all, saphena vein). Also by use of natural prostheses there was a high risk of false aneurysm. So synthetic materials were introduced, first in Dacron and then in e-PTFE. Using these materials there was a decrease in incidence of false aneurysm, although ever possible was the risk of infection or thrombosis. Moreover, synthetic prostheses are at risk of another type of complication, the seroma, which is considered a form of rejection.
METHODS: Our experience can be divided in two periods, the first starting from January 1982 to December 1994 and the second between January 1995 and December 1998. In both periods we used many different kinds of prostheses: in the first period was used e-PTFE (160), homologous saphena (110), Dacron (77), autologus saphena (16), bovine carotid (12), biosynthetic prosthesis (11), human umbilical vein (8); in the next period we used e-PTFE in 97% of patients (141), and only in 3% of cases used autologus saphena (4). In all patients the fistula was performed under local anesthesia and in day hospital.
RESULTS: In the first period of our experience a large number of prostheses types were employed, but since the first application of synthetic materials it was clear that patients survival rate was better than when using natural materials or in simple AVF, so in the next period the preference was given to synthetic prostheses. In fact, while patients survival rate for natural materials at 2 years was roughly 60%, worsening in notable way at 3 and 5 years, patients rate for synthetic materials was about 90% at 2 years, 65% at 3 years and 40% at 5 years. The major complications of these were infections (10%) and seromas (3%).
CONCLUSIONS: Nowadays, all over the world an ever increasing number of patients survive thanks to dialysis. This is possible because of the improvement of medical and surgical therapy to make in day hospital. At the present time. thanks to the dialysis surgeon, it is possible a close link between artificial kidney and patient in day hospital with less discomfort to the latter patient.

Endoscopic vs open thoracic sympathectomy in the treatment of functional upper microangiopathy of the upper limb

M Campagnol, S Brun, M Di Giacomo, F Cicconetti, C Paparelli, O Papa, G Raimondi, A Cavallaro

I Istituto Clinica Chirurgica, Università la Sapienza, Rome, Italy

INTRODUCTION: From 1979 through 1998 thirty-seven thoracic sympathectomies for functional microangiopathy of the upper limb were performed at our institution. Up to 1996, standard Atkins' procedure through the axilla was performed, but since then a comparative trial between open (A) and thoracoscopic (B) techniques was started. Patients requiring bilateral surgery were selected and they accepted to undergo on one side Atkins' procedure and the other one thoracoscopy. In either group the resection involved T1 (tail of the stellate ganglion) to T4 sympathetic ganglia.
METHODS: As short-term results, we took into consideration the need of analgesic drugs, pleural drainage, discomfort, postoperative hospital stay and complications. Long-term results (12 months) included functional and cosmetic outcome. The trial was discontinued after 3 patients given the definite superiority of the thoracoscopic technique.
RESULTS: As a matter of fact, we observed the same functional result but: (1) analgesic drugs were needed for 5 days after (A) and for 2.5 days after (B); (2) pleural drainage was always positioned after (A) and never after (B); (3) discomfort, evaluated according to a Visual Analogic Scale 1 to 10, was medium (5) after (A) and slight (1 to 3) after (B); and (4) postoperative hospital stay was 5 days after (A) and 2.5 after (B). All patients in group (A) showed minor complications (two apex pneumothorax and one pleural effusion) whereas only one patient in group (B) had mild apex pneumothorax. Cosmetic results were judged satisfactory after either procedure.
CONCLUSIONS: In conclusion, we observed that thoracoscopic and open procedures provide the same functional results but the former is better for the patient in terms of complications, discomfort and short-term outcome. Furthermore, endoscopy implies a shorter hospital stay and can also be carried out on a one-day surgery basis in selected patients.

Use of n-butile-cyanoacrilate for closing skin wounds

G Docimo[a], A Canero[a], F Iovino[a], P Caiazzo[a], F Cimmino[a], M Graziano[a], L Docimo[b], F Lo Schiavo[a]

[a]*Servizio di T.S. in Chirurgia Oncologica and* [b]*Catterdra di Chirurgia Generale, Seconda Università di Napoli, Naples, Italy*

INTRODUCTION: The possibility to make use of biological materials induced us to introduce in our experiment tissue adhesive in n-butile-cyanoacrylate (Indermil™) for closure of skin wounds. We compared results, times and costs among sutures and applications of n-butile-cyanoacrylate.
METHODS: Among the indications to the use of cyanoacrylate tissue we included repair of skin wounds under 5–6 cm of length without tension, not contaminated, not secerning. The application is very easy: the product can be affixed on the skin margin. After 20″ of pression on margins it establishes a strong connection that promotes also hemostasis. The time of skin closure is around 30″; using suture closure we need 3–5′. In case of traumatic lesions avoid anestetic infiltrations become this method pharmacologically sure and fast.
RESULTS: Psychologically we have excellent results and post-operatory controls do not need stitches rimotion. Histologic experimental studies found in the literature, conducted on the rat, showed that use of adhesive tissue versus sutures reduced inflammatory infiltration, without developing infections. Practically, we always had rapid scarification with linear margins in absence of infections. Aesthetic results were excellent and similar to results obtained with plastic sutures.
CONCLUSIONS: We support the use of adhesive tissue as an effective alternative to conventional techniques, also in pediatrics where worst is discomfort for young patients. The good results obtained, although these are preliminary experiments, support us to continue this study and this comparison.

REFERENCES:
1. Quinn J., Wells G., Sutcliffe T., Jarmuske M., Maw J., Stiell I., John P.: Tissue adhesive versus suture wound repair at 1 year: randomized clinical trial correlating early, 3 months and 1 year cosmetic outcome. Ann. Emer. Med. 1998 Dec; 32 (6): 645–9.
2. Simon HK., McLario DJ., Bruns TB., Zempsky WT., Woodr J., Sullivan KM.: Long term appearence of lacerations repaired using a tissue adhesive. Pediatrics, 1997 Feb., 99:2 193–5.
3. Vanholder R., Misotten A., Roels H., Matton G.: Cyanoacrilate tissue adhesive for closing skin wounds: a double blind randomized comparison with sutures. Biomaterials 1993 Aug, 14 (10): 737–42.

VIDEO

The use of radiofrequency in oculoplastic surgery

G Davì[a], P Raus[b]

[a]*Department of Ophthalmology and Visual Sciences. H.S. Raffaele, Via Olgettina, 60, 20132 Milano, Italy*, [b]*University of Brussel, Belgium*

PURPOSE: The aim of this study is to evaluate the advantages of radiofrequency technique to correct several oculoplastic pathologies.
METHODS: Two hundred and twenty-three oculoplastic operations were performed using radiofrequency technique: 10 eyebrow ptosis, 34 upper lids blepharoplasties, 15 transconjuntival lower lids blepharoplasties, 21 aponeurotic ptosis, 49 trichiasis, 104 eyelid tumours. The radiofrequency surgical approach implies the passage of high frequency radio waves through soft tissues to cut, coagulate or remove it.
RESULTS: All patients had excellent aesthetic results with no surgical complications and less bleeding than patients operated with traditional technique.
CONCLUSIONS: The radio frequency technique compared with conventional surgery shows less bleeding, only minimal tissue alterations, faster recovery time and reduced post-op treatments.

Prostate laser operation—the cheapest way to treat our patients

J Hainz, H Hainz

Urologische Abteilung Maria Hilf Krankenhaus, 54550 Daun, Germany

INTRODUCTION: Worldwide seniors are increasing in number—so are costs in medicine: Germany paid 1 100 000 000 DEM in 1995 for therapy of benign prostate diseases. Ambulatory Surgery (AS) could deactivate this problem.
METHODS: This video shows a prostate laser operation (PLO) with a 17.5 Fr. Olympus urethrotom which needs, besides pure water, a 10–14 Fr. suprapubic catheter (SC), only a 0.6 mm reusable bare fibre—so costs fell to 1/2 USD for fibre/oper. Energy is beamed in into the surface of prostate, quadratic in a distance of 5 mm/200 J at the bladderneck and the sphincter and 1000 J into the mass of both sides and huge middle lobes—device adjustment:continous wave NdYAG 40 W-Diodelaser 25/30 W. Huge prostates need several sessions—imagine destroying an onion in layers. Prostate function for histology and vasectomy depends on request of patient or law of each country, but makes more complications.
RESULTS: Complication in 391 cases: fever: 47; pain: 28 (on request SC?); bleeding: 7 (irrigation necessary—6 operation directly after micturation failure); catheterization: 4 (tissue ± bloodclots 2–4 weeks after PLO); hematury: 2 (second transurethral op-electrocoagulation; 1 Art. prostat. 1 bleeding of bladder at SC place); no cases of: bloodtransfusion, incontinence, fistula, open surgery, urethra- or bladderneck strictures.
CONCLUSIONS: Laser can be used with the same low complication rate and as cheap as in prostate in many indications in urology and all other compartments in surgery too. New Diodelaser are small, more sturdy, with longevity and very effectively they can become surgeons' daily instrument in AS, interdisciplinary in smaller hospitals and in all regions where poverty is at home in the moment.

Tension-free hernia repair: how I do Trabucco technique

A Coda, F Ferri, C Filippa, R Mattio, A Bona, G Ramellini

Ospedale Gradenigo, Divisione di Chirurgia, Prim. Prof. M. Dellepiane, C. so Regina Margherita, 8, 10153 Torino, Italy

The video shows how I perform tension-free hernia repair. The technique is derived from Trabucco procedure. I have added some changes that are not essential and not original, but appropriate in my case. The operation is done whenever possible under local anaesthesia. A small self-retractor is helpful. Technical steps are skin incision, fascial incision cephalad the internal inguinal ring, dissection of the spermatic cord. The cord is then grasped with a soft drain and placed under a gentle tension to allow incision of the cremasteric fascia along the cord. Cremasteric fascia is incised along the cord and the two parts of the of the cremaster ligated and cut out. The hernia indirect sac is then dissected to the 'shoulders' and inverted. Scrotal sac is cut, proximal part sutured and inverted, and caudal part neglected. A polypropylene plug (4 × 4 cm) is inserted over the sac and if the ring exceeds than two fingers in diameter, it is stitched over the plug. Little sacs are obliterated with an interrupted resorbavle suture. Sometimes in very huge rings oversized plug (10 × 10 cm) fashioned as T1 Trabucco are used. Small direct sacs are obliterated with an interrupted reabsorbable suture. Larger or diverticular sacs are closed at the base with purstring suture. The purpose of there sutures is to eliminate bulges and to reduce the surface for a cosmetic reason. A 4 × 4 cm cone-shaped plug is inserted in the pocket before tightening: this will reinforce the wall from inside. During subsequent laparoscopic operation it was seen, lying under the peritoneum. The next step is insertion of the pre-shaped close knit mesh between external oblique fascia and the floor of the inguinal canal. The fascia is then sutured under the spermatic cord. The wound is sutured.

Lichtenstein's intervention and variants in the treatment of inguinal hernia

C Di Martino, P Celeste, A Conti, M Iacampo, G Centanni, N Caruso, C La Rovere, F Cristini

Divisione di Chirurgia, Ospedale di Colleferro, 00034 Colleferro, Rome, Italy

The inguinal hernia repair using polypropylene mesh according to the principle of tension-free introduced by Lichtenstein in 1986 has rapidly achieved a large diffusion with technical variants differing from the fashioning of the mesh to its apposition over the muscles (on-lay) or behind them (in-lay), or its fixation with or without stitches (sutureless technique). The authors show Lichtenstein's technique used in hernia repairing with some variants principally concerning the fashioning of the mesh and its fixation. The mesh is fashioned in situ with a semicircular incision nearby the internal inguinal ring over the funicle and secured to the inguinal ligament with a continues suture starting from the lacunar ligament to the internal inguinal ring and laterally to it with an interrupted suture in order to reproduce, at least morphologically, the physiologic mechanism of Lytle's sling. As regards the posterior wall of the inguinal canal they describe the pubic-epigastric triangle (PEA) having the Poupart's ligament as inferior side, the inferior margins of the internal oblique and transverses muscles as superior side, and the epigastric vessels as lateral side. Such triangle, usually virtual when no hernia is present, is inserted into Hesselbach's triangle, the weak point of the abdominal wall through which the abdominal pressure may exert its action, and represents nothing else but the opening of the inguinal shutter in patients with inguinal hernia. By the way it is possible to evaluate the opening of the inguinal shutter taking into account the pubic-epigastric angle (PEA) having the inguinal ligament as inferior side and the inferior margins of the internal oblique and transverses muscles as superior side, and the epigastric vessels as lateral side. Such triangle, usually virtual when no hernia is present, is inserted into Hesselbach's triangle, the weak point of the abdominal wall through which the abdominal pressure may exert its action, and represents nothing else but the opening of the inguinal shutter in patients with inguinal hernia. By the way it is possible to evaluate the opening of the inguinal shutter taking into account the pubic-epigastric angle (PEA) having the inguinal ligament as inferior side and the inferior margins of the internal oblique and transverses muscles as superior sides. In the case of APE $>25°$ they suggest to lower the inferior margins of the muscles to the inguinal ligament in order to provide a supporting wall to the mesh. They agree on the effectiveness of the technique: simple, rapid feasible in local anesthesia, with prompt discharge and resumption of activity.

Just for the day—a day's stay in hospital

K Lee

Royal Children's Hospital, Melbourne, Victoria, Australia

A trip to the hospital for day surgery is not an experience many parents and children look forward to. Understandably it is associated with pain and anxiety over the unknown. To help allay these fears, visual and audio information on preoperative, induction, recovery and discharge phases was released. 'Just for the Day' is a 9 minute video produced by the Royal Children's Hospital to disseminate this information in a manner that parents and children can relate to. It seeks to assure and educate parents and children by walking them through a typical experience at the Day Centre. This video is screened during their pre-admission visit and on the day of surgery. Besides anecdotal reports from parents and children confirming the educational and assuring benefits of this screening other personnel, such as nurses and anaesthetists, have very positively commented on it.

Haemorrhoidal prolassectomy with circular stapler in a regime of day surgery

G Roggia, P Villani, S Rucci, F Montini, M Maggi

Presidio Ospedaliero 'F. Lastaria', Divisione di Chirurgia Generale, Primario Dr G. Roggia Lucera (FG), Italy

Haemorrhoidal disease is very common. It is believed that almost half the people are affected by it at one time or another. In medical practice the general practitioner has, daily, to confront himself, diagnostically and therapeutically, with this apparently simple disease. Twenty percent of patients affected by haemorrhoids need surgical treatment, mostly those suffering of complicated III and IV degree haemorrhoids. Usually, such patients are against surgical treatment, on the ground of post-operative pain and long stay in hospital. The operations of choice in our department are haemorrhoidectomy according to Milligan–Morgan and Ferguson's closed-method haemorrhoidectomy. Since April 1997, we have adapted the new method of haemorrhoidal prolassectomy with the I.L.S. 33 circular stapler. With this technique a purse-string is made, over 3 cm from the toothed line, by transfixing, at the base, a muco-haemorrhoidal fold next to the haemorrhoidal tags. An I.L.S. 33 is then introduced and a muco-haemorrhoidal transection of haemorrhoids and prolapsed mucosa is performed. We have treated, with such method, 35 patients: 24 males (74.4%) and 9 females (25.6%); average age 44 years (range: 28–83 years). Of these, 38.10% were affected by III degree haemorrhoids and 61.90% by IV degree haemorrhoids. General or spinal anaesthesia was administered according to patients' choice.

Average duration of operation was 12 min. Feeding was resumed the same night of operation; bowel motion was present on the first post-operative day. In the first phase of our experience, patients were discharged on the second post-operative day. In the last 6 months, with improved experience and reduced post-operative complications, patients were discharged on the first post-operative day. That is we now treat haemorrhoidal pathology as day-surgery. This is possible because muco-haemorrhoidal transection falls at no less than 2 cm above the toothed line, an area known for lack of sensory nervous terminations. Also post-operative bleeding is almost nil. Follow-up was made 1, 7, 15, 30 days and 6 months after discharge. We have had the following early complications: 3 cases of perianal oedema, 1 sub-mucosal haematoma, 2 cases of bleeding, 1 case of urinary retention. Late complications were: 1 case of soiling, 1 residual haemorrhoidal tag, 1 case of pruritus.

In conclusion, the technique has shown to be rapid and safe. Patients never complained of post-operative pain. There were only 2 cases of post-operative bleeding, easily dealt with. The 3 cases of perianal oedema occurred at the beginning of our experience and improved with local treatment. The 2 cases, one of soiling and one of residual haemorrhoidal tag, did not require any treatment. This technique is reliable, well accepted by patients, easy to perform and, in the hands of an experienced operator, with minimal and easily dealt with post-operative complications. It allows for the treatment of haemorrhoidal disease in a regime of day-surgery. Nevertheless, a longer follow-up is necessary to better evaluate late post-operative complications.

Fistulotomy under local anaesthesia

C Pereira, M Oliveira, S Serra, C de Oliveira

Hospital de São João, Porto, Portugal

INTRODUCTION: The aim of this video is to demonstrate the technique of local anaesthesia used in the surgery of perianal fistula. METHODS: 1) Patient in prone jacknife position. 2) Start infiltration of lidocaine (maximun dose 7.5 mg/kg) with adrenaline subcutaneus around the anus, using a needle 25 or 30 G. 3) Subcutaneus infiltration of bopivacaine 0.5% (maximum dose of 3.5 mg/kg); deeply out the external esphincter doing a sensitive and motor block of pudendal nerves. 4) Anuscopy; identification of the internal opening of the fistula, opening the fistula tract; curetage of its bed; excision of small portion of skin around the external opening.

RESULTS: With this technique we did not find more difficulties performing surgery. There was a good acceptability by the patient.
CONCLUSION: Fistula surgery is possible under local anaesthesia at ambulatory surgery. There is good acceptability by patient and surgeon.

The plug technique in umbilical hernia

Casta Pereira, C Martinez, C de Oliveira

Hospital de São João, Porto, Portugal

INTRODUCTION: The aim of this video is to demonstrate the surgical correction of an umbilical hernia with a prosthetic plug of mersilene mesh.
METHODS: Female patient, 64 years old, with umbilical hernia. 1) Periumbilical incision and dissection of the hernia sac. 2) Opening tue sac and resection of incarcerated omentum. 3) Excision of excessive sac tissue and closure of the opened sac. 4) Set the plug in the umbilical orifice, to fill all the defect. 5) Fixation of the plug with multiple stitches to the umbilical borders. 6) Closure of the wound.
RESULTS: The patient did well. She was discharged from hospital the day after the operation and did not require analgesics at home. After 6 months of follow-up there was no recurrence of the hernia.
CONCLUSION: Plug technique in umbilical hernia is easy, safe and with no recurrence in our experience. It is possible to perform this at ambulatory surgery.

CO_2 laser technique in hemorrhoids disease

Th Jungeblod

Chirurgie Center Schopfheim, 79650 Schopfheim, Germany

INTRODUCTION: Internal and external hemorrhoid with or without acute thrombosis is usually accompanied by prolapse and pain; it will never heal spontaneously. It must be excised. The current surgical treatment is painful, and there exist many forms of complications.
METHODS: The laser technique is very tender and less painful. Excision of hemorrhoids at multiple sites according to Whitehead was performed. Sutures should not be used. Laser allows exact bleeding control and preparation. Postoperatively, there is no fever or wound infection. The thermical damages are restricted to the touched tissue.
RESULTS: Between Nov 1997 and Oct 1998 41 patients with hemorrhoid disease after thrombosis were operated; they were treated by the laser technique. The acute pain disappears in 5 days, as does the localized swelling. Especially, we saw no complication. After 10 days, all ulcerations were very small, the mucosa was repaired. In all of them, no further treatment was necessary after 14 days.
CONCLUSION: Benefits for the patient: less pain, quick and better healing, no complications.

The deep sclerectomy with a foldable lens. A new way for combined cataract and glaucoma surgery

R Gerl, St Schmickler

Augenklinik Ahaus, D-48683 Ahaus, Germany

The rate of success after filtering procedure is about 50% in five years. Since about two years ago the deep sclerectomy has been performed and there is good hope to improve the rate of success in glaucoma surgery. By excision of a deep scleral flap aqueous humour flows to a cavity and from there to the conjunctive where it will be taken away. After preparation of a scleral flap another smaller sceral flap will be made under the first flap. With a diamant tunnel spatula the upper flap will be tunnelled into the cornea for the phaco tip. After hydrodissection phacoemulsification and extensive capsule polishing a flexible lens will be implanted. Now the deep scleral flap will be removed. The Schlemm canal will be opened and a peripheral iridectomy will be performed. The upper sceral flap will be secured with two 10-0 sutures. A pocket will be cut into the cornea to draw it the conjunctive with two U-sutures. Already at the end of the procedure IOP will be at normal level in most cases.

Intraoperative sources of error during laser in situ keratomileusis

St Schmickler, R Gerl

Augenklinik Ahaus, D-48683 Ahaus, Germany

The LASIK operation does not always proceed smoothly. The following film uses case examples to illustrate possible intraoperative errors during the LASIK procedure. These can be avoided by a thorough pre- and intraoperative checklist.

Technique of haemorrhoidectomy under local anaesthesia and sedation

JM Villar, JB García, JT Torres, PM Ruiz, J García, MJ Álvarez

Ambulatory Surgery Unit, Hospital Virgen de las Nieves, Granada, Spain

INTRODUCTION: In this video we pretend to show a haemorrhoidectomy performed under local anaesthesia with sedation on ambulatory basis.
METHODS AND RESULTS: The type of anaesthesia employed (local with sedation or general) depends upon the associated pathology and patient personal preferences. In the case of local anaesthesia, we began with a continuous intravenous infusion of propofol, after which we carried out a four-quadrants infiltration technique of the perianal area, using 1% mepivacaine with adrenaline as anaesthetic agent. The surgical technique of choice was the Milligan–Morgan operation. Different steps of the operation are shown in the video. The patient was a 34 year old white woman with haemorrhoidal symptoms since 1995, actually with a three pedicles III-degree pathology. Six hours after operation, she was discharged without bleeding, sickness or excessive pain.
CONCLUSION: The haemorrhoidectomy procedure under local anaesthesia with sedation is a simple and feasible technique. It generates little postoperative discomfort and has been viewed with a high level of satisfaction by our patients. We believe it to be a suitable technique to be performed on an ambulant or short stay basis.

Further progress in the transaxillary augmentation mammoplasty: experience of 494 cases

P De Paula[a], M De Donato[b], R Bellochi[b], F Giulianelli[b], C Boccu'[b], M Rambotti[b]

[a]*Division of Plastic Surgery Hospital M. Couto, Rio De Janeiro, Brazil,* [b]*Servizio PS Conannessa Chirurgia d'Urgenza, Padova, Italy*

INTRODUCTION: Aesthetic breast surgery is still considered one of the most difficult surgical procedures from which to obtain acceptable long-term symmetry and lasting results. Transaxillary augmentation mammoplasty (TAM) combines the advantages of a surgical scar that is not only concealed but also distant from the breast itself with those of a submuscular pocket. Our group has modified the standard surgical procedure as outlined below.
METHODS: From March 1992 to March 1998, 494 women underwent primary augmentation mammoplasty. Their age ranged from 16 to 44 years (mean 28.2 years). Patients with greater than grade I or II ptosis requiring concomitant mastopexy were excluded from this study. All procedures were performed under general anaesthesia on an outpatient basis. A broad-spectrum antibiotic was administered intravenously prior to surgery and was continued orally for 5 days postoperatively. Nominal implant volume ranged from 150 to 350 cc; smooth silicone implants were used.
RESULTS: Operating times ranged from 25 min to 80 min (mean, 41 min), using the following approach: small transaxillary incision (no longer than 3 cm); submuscular pocket made first by digitoclasia, then with De Paula's hook (a specifically-designed device); silicone implants positioned with Eckert's syringe modified by De Paula;

slightly compressive dressing placed over the breasts for 15–20 days. Four patients (4 of 988 implants, 0.4%) developed capsular contracture (Baker IV) requiring surgical intervention. Nine patients had 15 malpositioned implants (15 of 988, 1.6%) in the early postoperative period, attributed to early removal of the dressings and corrected by means of a new compressive dressing. Forty-six patients (9.4%) complained of retropectoral pain in the early postoperative period, which was relieved by common analgesics. No perioperative infections, nipple areolar paresthesia or hypesthesia were encountered, no axillary scars were corrected and there were no implant pocket haematomas.
CONCLUSION: Results emerging from our present series of 494 cases followed up for an average of 62.5 months show that our modified version of the TAM offers numerous advantages over the traditional technique.

Ambulatory guided biopsy of non palpable breast lesions

A Santoriello, M De Maio, S Arena, A Dorato, M Russo, FA Ciarleglio, S Canonico

Intitute of General Surgery, *Second University of Naples*, *Italy*

INTRODUCTION: Our purpose was to establish the efficacy of stereotactic and US guided biopsy in diagnosing histological malignancy of non palpable breast lesions with X-ray suspect findings and uncertain FNAB diagnosis.
METHODS: Thirty-five women (age range 25–78 years) with non palpable breast lesions were seen from January to October 1998 and underwent stereotactic (20 patients) or US guided (15 patients) biopsies, a 'self retaining Anchor Wire' being positioned through a flexible metal finder. The lesions were 0.7–1.8 cm in diameter and were removed under local anesthesia with the Anchor Wire: this has an echoreflecting hook tip that anchors to the lesion.
RESULTS: Histological diagnoses were: benignancy in 28 cases, invasive cancer in 3 cases, carcinoma in situ in 4 cases. No complication occurred and diagnosis was certain and definitive in all patients.
CONCLUSION: Stereotactic or US guided biopsy is very effective in diagnosing cancer in patients with uncertain breast lesions, having low invasiveness and high affidability.

Tension-free hernioplasty with a new prosthesis: 'PHS: Prolene Hernia System'

G Ceccarelli, AR Pari, L Cerchione, R Rossi, L Forlivesi

Rimini Hospital, *Department of Surgery (Head: Prof. L Forlivesi)*, *Rimini*, *Italy*

Inguinal hernioplasty and appendicectomy represent the most common surgical procedures in all departments of general surgery. The surgeons' challenge of the XX century, to research the best surgical technique for groin hernia, to assure the least number of recurrences, morbidity and post-operative discomfort, brought to us a lot of surgical procedures. The use, in the primary and recurrent groin hernia, of the prosthesis (with very different shape, size and position), started at least 30 years ago, and more and more has been increasing, in the last years, all over the world. The results of this trend are widely known and they show that: a) the polypropylene mesh (nonabsorbable monofilamented) represents, until now, the best material; b) the 'tension-free' technique (in all its variety) is widely accepted since it is easily performed under a local anesthetic in day surgery, simple in execution, with minimal discomfort and allows a prompt return to physical activity (1); c) the ideal, but sometime difficult, placing of the prostesis is in the pre-peritonal space (2). The video shows our experience with the new prostesis 'PHS' (Prolene Hernia System) and the new modified type. In our opinion, PHS is indicated in all types of groin hernia, especially when the posterior inguinal wall is weak.

REFERERENCES:
1. Lichtenstein IL, et al. The tension-free hernioplasty. Am J Surg 1989; 157: 188–193.
2. Read RC, et al. Properitoneal prosthetic placement throng the groin. Surg Clin N Am 1993; 73 (3): 545–555.

Internal hemorrhoidectomy: our experience

E Brignole, FT Accarpio, G Accarpio

Azienda Ospedaliera Villa Scassi, *II Divisione di Chirurgia*, *Centro Colonproctologico*, *Genova*, *Italy*

INTRODUCTION: The authors describe a closed technique for internal hemorrhoidectomy in 25 patients with hemorrhoids of II degree, III degree and sometimes with prolapse.
MATERIAL AND METHODS: One hundred and seventy cases were of II degree, 50 cases of III degree an 30 cases were associated with prolapse.
DISCUSSION: This method allows to avoid pain and severe complications, no fissure and stenosis—our team performed outpatient treatment.
RESULTS: Effects of this treatment were: in 5% of patient pain; in 4% of patients severe pain; in 2% bleeding and 0.4% small abscess posterior.
CONCLUSION: The surgical treatment is only limited to internal hemorrhoids; in some cases it is necessary to drain external thrombosis.

Outpatient treatment of inguinal hernia by Prolene Hernia System: personal experience

A Gubitosi, M Agresti

Dipartimento di Chirurgia Generale, *Seconda Università di Napoli*, *Italy*

INTRODUCTION: Synthetically we think the device should be useful for treatment of the internal ring defects, chiefly those of large dimensions and in some direct defects as the pseudodiverticular case in the movie.
METHODS: Technically the prosthesis placing results is not particularly difficult. Our mesh placing technique consists, after the anatomical preparation of the surgical field and the sac replacing into the abdomen, in: a) introduction of the plug parachute like folded hold by a clamp into the internal ring, b) plug spreading in the properitoneal space by fingers manipulation, c) asking the patient to cough to obtain a good positioning and final plug spreading and at the same time to check the device is working, d) make a trasversal incision to permit the spermatic cord passage trough the mesh, e) the last point of the repair consists in the joining of the mesh to the pubis tuberculus by a single stitch.
RESULTS AND CONCLUSIONS: In our, even though short, experience we did not recognise any postoperative complications; a 3–5 month follow up shows no recurrence at the moment. In our experience the most important advantages are: a) fast repair (reduction of surgical procedure time), b) sutureless plug positioning, c) device anatomical stability (absence of dislocation). In conclusion we underline the value of the plug-trasversalis-mesh complex which seems to give a better reinforcement to the inguinal tract compared with the other devices and techniques in use (onlay mesh; mesh-plug). We can identify some preliminart and theoretical limits about the treatment of direct hernias with a large trasversalis fascia defect and in the oblique internal hernias.

Defourmental technique for sinus pilonidalis in Day Surgery

G Titolo, R Lionetti, A Forgione, R Brunaccino, S Dilillo, GP Ferulano

III Department of General Surgery University of Naples 'Federico II', *Naples*, *Italy*

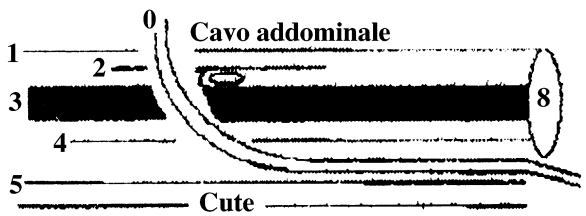
INTRODUCTION: The ideal treatment of pilonidal sinus should provide a high chance of cure with a low recurrence rate, and should avoid hospital admission and general anaesthetic while involving minimal inconvenience and time off work for the patient.
METHODS: From April 1997 to September 1998 40 patients affected by 'sinus pilonidalis' were admitted in our division. Fifteen (37.5%) of them (13 M, 2 F) underwent Defourmentel technique in spinal anaesthesia. The technique were preferred in those patients who needed a short hospitalization for an early return to work or in young people. Mean age was 25 years (range 17–35), BMI 28 ± 1 (range 25–31). All patients were very hairy, especially the male ones.
RESULTS: Neither mortality or intraoperatory complications were registered. In only one case (6.7%) we observed an early postoperatory complication (haematoma of the wound) that was resolved by an ambulatory intervention (fine needle aspiration). One (6.7%) late postoperative complication was registered (wound dehiscence). The follow up was made in all cases at 5, 10, 15, 46 days from the operation. In 14 patients (94.3%) the wound cicatrized perfectly with acceptable aesthetical results. All of them went back to regular daily activity on the 7th day and back to work 7 days later.
CONCLUSION: We consider the Defourmental technique a valid and safe alternative for the treatment of the 'sinus pilonidalis' in consideration of the minimum hospital stay, the low recurrence rate of complication and the quick return to regular activity.

Personal technique for inguinal hernia repair with two meshes (ultra tension free technique)

F Rendano, G Cammarota, G Piscitelli

Clinica Sant'Anna, Caserta, Italy

INTRODUCTION: 1, trasversalis fascia; 2, the properitoneal mesh cut as illustrated; 3, muscolar layers; 4, the second most superfascila mesh cut as before but larger; 5, great obilque fascia; 6, spermatic cord; 7, epigastric vessels; 8, pubis.



METHODS: To put the first mesh in the properitoneal space, deep to the trasversalis fascia, the spermatic cord should be divided completely from the cremasteric fibres. The lower part of this mesh is then reflected upward to follow the pelvic plane. The cord must be free enough passing the two holes of the two meshes that must be spaced out about 2 cm. From January '95 to December '98 the authors made 397 interventions on 361 patients.
RESULTS: The mean follow up has been of 13 months (range 3–48) with the following results: no relapses, 13% complications without reinterventions needed (52/397), 19 hematomas and 25 seromas (39 receded with medical therapy only, 5 needed one or more percutaneans U.S. guided aspirations punctures), 4 transient orchytis. The most striking good result has been the reduction of post operative pain, almost absent in about 60% of patients, mild in 46% and severe, but transient, in the remaining 4% (15 pts.) that required i.m. antidolorific drugs for more than 7 days.
CONCLUSION: The authors conclude that this ultra tension free technique offers very good results in terms of post operative pain and recidives.

REFERENCES:
Rendano F. et al. Complications apres hernirraphie inguinale selo une technique personelle. Prem. Sim. Francais International de Chirurgia Herniaire. NicR 17/5/1990.
Rendano F. et al. Nuova tecnica di emioplastica inguinale con due protesi. Attl S.I.C. Roma 11–16 ott. 1998.

SEPS (Subfascial Endoscopic Perforator Surgery): a new method with an ultrasound coagulation technique

A Farina[a], G Pisano[b]

Azienda Ospedaliera 'Ospedale Maggiore' di Crema, [a]U.O. de Chirurgia Vascolare, [b]M.O. di Chirurgia Mininvasiva, Crema, Italy

INTRODUCTION: Division of incompetent perforating veins has long been regarded as an appropriate method for the treatment of severe chronic venous insufficiency and venous stasis ulcers. The recent development of endoscopic techniques has permitted the application of this therapy without the need for long, open incisions.
METHODS: We report our experience in 10 patients treated with endoscopic assisted subfascial division of incompetent perforating veins. Preoperative assessment included duplex scanning (valve closure times and perforator mapping). In the first group of 5, the division has been performed between clips logation. In the last 5 patients we introduced the ultrasound coagulation-division technique (ULTRACISION, Ethicon Endo-Surgery). Seven of 10 had active or recently healed venous ulcers. Standard laparoscopic equipment, with one 10 mm and one 5 mm ports, was used in 7. In 3 a new 10 mm balloon dissector trocar was used to rapidly establish the subfascial working space. In order to avoid thromboembolic complications, no pneumatic thigh tourniquet have been applied. Concomitant removal of superficial veins was performed in 8 limbs. The total mean operation time was 50 minutes.
RESULTS: No local or general complications have been observed. Minimal occasional bleeding by small veins during the procedure, was successfully treated by means of ultrasound coagulation. The mean hospital stay was 2.3 days (1–3 days). No outpatients treatments have been performed.
CONCLUSIONS: SEPS seem to be a safe and effective method for treatment of chronic venous insufficiency. We introduced and suggest the use of the ultrasound coagulation-division technique in order to ease the procedure, to reduce the operating time and probably the costs of the equipment, with same safety and a better bleeding control during the procedure.

Day surgery: organizational model and experience

B Coffano, R Monzani, O Montino

1st Cl. Humatinitas, Rozzano, Milan, Italy

Abstract not received.

The role of the loco-regional anaesthesia in a day surgery (protesic hernioplasty-trabucco technique)

M D'Agosto

Italy

Abstracts not received.

Subfascial endoscopic perforating vein surgery. Techniques and short term results in day surgery

P Sorrentino, U Baccaglini, C Castoro, G Spreafico, P Pavei, S Martella, A Gongolo*, E Ancona

*Department of Surgery IV, University of Padova, Italy, *General Hospital, Dolo, Italy*

Abstract not received.

How to prevent saphenous nerve injury: personal approach to the stripping of the long saphenous vein

P Sorrentino, C Castoro, G Spreafico, P Pavei, F Coppa, S Penzo, T Morbin, U Baccaglini, E Ancona

Department of Surgery IV, University of Padova, Italy

Subfascial endoscopic perforating vein surgery. Techniques and short term results in day surgery

P Sorrentino[a], U Baccaglini[a], C Castoro[a], G Spreafico[a], P Pavei[a], S Martella[a], A Gongolo[b], E Ancona[a]

[a]*Clinica Chirurgica IV, University of Padova,* [b]*Ospedale Civile di Dolo, Venezia, Italy*

INTRODUCTION: Endoscopic subfascial division of incompetent perforating veins in patients affected by leg ulcer and chronic venous insufficiency is at present a valid alternative to the more invasive techniques of Linton and Cockett. Early studies have conformed that this new surgical approach has greatly reduced most of the complications and has shortened the hospitalization.
METHODS: Since 1995, we have performed subfascial endoscopic perforator surgery (SEPS) in our Day Surgery Unit at the 4th General Clinical Surgery at the University of Padova, Italy. Patients affected by chronic venous insufficiency of II and III degree were tested as follows: clinical examination, echocolordoppler, photoplethysmography and phlebography in order to study the superficial and deep venous system and to evaluate the degree of lipodermatosclerosis. The patients with significant incompetence of 1 or more perforating veins of the calf and ankle underwent subfascial endoscopic perforating veins surgery. In the case of simultaneous incompetence of the perforators and long or short saphenous vein, first of all high ligation and stripping is performed then the leg is made ischemic. To make the leg ischemic, Lofqvist's method was chosen. A pneumatic rubber cuff is inflated to 120 mmHg and rolled out along the limb from foot to the proximal third of the thigh. The patient is placed in the supine position with the knee flexed and a roll placed under the distal thigh. A unique 2 cm longitudinal incision is made in the proximal medial leg on healthy skin. In this series of patients we have used either a 10 mm (Karl Storz, Germany) or 20 mm (ETB, Germany) specifically designed endoscope. After skin suture and removing the roll cuff a short stretching adhesive bandages applied to the leg.
RESULTS: From March 1995 to December 1998, 52 patients, selected according to the above mentioned criteria, were operated in our Day Surgery Unit. In this first series of patients no major complication occurred. All patients were discharged from hospital within 6 hours. Only 2 out of 52 patients had an area of complete sensory loss: one of 1 cm^2 in the heel zone, and the other in the lateral side of the sole, persisting at the 6 months follow up. Good early clinical results were obtained in all cases.
CONCLUSIONS: The early results of this series are encouraging. The procedure of endoscopic subfascial division of perforating veins is not very invasive, and can be safely performed in Day Surgery. This technique represents a true technical progress in the treatment of incompetent perforators. Long term follow up and larger prospective series are needed to evaluate indications and results reflux.

How to prevent saphenous nerve injury: personal approach to the stripping of the long saphenous vein

P Sorrentino, C Castoro, G Spreafico, P Pavei, F Coppa, S Penzo, T Morbin, U Baccaglini, E Ancona

Clinica Chirurgica IV, University of Padova, Italy

INTRODUCTION: In literature the incidence of paresthesia caused by stripping of the long saphenous vein varies widely. Best results have been reported with the invagination technique by Van Der Strichts. By the way this technique is associated with a high incidence of vein rupture and incomplete stripping.
METHODS: Seventy-six patients underwent high ligation and stripping of the long saphenous vein (LSV) from groin to ankle under monolateral spinal anaesthesia on a one day surgery basis. After high ligation of the sapheno–femoral junction (SFJ), an internal modified metallic stripper was inserted from groin to ankle where a short incision anteriorly and below the internal malleolus was performed. An external modified Mayo stripper was used to dissect the vein from groin to upper calf, and then an upwards invagination of the vein from ankle to upper calf completed the stripping. Adhesive short stretching bandage was applied immediately after the operation. All patients were evaluated for subjective and objective sensory impairment in the cutaneous distribution of the saphenous nerve, 1, 3 and 6 months after the operation.
RESULTS: No intraoperative complications were recorded. Stripping of the LSV was complete in all cases without any rupture of the veins and no post-operative haematomas. Two out of 76 patients had an area of hypoasthesia persisting at 6 months follow up one of 16 cm^2 and one of 3 cm^2. All the patients were discharged on the day of operation and we did not register any unanticipated hospital admissions.
CONCLUSIONS: Our approach combining external and invaginated stripping resulted in a very low complication rate with only 2 paresthesia out of 76 patients without any rupture of the vein.

POSTER

Organization and Management

Development of ambulatory surgery in Argentina

V Jacoboni, A Palonsky

CEDYCA-Centro de Diagnosticoy Cirugia Ambulatoria-AMR, Rosario, Argentina

INTRODUCTION: Ambulatory Surgery is a new and very important way of sanitary assistance which has not enough repercussion in our country.
METHODS: A retrospective study of 45 months considering: number of patients; kind of surgeries; anaesthesias; recovery times; and complications.
RESULTS: A total of 5787 patients were studied with an age limit between 30 days and 99 years; 56.5% were women, 12% children and 10% elder. The surgeries performed were: orthopedics 1466; ophthalmology 1252; otorhinolaryngology 1245; general 758; plastic 707; gynecology 228; and others 131. The kind of anaesthesias performed were: local 2163; general 1549; regional block 1291; and sedation 784. The ASA classification was: I, 74%; II, 24%; and III, 2%. The recovery time until discharge was on average 5 hours. The minor complications were: pain (31%); nauseas and vomiting (20%); and postsurgical anxiety states (10%). The major complication was bleeding (6%), ten patients needed to be rehospitalised, seven of them because of this reason.
CONCLUSION: In spite of our short experience, we reach to the conclusion that ambulatory surgery is very safe, as is demonstrated by our results of recovering time and low complications. Other benefits were also seen such as the satisfaction related by the patients and the lower costs in healthcare.

Design and construction of a purpose built oral surgery day unit—the Newcastle experience

PJ Thomson, IR Fletcher, S Briggs

Oral Surgery Day Unit, Newcastle Dental Hospital, Newcastle upon Tyne, NE2 4AZ, UK

INTRODUCTION: The Newcastle Dental Hospital Day Unit was commissioned in 1978 and currently provides oral surgical and dental treatment under general anaesthesia for approximately 2500 adult and paediatric patients per year[1]. This is one of the highest throughputs for any specialised dental day unit in the UK[2].
METHOD: In 1997 planning commenced to design and construct a new purpose built oral day surgery unit to facilitate provision of modern ambulatory care. A review of patient age/sex distribution, service provision and clinical teaching requirements was carried out and a Project Management Team formed to oversee development and progress of the new unit.
RESULTS AND CONCLUSION: The development of the unit from the initial planning stages through to construction, commissioning and provision of the new clinical service will be described. Difficulties encountered and the mechanisms developed to overcome them at each stage, together with relevant successes will also be discussed.
REFERNCES:
1. Day Surgery Activity and The University Dental Hospital. S. Briggs, K. Clark, R. Voase, D. Barthram, I.R. Fletcher, P.J. Thomson, British Association of Day Surgery (1998).
2. Day Surgery—Value for Money. Deloitte and Touche, Royal Victoria Infirmary & Associated Hospitals NHS Trust (1998).

Experience of two years of activity in a non autonomous unit of day hospital and day surgery

S Vaccarisi, A Bergantino, M Ponsetto, E Personnett, M Obialero

Azienda USL 9 Ivrea (TO), Italy, Osp. Cuorgnè div. Chir. Gen., Primario dott M Obialero, Resp Day e Day Surgery, dott. F. Peradotto

INTRODUCTION: Several hospital managers have devoted considerable attention and energy to day hospital and day surgery units, in order to reduce costs and to shorten waiting lists. Day hospital and day surgery consists of one day admission, during which operations and chemotherapies can be practised, and investigations can be performed to diagnose pathologies or follow up patients. If well planned, these activities can increase patient satisfaction and allow a more efficient use of the hospitals services.
MATERIALS AND METHODS: In our Hospital there is a day hospital and day surgery unit with a dedicated surgeon and specialised nurses. This structure consist of: a room with two beds; a room for infusional therapies with three comfortable armchairs; an "ambulatory" and a sick bay. If a patient consents to one day surgery, he will fill out and sign the consent form, then the patient will be visited and a history will be taken, the patient will undergo anestesiological evaluation and blood tests will be performed. He will be notified about the day of the operation. After the operation the patient is discharged before 6.00 p.m. if his conditions responds to our predetermined clinical standards, should post-discharge problems arise, the patient his instructed to contact our unit by phone.
RESULTS: During the years 1997–1998 in our DH unit we performed 270 operations (i.e. about two interventions per week), 428 chemotherapies and 675 follow up visits. The patients who underwent chemotherapies were affected by the following tumors: breast 26%; colon 18%; stomach 8%; lung 8%; kidney 2%; liver 5%; melanoma 2%; diffuse metastatic 5%; and various 13%. The operations we practised were: inguinal haernia 37%; varicose veins 21%; various (minimally invasive and proctological surgery) 41%; and dermatologic surgery 2%.
DISCUSSION: The day hospital and day surgery of Cuorgnè Hospital provided the following services: follow up visits; chemotherapies, small surgery interventions. These figures show the value of such a structure in a small hospital and we plane to increase all these activities to reduce costs and improve patient satisfaction.
ACKNOWLEDGEMENT: Thanks for the contributions from Paolo Magnani M.D.

Planning, organisation and functioning of two ambulatory surgery units in Chile

WG Stein

Clinica Arauco, Santiago, Chile

INTRODUCTION: Ambulatory surgery is a new concept in our country. Planning, organisation and the initial functioning stages of the first two free standing ambulatory surgery units in Chile, one in the public health system and one in the private field, are described.
METHODS: One large public center, custom made for primary and secondary care was planned with a self contained ambulatory surgery unit with one fully equipped operating theatre. The other center, a private 13 story clinic containing all specialities in medicine, was fitted with an ambulatory surgery unit, comprising of 4 fully equipped operating rooms and recovery beds.
RESULTS: The first 10 months of activity of these 2 units, pioneering ambulatory surgery in the country, are presented.
CONCLUSION: Ambulatory surgery is a successful new concept in health programmes in a developing country, both in private and in public sectors.

Development of ambulatory surgery in the Kaunas Municipal out-patient departments

V Vaškelis, Z Čekavičius, T Kasarskas

Kaunas Medical University, General Surgery Clinic, Kaunas Central out-patient department, Kaunas Dainava out-patient department, Lithuania

One of the main trends in the development of current surgery is the shortening of the in-patient postoperative period, expansion of ambulatory surgery and active postoperative treatment at patients' (pts) homes. These, world standard, surgery developments are implemented in the Kaunas city out-patient departments. In 1996, 166 ambulatory operations were performed at the Municipal Central out-patient department, in 1997 the number of operations increased by 30% and in 1998 by 15%. In 1996 the predominant surgery was on cutaneous or subcutaneous tissues, in 1997–1998 the number of ambulatory proctology operations increased: hemorrhoidectomy; excision of anal polypus; papillomas; condylomas acuminate; a number of removals of big subcutaneous lipomas; ganglions of joints; Dupuytren's contractures; finger osteomas; secondary closure of wounds; circumcises; and autodermoplasties. It allowed a reduction in the number of surgery beds in the in-patient departments, a reduction in the treatment costs and made it possible for pts to be treated at home in more comfortable conditions.
At the municipal "Dainava" out-patient department the quantity of ambulatory operations increased more than in 20% during 1996–1998. The one day surgery unit established in 1996 permitted the expansion of the indications for ambulatory surgery and the observation of pts more actively.
Recently, the medical reform started in Lithuania covers establishment of insurance medicine. Expansion of ambulatory surgery promotes the development of this reform as it reduces the number of in-patient surgery beds. Moreover, the one day surgery departments that were established at the two municipal hospitals and the ambu-

ulatory surgery center was established in the vicinity of the new out-patient office. Thus, the expansion and activation of ambulatory surgery is a positive phenomenon, it meets the up-to-date requirements and tendencies of surgery development and has the potential for further expansion.

Ambulatory surgery results in Comlejo hospitalario, Universitaro de Santiagour

D Prieto, F Barreiro, JA Puñal, E Mena, C Fdez Viz, J Potel, M. Ariza

Hospital General de Galicia, *Santiago de Compostela*, *Spain*

INTRODUCTION: The ambulatory surgery unit of Santiago is an autonomous unit, sited in the Hospital Provincial de Condo and checked by Complejo Hospitalario de Santiago. The ambulatory surgery unit was inaugurated on June 1994 and it's a multidiscipline unit where, everyday, several patients are operated on by different specialists: general surgeon; neurosurgeon; traumatologist; head and neck surgeon; gynecologist and vascular surgeon.
PATIENTS AND METHODS: From June 1994 to December 1997 we have operated on 4992 patients. We use strict guidelines to select patients in our unit as well as the procedures we perform. In our unit there are two operating rooms, an intensive care room with two places and nursery rooms. The previous study of patients were made in the ambulatory system. Every day eight–ten patients were operated on, inthis way.

RESULTS:

Departments	U.C.M.A.	U.C.E.	Total
General surgery	1900	0	1900
Traumatology	650	610	1260
Vascular surgery	107	678	785
Head and neck	524	0	524
Neurosurgery	64	173	237
Gynecology	211	75	283

CONCLUSIONS:
1. We have no mortality. Our morbidity is low: wound infections and hematomas.
2. Early recovery of health
3. Decrement of waiting list in hospital. Profitable procedure.

The evolution of quality indicator in a day surgery unit

P Cabre, C Alerany, G Agreda, C Semeraro, C Vicens, A Rodriguez

Clínica Quirúrgica Adrià, *Hospitals Vall d'Hebrón*, *Barcelona*, *Spain*

INTRODUCTION: By monitoring the quality of the activity of our center we can identify the areas or procedures that could be improved.
THE AIM: to evaluate the evolution of the quality indicators during five years (1994–1998).
METHODS: We have evaluated 17 219 surgical procedures performed in our day surgery unit and applied the following quality indicators (QI): 1. patients experiencing complications during the perioperative period (pain, n&v, bleeding); 2. surgical procedures cancelled; 3. substitution index; 4. patients admitted to the hospital following surgery; 5. patients readmitted after discharge; 6. patients experiencing complications at home (pain n&v, bleeding); 7. patients satisfied with preoperative and postoperative information and care.

RESULTS:

QI	1994 $n = 3113$	1995 $n = 3459$	1996 $n = 3981$	l997 $n = 4171$	1998* (I–VI) $n = 2598$
1	0.54%	0.42%	0.32%	0.4%	0.4%
2	0.77%	0.75%	0.32%	0.47%	0.69%
3	69.1%	70.5%	76.4%	78.9%	80.5%
4	0.13%	0.29%	0.22%	0.24%	0.11%
5	0.25%	0.14%	0.10%	0.11%	–
6	7.0%	6.8%	5.67%	6.02%	5.0%
7	94.9%	96.5%	95.3%	96.1%	96.9%

CONCLUSIONS: The evolution of the quality indicators has been satisfactory and allows us to monitor and improve the quality of our performance.

Is there a distance-limit for selecting patients for ambulatory surgery

M Ramos, F Malafaia, M Almeida, P Lemos

Anaesthetics Department of Hospital Geral Santo António, *Porto*, *Portugal*

INTRODUCTION: Sixty minutes away from the day surgery unit (DSU) is usually the distance-limit accepted for out-patients. However this guideline must be flexible and adjustable to the type of surgery. At our DSU we do neuromuscular biopsies on children from all over the country as a day case procedure. The objective of the present study was to settle if there was any relation between morbidity and distance.
METHODS: This prospective study included 50 children ASA I, II and III proposed for neuromuscular biopsy: They were assigned to three groups, according to their distance to the DSU: A ($n = 17$), children living less than 30 min away from the DSU; B ($n = 15$), children living between 30 and 60 min away from the DSU; C ($n = 18$), children living more than 60 min away from the DSU. All children were operated with a standard general anaesthesia protocol (usually TIVA). Before the surgical incision, lidocaine, 1%, was infiltrated into the skin. Pain scores were assessed at discharge time, 48 h and 30 days after surgery, with a children's visual scoring that included 5 faces. The 48 h pain score and other complications were assessed by a questionnaire that children's parents sent back to the DSU. The 30 day pain score and other complications were assessed by a phone-call. Any sign of an adverse event was recorded.
RESULTS: There was no statistical difference between the groups. The worst face reported was face no. 3 (at the middle of the scale) in just one child. All children went home. At home there was no morbidity worth being reported. None of them needed to be readmitted during the 30 days after surgery. In terms of satisfaction just 3 parents reported a level below 7 on a 10 point numerical scale.
CONCLUSION: It seems that for some type of surgery like neuromuscular biopsy distance must not be a limit criteria for a proper day case selection. In this study the insignificant minor morbidity that we had was independent of the children's area of residence.

Ambulatory surgery in Timisoara, Romania

J Avram, F Cadariu, A Rodica, A Enache, I Avram, N Miculescu

First Surgical Clinic, *University of Medicine and Pharmacy*, *Timisoara*, *Romania*

INTRODUCTION: In this paper we present our experience in the field of varicous and hemorroidal disease ambulatory surgery.
METHODS: Over the last 3 years we have treated a number of patients with a varicous disease. We have performed Muller minimal flebectomy (in 16 of the calm) or flebectomy of the thrombosed varicoses (in 2I

of the cases), according to the clinical findings, and the evolutive stage of the disease. In addiction to the flebectomy, in 22 cases we also performed catgut endovenous inclusions, according to the Brinzeu procedure. Local anaesthesia has been used in all the interventions. As far as the hemorrhoidal veins pathology is conceded, we performed 7 ambulatory hemoroidectomies (Langenback procedure) and 30 surgical hemoroidal thrombectomies. Local, perianal anesthesia has also been used in all of these cases.
RUSULTS: Few post surgical complications appeared, e.g. small haematom developed in 5 of the cases, but they didn't require medical intervention, as we solved the problem by medical care. The prognosis after three years is good, with no clinical symptomatology and minimal scars. Regarding the evolution after hemoroidal surgery, the results were good in all cases; an anesthesic gel was used to reduce post-surgery pain and intraanal and perianal antibiotic therapy prevented post-surgery infections.
CONCLUSION:

- The ambulatory venous surgery is well accepted in all cases, being less expensive than hospital surgery.
- The aesthetic results were very good in all cases of varicous disease.
- In selected cases, it is a very good method of therapy, the best results being obtained using associated methods of varicous therapy.
- This is a new alternative for varicous diseases surgery in our country, the good results obtained encourage us to develop the ambulatory surgery.

Significance of recovery room in a day-surgery unit

FJ García, R Pernas, F López, M Rodríguez, F Fernández, R Anera

H.U.G.E. Virgen de las Nieves, *Granada*, *Spain*

INTRODUCTION: "Shock and recovery" units in the Second World War were the origin of the current recovery rooms. During the years, scientific advances have increased their field use.
METHODS: Retrospective and descriptive study with 1974 patients admitted to recovery rooms. Ages, pattern of anaesthesia and kind surgery were recorded.
RESULTS: Mean age was 46.07 years old; most frequently used anaesthesia were: general anaesthesia 47.5% ($n = 919$); regional anaesthesia 35.6% ($n = 689$); and local anaesthesia with sedation 16.7% ($n = 323$). Orthopedic surgery needed more blocks ($n = 547$) and general surgery required a big number of local anaesthesia with sedation ($n = 220$).
CONCLUSION: A considerable number of regional anaesthesias are achieved in our unit and this helps to exploit the recovery room, by making blocks and having suitable monitoring while operating rooms are in use; so the necessary time for the proper level of anaesthesia is reached. In cases of patients under a intraoperative deep sedation, the recovery room is used to observe the evolution, as well as to take care of, vascular stasis after intravenous regional anaesthesia in short time surgery. We conclude that the recovery room offers numerous possibilities and contribute to improvement of the output and the efficiency of a day-surgery unit.

Causes of the hospital stay in ambulatory surgery

MA Prieto Reyes, JL Blanco, J Mena, R Glez Burguillos, L Cuaresma, R Santos, F Gomez, A Fernandez, M Bastos

Hospital Universitario Virgen del Rocio, *Sevilla*, *Spain*

INTRODUCTION: In spite of the earlier selection of the patients before the ambulatory surgery, a percentage of them remained in the hospital for not completing the established requirements.
METHODS: Study prospective of 400 patients, 246 men and 154 women, average age 42 years. Intervened pathology: hernias 169; anal surgery 172; benign breast 32; and 27 others of anal surgery.
RESULTS: A total of 29 (7%) patients remained hospitalised after the intervention. The causes of the entrance fué: pain 2; urinary retention 2; vomiting 3; bleeding 3, pathology of more complexity than the ones foreseen 16; the patients reluctant to leave 3. Significant differences did not exist regarding the pathology, the sex, or the age of the patients.
CONCLUSIONS: The causes of the hospitalisation from the ambulatory surgery are not owed so much to anesthetic or surgical complications, but to the faulty evaluation of the pathology in the earlier selection.

Impact of the anaesthetic technique on the unexpected admissions and side effects after ambulatory surgery

A Pajuelo, C Rodríguez, AJ Durán, FJ Castillo, P Sacristán

Anesthetics Department, *Hospital de Poniente de Almería*, *Spain*

INTRODUCTION: The unexpected admissions to hospital after ambulatory surgery is a valid measure of morbidity rate and an indicator of assistance quality, especially in what refers to the anaesthetic method used.
AIM OF THE STUDY: Our purpose is to analyze, retrospectively, the unexpected admissions (UA) and the side effects (SE) after ambulatory surgery in 1813 patients, as well as the reasons for forced hospital admission before discharge from the recovery room. Three different anaesthetic techniques were considered: general anesthesia (group 1); locorregional anaesthesia (group 2); sedation with local anaesthesia (group 3).
METHODS: A total of 1813 patients admitted to the day hospital unit at Hospital de Poniente from April 1996 to August 1998 were analyzed. In our study, the side effects that caused the admission of the patients were analyzed: surgical complications; wound pain; sickness; headache; dizziness; hypotension; urinary retention and prolonged motor block.
RESULTS AND DISCUSSION: As shown in table 1, of the 1813 patients scheduled for discharge from the day unit, 52 of them (28%) had to be admitted before discharge from the recovery room (we excluded the patients that were admitted into hospital immediately after a long surgical procedure).

	Group 1		Group 2		Group 3		Total	
Number	799		790		224		1813	
Age	30.2		36.5		49.6		37.6	
Surgery time (Min)	356		456		387		406	
	SE	UA	SE	UA	SE	UA	SE	UA
Surgical complications	2	2	3	3	1	1	6	6
Headache	2		5	5	1		8	5
Motor block			5	3			5	3
Sickness	56	4	4		1		61	4
Hypotension	2		5				7	
Pain	326	1	192	5	17		535	6
Urinary retention	14		32	15			46	15
Dizziness	2	1					2	1
Patient's selection		4		6		1		11
Total	404	12	246	37	20	2	670	51
%		1.5		4.6		0.89		2.8

Major ambulatory and short stay surgery unit: six-years global results

JM Pillar, JB García, PM Ruiz, JT Torres, M Rodríguez, F Gil

Ambulatory Surgery Unit, *Hospital Virgen de las Nieves*, *Granada*, *Spain*

INTRODUCTION: We summarise the surgical activity performed in our unit from its foundation until the present time, disclosing it in function of participating surgical specialities.
METHODS: We have analysed the results concerning epidemiological data, types of pathology, anaesthetic and surgical techniques, postoperative stays, morbidity and readmission rates. This unit works as a satellite centre of our hospital.
RESULTS: From May 1992 to October 1998 31 086 surgical procedures have been performed (14 620 excluding minor surgery). The participating specialities have been: general surgery with 6388 patients; urology 3363; orthopaedics 3204; plastic surgery 435; maxillofacial 424; ENT 361 and others 445. No mortality. Morbidity 8.3%. Discharge 4–8 hours after surgery in 68.5% of general surgery patients (the rest were admitted overnight). Readmission rate 0.8%.
CONCLUSION: The major ambulatory and short stay surgery techniques are safe and applicable to a wide range of pathologies and surgical specialities. Their good results favour their acceptance by the community and health professionals in our area.

Patient's opinions about major ambulatory and short stay surgery

JM Villar, JB García, JT Torres, PM Ruiz, MT Villegas, F Gil

Ambulatory Surgery Unit, *Hospital Virgen de las Nieves*, *Granada*, *Spain*

INTRODUCTION: Patient opinions on the value of ambulatory and short stay surgery are controversial. Presented below are the impressions of our patients obtained through enquiries.
METHODS: At discharge, they all received a confidential questionnaire. Once completed, it was returned one week after the operation. The different items analysed were: information received; postoperative pain and anxiety; and overall unit evaluation. Likewise, there is a page available where comments or criticisms could be voiced.
RESULTS: A total of 1407 patients were operated on by the general surgery team in the period April 1997–October 1998 (76.9% answered the questionnaire). Preoperative information was judged adequate by 86%. Postoperative pain: absent 34.8%, light 24%, mild 30.6%, severe 10.6%. Overall unit evaluation: excellent 58.2%, good 40.5%, poor 1.3%. A total of 198 patients supplied some comments or criticisms: those related to scarce or inexact information (47.1%); facilities and setting (34.1%); organisational and management issues (13%); and personnel behaviour (5.8%).
CONCLUSION: The enquiries are useful tools that could help us to know the opinion of our patients. It is important not to neglect aspects like users information.

Indexes of substitution in major ambulatory and short stay surgery

JM Villar, JB García, PM Ruiz, JT Torres, MJ Álvarez, F Rubio

Ambulatory Surgery Unit, *Hospital Virgen de las Nieves*, *Granada*, *Spain*

INTRODUCTION: If an ambulatory surgery unit (ASU) began a short stay surgery (SSS) program, it could probably treat more patients and processes than a day hospital. In our ASU both ambulatory surgery (AS) and SSS coexist. We analyse the general surgery team's activity, evaluating its indexes of substitution (IS) in different processes throughout the period 1992–1997.
METHODS. We defined two indexes in various pathologies. ASI (ambulatory substitution index) being the percentage of patients treated on ambulatory basis of the total operated on in the unit as well as in the reference hospital. GSI (global substitution index) being the percentage of the total of elective operations undertaken in the unit (AS and SSS).
RESULTS: Inguinal hernia: ASI 49.2%; GSI 78.3%. Global abdominal wall surgery: ASI 47.2%; GSI 73.6%. Benign proctologic lesions: ASI 49.5%; GSI 82.2%. Pilonidal cyst: ASI 83%; GSI 92%. Overall general surgery results: ASI 54.7%; GSI 78.7%.
CONCLUSION: High acceptance rate of AS for general surgery pathologies in our area. Thanks to SSS, we have increased the IS of these processes by an additional 25% compared to day hospitals.

Involvement of general practitioners and district nurses in an ambulatory surgical unit

JM Villar, JB García, PM Ruiz, JT Torres, J García, M Vargas

Ambulatory Surgery Unit, *Hospital Virgen de las Nieves*, *Granada*, *Spain*

INTRODUCTION: Since their beginning, ambulatory surgical units (ASU) have been considered as an intermediate step between the hospitalary and extrahospitalary levels. With this in mind, we initiated a primary care teaching program focused on giving general practitioners and district nurses the expertise required to survey the postoperative period of our patients. We present this experience.
METHODS: Since 1994, general practitioners and district nurses spend one month in our unit, rotating through operating-theatres (local anaesthesia, sutures, drainages) and outpatient clinics (postoperative pain control, wounds redressing, detection and treatment of postoperative complications).
RESULTS: A total of 48 general practitioners and 51 nurses have been trained in our unit. The majority of them—after this experience—began to control the postoperative period of our patients (successfully proven when we analyse the ratio preoperative/postoperative consultation in our clinic: 1/3 in 1992 and 1993, 1/2 in 1994, near 1/1 in 1995 and 1996, 7/4 in 1997 and 2/1 in 1998).
CONCLUSIONS. Teaching general practitioners and nurses in the control of the postoperative period of ambulatory patients has been proven to be very useful.

Ambulatory surgery unit in a general hospital

F Marsal, E Caubet, M González, J. Picas, JJ Pamies, S López, J Pereira

Department of Surgery, *Hospital St. Pau i Sta. Tecla*, *Tarragona*, *Spain*

INTRODUCTION: The "St. Pau i Sta. Tecla" Hospital (Tarragona, Catalonia, Spain), is a general hospital with 180 beds, serving 86 000 people. The program for the ambulatory treatment of groin hernia began in June 1990. At the present time, the hospitals possibilities and the requirements of our patients make us perform one-day surgery in the following cases of surgical procedures: general surgery; vascular surgery; orthopedics; ophtalmology; gynecology; urology; and ear, nose and throat.
METHODS: We present our new project, a self-sufficient centre (245 m^2), with 2 complete different areas: clinical (patient administration) and surgical. This project will be underway from 1999 (7:30 a.m to 7:30 p.m). A patient satisfaction survey was carried out by phone 24 hours later.
RESULTS: From June 1990 to June 1992, 192 patients, suffering from groin hernia, were operated on by our department in a general hospital. One hundred and thirty nine (70%) were scheduled as out-patient surgery. From January 1993 to September 1998, 2058 cases were performed on the ambulatory program for the surgical specialities: general surgery (39.75%); orthopedics (25.85%); ear, nose and throat (25.49%); gynecology, urology and opthalmology (8.91%).
CONCLUSIONS: The changes introduced to the organisation of day care surgery will permit the percentages of cases treated as out-patients to grow. The expectation for 1999 with the new ambulatory surgery unit, which has been calculated based on 250 working days, will be 2080 cases.

Activity evaluation in an ambulatory center. A profile definition.

B Brahin, JM Glasson, Cl Reboul

Valmedica, *Nîmes*, *France*

Ambulatory surgery is a very recent concern. The development of these structures is progressive and standards of activities are not precisely defined. No list gathering all the diseases that are suitable for ambulatory surgery are available nowadays in France. The setting up

since the beginning of 1997 of the GHM standard (close to the American DRG) authorised better follow up of the ambulatory institution. Actually two data (GHM 700 and 800) are relevant for the description of the activity and are the part of cases that are transferred from usual hospitalisation. We have been studying this data in a multidisciplinary independent ambulatory center especially those concerning orthopedics activity. Moreover we have tried to qualify each procedure according to the criteria previously defined by the French Ambulatory Association (AFCA) group 1, 2 and 3. These groups have been known since 1996 but were never exploited in a retrospective study. This allows for: the perfect description of an ambulatory center profile; the comparison between different centers; and an accurate evaluation of each of them. The description of an independent ambulatory center will be illustrated in this study.

Day-surgery activity in a general surgery unit two years analysis

P Colobraro, A Borzone

Ospedale Di Civitacastellana, Viterbo, Italy

INTRODUCTION: Day-surgery activity (DS) at the general surgery division of the Civitacastellana Hospital started in December 1995, and became fully operational as of the beginning of 1996. We deeply trusted this organization for patients treatment which, according to other centers data, could have brought advantages both to patients' personal comfort and surgical treatment.
METHOD: After two years of implementation we can now be satisfied that we were right. For instance, if we take the parameter ''inguinal hernia'', in 1995, 110 operations have been carried out while during the following year 1996 the inguinal hernia procedures almost doubled to 186. Such results have been possible thanks to the new pre-operative screening, carried out on an out-patient basis; patients were not physically admitted into the ward, but just came to the hospital to undergo pre-operative tests. Considering that for three months the surgical ward was not fully operational, due to restoration works, which have halved the receptivity, we have increased by about 180 units the number of admissions/year and by about 100 units the total (performed) operations number. Total number of DS in 1996 has been 117 operations. The same data from 1997 has raised to 148, scoring an improvement of 31 units (20%), in 1998 the total operations number has increased to 163, with a further numerical improvement of 15 units (9.2%) compared to the previous year, scoring a bi-yearly improvement of DS ranging about 30%.
RESULTS: Analysis of the following operations (inguinal hernias, venous varicys, appendectomies, hemorroids and fistulas):

1996	117 in day-surgery	200 under regular admission	317 total operations
1997	148 in day surgery	170 under regular admission	318 total operations
1998	262 in day surgery	55 under regular admission	317 total operations

In 1997, 31 DS procedures, an increase of 20.9%, 30 less procedures under regular admission (17.6%). In 1998, 114 DS procedures, an increase of 43.5%, 115 less procedures under regular admission (47.8%), assuming a daily admission cost of L. 900 000 for two days

1997	real saving achieved (1 800 000 × 30)	Lit. 54 000 000
1997	admission costs (1 800 000 × 170)	Lit. 306 000 000
1997	assumed total savings (306 000 000 + 5 000 000)	Lit. 360 000 000
1998	real saving achieved (1 800 000 × 115)	Lit. 207 000 000
1997	admission costs (1 800 000 × 170)	Lit. 99 000 000
1997	assumed total savings (207 000 000 + 99 000 000)	Lit. 306 000 000

CONCLUSIONS: Such results have are not only theoretical, but are reflected in the present two-months waiting list. According to us the DS activity indicators are: an increase or regular admission regime, and in surgery, an increase in operation numbers carried out under short admission regime, and the consequent reduction of total admission days/operation. On the grounds of the above analysis, we believe the DS admission regime is cost effective and such opinion is supported from the users' consensus.

Patients experience of day surgery procedures under local anaesthesia

S Powell, P Saunders

Royal Hospitals NHS Trust, Day Surgery Unit, London

INTRODUCTION: Patients undergoing any invasive procedure whether under local or general anaesthesia require standardised perioperative management.
METHOD: We followed 100 patients undergoing day surgery procedures under local anaesthesia and gave them a questionnaire, covering all aspects of perioperative management, to complete on the 7th postoperative day.
RESULTS: Only 12.5% of patients made the decision themselves to undergo local anaesthesia, 21% of patients would have preferred general anaesthesia and 29.2% of patients found the initial injection of local anaesthetic agent uncomfortable and distressing. Only 50% of patients were given written postoperative instructions, 95.8% of patients would be prepared to repeat the experience.
CONCLUSIONS: Although most patients were satisfied with local anaesthesia technique patients need more involvement in decision-making, and improved written and verbal information. The injection of local anaesthetic agent is painful and distressing and the application of emla cream preoperatively is considered essential to improve quality of care.

Demographic survey of inner city day surgery patients

A Apio, P Saunders

Royal Hospitals, NHS Trust, London

INTRODUCTION: An inner city DSU with patients from diverse socio-cultural and economic backgrounds has increased demands for the provision of quality of care to meet the individual needs in the tertiary or community phase of recovery. The community here is often not traditional in nature with an inadequate support structure, compounded by poor access to communications and transport and lack of resources.
METHOD: A questionnaire was devised to obtain general rather than specific background information of the patient: degree rather than exact nature of support structure; language difficulties and type of access to telephone and transport as well as nature of housing.
RESULTS: The majority of patients had domestic commitments and lived in multi-storey buildings with lift facilities. In 27.3% of patients English was a second language. Of these 44% did not speak or read English, 37.6% of patients depended on public transport. In 10% of patients the first language was different to the general practitioner.
CONCLUSIONS: The need to provide perioperative information in different languages is evident and more so in difficult inner city socio-economic circumstances.

Outpatients surgery: our experience in 1998

A Cavalca[a], L Boccia[b], A Baisi[c], ME Lorenzetti[d], AR Zanoni[c], C Carusillo[c], G Mariani[b], A Viotto[a]

[a]*Divisione di Chirurgia Generale*. [b]*Divisione di Chirurgia Generale, P.O. Destra Secchia di Pieve di Coriano,-Azienda Ospedaliera C. Poma-Mantova*. [c]*Servizio di Anestesia e Rianimazione*. [d]*Divisione di Pediatria, P.O. Nuovo Montecchi di Suzzara e*

INTRODUCTION: In the last few years there has been much discussion about the possible decrease of in-stay days in hospital for surgery, modifying surgery and anaesthetic techniques. We present our experience in 1998.
METHODS: We analyzed all the general surgery operations performed in DH or DS in 1998 in two local hospitals of Mantua. Patients, selected under criteria ASA 1 and ASA 2, were submitted to free preoperative evaluations (diagnostic DH: basic laboratory tests; ECG; anaesthetic evaluation; thorax X-ray in patients over 60 years of age) within 10 days of the operation. Admission to the hospital was at 7.00 a.m. and dismission before 8.00 p.m. They received local anaesthesia or local regional anaesthesia according to age and collaboration level (spinal anaesthesia wasn't fit for children and very aged patients). Criteria for dismission were: no intraoperative significant complications; analgesic drugs within 4 hours of the operation; controlled pain in patients under local anaesthesia. To these we added for spinal anaesthesia: good cardiac and respiratory parameters monitoring within 6 hours after the operation; non significant complications (urinary retention, fever, headache, vomiting); other favourable conditions for the patient (phone, car, family members care, compatible distance from the hospital)
RESULTS: In 1998, 575 general surgery operations were performed in DH or DS; 402 under local anaesthesia and 173 under spinal anaesthesia. Namely: 350 herniorraphies, 120 saphenectomies, 50 proctologic operations, 30 urologic operations and 25 breast operations. Among these patients: 5 patients presented intraoperative complications (severe pain, psychomotor agitation); 15 patients presented late postoperative complications (urinary retention, headache; severe pain); no one presented immediately postoperative complications. Six patients stayed in hospital after 8.00 p.m. because of: severe continuous pain in two herniorraphies with good outcome within 5 days after the operation; headache in 3 patients; and continued urinary retention (these last cases occurred in the first period of our experience).
CONCLUSIONS: The use of these anaesthesiologic techniques modified the organisation of surgery hospitals leading to: shorter in-stay in hospital (over 2000 days off in our experience); rise of the turn-over of patients; simplified operating room admittance (with more problems in preoperative organisation); significant economic saving (patients social times, different utilisation of care-nurses, materials and drugs). The high popularity index of patients and the lack of severe complications lead us to gradually extend the criteria of selection regarding these anaesthesiologic techniques.

Regional analysis about potential activity on ambulatory surgery and regional organisation of the care offer

D Hève[a], A Conez[b], MC L'Huillier[a]

[a]*University Hospital of Montpellier, France*. [b]*Regional Agency of the Hospitalization, Languedoc-Roussillon*

A proposal for an integrate day surgery unit: methods and organization

DP Greco[a], P D'Auria[b], B Capaccioni[b], M Galeone[c]

[a]*Coordinatore Unità Operativa di Day Surgery Integrata*. [b]*Unità Operativa di Day Surgery Integrata*. [c]*Direttore Presidio Sesto San Giovanni*

The integrated day surgery unit is designed to optimize "Cost/Effectiveness and Cost/Quality ratios" of treatments. By means of a rigorous planning, the day surgery unit provides a better use of resources, particularly of hospital bed occupancy and preserves the number and the high standard quality of surgical treatments (zero defect process). The planning design of this unit and its control is based on a specific regulation. The core of the regulation is the enclosure which fully described the peculiar characteristics of a single, specific unit. The regulation for a unit comprises of specific protocols and flow-charts: the former describes each clinical steps of each intervention whereas the latter outlines the procedures for the diagnosis and treatment that involve the hospital management and the decisions that involve the patients. Herewith, the authors analyse and describe several flow-charts related to:
- day surgery
- geriatric surgery
- different pathological conditions grouped for homogeneous area of interest
- escape ways.

During the working process, it appeared that procedures would be better grouped on the basis of the decision-making process rather than on different specialities. Homogeneous procedures have been developed for single pathological conditions when the decision-making processes were quite similar and only particular protocol options allowed for their differentiation. The flow-charts have been analysed either top-down or following a circular approach. In their conclusions, the authors underlined that the use of flow-charts without protocols and a structured regulation has mainly a bureaucratic meaning. On the other hand, when flow-charts, protocol and regulation are used together, they are able to describe the layout of the system management.

Day-surgery: selection and management of patients

A Virdis, P Soro, G Padula, F Attene, G Occhioni, GF Fancello, M Cossu, S Masia, M Trignano

Institute of Patologia Chirurgica, Sassari, Italy

In our Institute of Patologia Chirurgica we started, 6 month ago, a Day-Surgery service.
The selection of patients is being made in our ambulatory of general and vascular surgery, among all the people envoyed by generalists and other ambulatory surgery. We evaluate the disease curable in day-surgery (inguinal and crural hernia, proctologial diseases, varicose syndrome, mammary disease such gynecomastia and giant fibroadenomas).
Who we judge eligible to Day-Surgery:
- all patients of Class ASA I and II
- some patients of Class ASA III after accurate clinical and anesthesiologial evaluation
- patients aged between 6 months and 75 years in relationship with general conditions and specific disease
- patients with a good motivation to undergo to a day-surgery operation
- logistical factors: residence of the patients near the hospital (not over one hour of travel between home and hospital
- good self-control of patient or family that could take care of him in the 48 hours after intervention.

The patients that we judge ideal, receive routine examinations including: ECG and cardiologic evaluation; chest radiography; and blood examination free of charge for the patients. After anesthesiological consultation, the date of operation is appointed DS and the informed consent is registered. The day of scheduled operation, the patient, without any premedication, is registered in our division and taken into the operating theatre, where the anestetist prepare the patients and select the type of anestetics. After the operation the patient stays in hospital for five hours and later he is discharged after he has recovered. At discharge he receives a report on the type of treatment and about the anestetics used. The instructions on staying at home and the date of future consultations with the surgeon and the division telephone number were supplied.
The authors, based on this first experience of D.S., convinced themselves that the observation of some selection criteria mentioned above, represent the preliminary factors in obtaining good results on the day surgery.

Surgical Specialities

Pre-, intra- and postoperative medication with ambulatory noseseptum-surgery: a randomised study

M Pilgramm, HP Weibel, HP Schäfer, A Weeber

One-day clinic, Detmold, Germany

In a randomised study from April 1997 to December 1997, noseseptum surgery was carried out on 98 patients. The patients were preoperative randmized in 3 groups. Group A (n = 32) no preoperative treatment, postoperative noselavage over 14 days. Group B (n = 33) one day preoperative diclotenae, intra operative 2 g lephalospovin, postoperative 4 days diclotenae. Group C (n = 33) same as Group B, without intraoperative antibiotics. The operation was done by two experienced surgeons. The Cottle-technique was usually used. The removing of the tampoing was done on the first postoperative day.

Results	A	B	C
Post op. nose care (days)	12,7	9,4	9,5
Post op. antibiotics (patients)	3	3	3
Post op. abscess of nasal septum/ hematoma	2	0	0
Not being able to work after op (days)	15,2	11,6	11,4
Patients satisfied with result	28	31	33
Intraop. loss of blood (ml)	57	39	41

The results showed that, by ambulatory done noseseptum a pro- and post op. diclophenae surgery is much better. The patient is able to get back to work much quicker. The daily nosecare can be done without antibiotics.

Analgesic effect of intra-articular acetylsalicilic acid, ketamine, and morphine after arthroscopic meniscectomy

J Ménétrey, S Pagin, M Baumann, F Munaretto, D Fritschy

Département de chirurgie, Policlinique de chirurgie, Hôpitaux Universitaires de Genève, 1211 Genève 14, Switzerland

INTRODUCTION: Arthroscopic meniscectomy is a common procedure in orthopaedic practice and is frequently performed on an outpatient basis. An efficient postoperative antalgia is one of the keypoints to achieve outpatient surgery. The aim of this study is to compare, in a randomized and double-mind manner, the analgesic effect of the intra-articular injection of different antalgic medications after arthroscopic meniscectomy.
MATERIAL AND METHODS: 74 patients (age: 18–65 years) underwent an arthroscopic meniscectomy and were randomly assigned to one of the four groups: (1) intra-articular injection (IaI) of 40 ml of NaCl 0.9% (group Placebo, n = 18); (2) IaI of 100mg Acetylsalicilic acid/40ml NaCl 0.9% (n = 18); (3) IaI of 20 mg ketamine/40ml NaCl 0.9% (n = 19); (4) IaI of 1 mg Morphine/40 ml NaCl 0.9% (n = 19). The post-operative pain was assessed 15 minutes, 1, 2, 3, 4, 24 hours, and 4 days after the arthroscopy using a visual analog scale score (VASD) and the recording of supplementary antalgic medication (Paracetamol).
RESULTS: The addition of the VASD mean for the seven pain evaluation was 10 for the Placebo group, 11 for the Acetylsalicilic acid group, 10 for the ketamine group, and 12 for the morphine group. At each evaluation, the mean VASD was inferior to two (slight discomfort) regardless of the group assessed. Over the four days period of observation, the number of Paracetamol tablets (500mg) taken by patients was 3 for the Placebo group, 2 for the Acetylsalicilic acid group, 2 for the ketamine group, and 3 for the morphine group.
CONCLUSIONS: This study shows that there is no noticeable analgesic effect in injecting intra-articular acetylsalicilic acid, ketamine, and morphine after arthroscopic meniscectomy. The post-operative period following outpatient arthroscopic meniscectomy is marked by a slight discomfort and we think that the intra-articular injection of antalgic medication is not justified.

Laparoscopic diverting colostomy for recurrence rectovaginal fistula

G Öğünç, C Arici

Department of General Surgery, Akdeniz University Medical School, Antalya, Turkey

INTRODUCTION: A protecting colostomy is usually not necessary in rectovaginal fistula. However in recurrence cases, a diverting colostomy can be needed for successful repair.
METHODS: A 42-year old female was admitted with passing gas and stool through the vagina for a period of 8 years. She was described an extensive childbirth trauma. A surgical repair had been performed a month ago but not successfully. Physical examination revealed a large rectovaginal fistula. Laparoscopic Hartman procedure was performed for complete diversion.
RESULTS: Operating-time was 45 min. There was no morbidity. Patient was discharged on the 3rd day.
CONCLUSION: We conclude that laparoscopic approach must be preferred in the indication of diverting colostomy.

Direct access day case carpal tunnel surgery

M Jarrett, G Giddins

Department of Orthopaedics, Royal United Hospital, Bath, UK

INTRODUCTION: Carpal tunnel syndrome is a common condition. In the literature there is controversy over reliability of signs. Nonetheless the more obvious cases seem reasonably easy to diagnose. To assess this a system of direct referral for day case carpal tunnel surgery was, instituted.
METHODS: General practitioners, physicians and surgeons were advised of the service and criteria for referral: female patients with bilateral symptoms, good signs and some response to treatment. All patients were reviewed preoperatively by the consultant. The service was an optional extra to standard outpatient referral.
RESULTS: Over eighteen months, 51 patients were seen. Two were refused surgery: one for a wrong diagnosis and one for resolving signs. Those operated upon were all either cured or substantially improved. The service was generally well received although some patients felt under informed. On average the patients waited 4 months less and avoided an outpatient appointment. This streamlining of their day surgery experience was to the benefit of both the patient, their employer and to already stretched outpatient clinics.
CONCLUSION: Direct access day case carpal tunnel surgery appears to work well by both reducing delays and costs of treatment. The cancellation rate seems acceptably low. Patient information is important in optimising the service.

Pediatric patient, and head and neck infections: an analysis of etiology, treatment and complications

M-S Al-Emad

Republican teaching hospital, Sana'a, Republic of Yemen

Head and neck infections are still a clinical problem in spite of antibiotics and early surgical treatment. The antibiotics have reduced the course of treatment and incidence of fatal complications. Some of the severe infections, such as airway obstruction, bacteremia, and septicemia, thrombophlebitis, brain abscesses, fatal mediastinitis, erosion of major vessels with severe hemorrhage and decrease of vision have been reported in the literature. The primary concern of this paper is to present an analysis of the etiology, treatment and complications of odontogenic and non odontogenic infections in the pediatric patients.

Similarities and differences in anesthetic management of identical twins undergoing ambulatory face-lifts.

MI Zalmanov, DE Antell, EM Taczanowski

RPA-C. Mobile Anesthesia and 850 Park Surgucal, New York, USA

INTRODUCTION: Nature offers few experimental models of identical twins for researchers to compare.
METHODS: Data was collected from 34 sets of identical twins. Monozigosity was 96% accurate and was confirmed. 7 sets of examined twins chose to undergo elective facial rejuvenation surgery. Anesthetic management consisted of a local anesthesia with intravenous sedation and was performed in all cases by the same physician.
RESULTS: Despite significant differences in socio-economic, environmental, occupational factors and physical appearances 6 out of 7 sets of twins required identical amounts of anesthetic drugs and experienced identical surgical and anesthetic recovery. One set of twins was obviously different in anesthetic requirements.
CONCLUSION. Based on this study, genetic predisposition plays the most important part in determining anesthetic drug requirements for elective face-lift surgery.

Vascular access for hemodialysis: personal experience

P Crucitti, V Ripetti, M Caricato, A Granai, CL Cellamare, P Berloco

Libera Università Campus Bio-Medico, Rome, Italy

Construction of a Cimino-Brescia radiocephalic fistula is the current method of choice for vascular access in most patients on chronic hemodialysis. Provision of lifelong angioaccess for hemodialysis generally requires multiple procedures, and occasionally vascular abnormalities could prevent the construction of a primary distal artero-venous fistual. Such situations frequently oblige to the fashioning of a proximal venous access that cause a significant increase of cardio-vascular risk for the hemodialyzed patient. The authors refer to personal experience developed during more than 20 years of activity in vascular access construction. Our experience includes a wide number of difficult and proximal artero-venous fistulas. From January 1975 to September 1998, 1394 operation for the construction of a vascular access for hemodialysis have been performed. Of these, 330 performed in the first years of experience were external shunt, while 819 were radio-cephalic fistulas according to Cimino-Brescia. In 226 cases a graft interposition was used, in 5 cases a Cimino-Brescia fistula was constructed using VCS vascular stapler, and in 14 cases, in the last few year, a proximal anastomosis was fashioned between the comites vein of omeral artery and the same artery. All operations, irrespectively of the technique used, were performed as outpatients, using infiltration anesthesia and only in a few cases peripheral troncular anestesia. The technique of fistula construction over the elbow anastomizing the omeral artery and its comites vein has been employed in 14 selected cases when the superficial venous system was entirely thrombosed. Subsequently the comites vein was superficialized for a 10–15 cm length. Such technique showed to be easy and safe and all cases were patent and with a sufficient flow at 15 days follow-up. Our experience confirms that the Cimino-Brescia technique is the first choice in providing hemodialysis vascular access, while autologous or eterologous prosthetic material must be used only when superficial venous property is compromized and an adequate experience in high flow proximal accesses has not yet been achieved.

One day surgery and varicose disease

M Ponsetto, S Vaccarisi, A Bergantino, R Scala, M Obialero

Azienda USL 9 Ivrea (TO) Italy Osp. Cuorgne div. Chir. Gem Primario dots. M. Obialero. Resp. Dav Hospital e Day Surgery doff. F. Peradoffo

INTRODUCTION: Venous insufficiency of legs affects up 20% of people in western countries. So treatment of this disease is a cost for modern society. Both progressive improvement of surgical and anaestesiological techniques carried the one day surgery success.
MATERIALS AND METHODS: We want to analyse our experience in one day surgery applied at venous insufficiency. We treated 39 patients during the last two years . They were 27% male and 73% female. The following operations were performed: saphenectomy and phlebectomy, only phlebectomy, crossectomy and perforant binding. In saphenectomy femoral aenesthetic block on the anatomic support was done. Phlebectomies with Oesch, Muller and Ramelet hooks were performed with local infiltrations. We even used sterile strip closing micro-incisions for better aesthetic results. We never applied stitches. Tensoplast compressive bandaging was performed on selective dressing which increasing ray, in accord with Laplace's law. So we had a selective pressure on the target points.
RESULTS: Only one case wasn't discharged before 6 p.m. and admitted in our Surgical Division. Pain control was obtained with NSAIDS. Complications observed were ecchimosis for more than two weeks that was treated with eparinoid cream in 8 patients (20,5%) and persisting perimalleolar hypoaesthesia in two cases. We didn't have other complications. With these results, we can say that our experience is good. The incidence of complications was in accord with the literature. The judgement of patients was good about 90%.
CONCLUSIONS: The results of our experience in one day surgery are good with regular frequency rate complications and reducing costs by not admitting patients. It should be emphasised, that comfort is also possible by using monoextensive dressing.
ACKNOWLEDGEMENT: Thanks are due to Paolo Magnani M.D. for his contributions.

Current role of Muller phlebectomy in the treatment of varicose veins

M Ponsetto, S Vaccarisi, A Bergantino, M Perardi, M Obialero

Azienda USL 9 Ivrea, Turin, Italy, Osp. Cuorgnè div. Chir.Gen. Primario dott. M. Obialero. Resp Day Hospital e Day Surgery dott. F Peradotto

INTRODUCTION: Many years have passed since Muller's technique was first described. Phlebectomies were introduced as an ambulatory surgical technique. The reasons why phlebectomy has increased its success are same-day discharge of patients, reduced discomfort from anaestethic infiltration and aesthetic results which were well accepted by patients (in most cases young women).
MATERIALS AND METHODS: In the last two years, 35 patients underwent ambulatory phlebectomy. 30 of them were female (85,8%) and 5 men. Mean age was 40.3 years, ranging from 25 to 62 years. Doppler or better Ecocolordoppler were used to map the vessels before interventions. US study is a fundamental step for the results of phlebectomy. Since it is essential to identify and map reflux 'escape points'. Before microincisior anaesthesia by local infiltration was performed. The solution was a mix of 2% xylocaine, marcaine and $NaHCO_3$. We used three types of hooks: Muller and Ramelet for little and medium sized veins and Oesch for troncular varicose veins. To close the micro-incision we used sterile strip for good aesthetic results. The operation ended with limb dressing. All patients were discharged in the afternoon before 6 p.m and none needed hospital admission. Pain was controlled using piroxicam tablets.
RESULTS: The indications to treatment with Muller's phlebectomy were postsaphenectomy varicous veins, not saphenic varicose veins or with unaffected GSV-LSV varicose veins and perforant veins. We didn't have important complications. In six patients dressing was changed before discharge because of perforant veins bleeding. Pain was controlled in all patient with oral NSAIDS. Aesthetic and functional results were good. Only 8 patients had a persisting ecchimosis around incision for more than two weeks that was treated with eparinoid cream.
CONCLUSION: Muller's phlebectomy is an aesthetic and ambulatory technique that also removes functional disease. Our experience confirms this, especially in young women. Correct surgical indication and accurate US preoperative study are of vital importance for the success of this technique.

Hernioplasty in one day surgery

A Bergantino, M Ponsetto, S Vaccarisi, F Peradotto, M Obialero

Azienda USL 9 Ivrea (TO) Italy Osp. Cuorgnè div. Chir. Gen. Primario dott. M. Obialero. Resp. Day Hospital e Day Surgery dott. F. Peradotto, Italy

INTRODUCTION: Inguinal hernia is a very common pathology, particularly in males. In fact the risk of this affection in males seems to be around 10% during the life span. Therapy is surgical, thus herniplasty is an important part of the routine performed in the departments of general surgery. In the last years the treatment performed as O.D.S is becoming increasingly widespread, thanks to the evolution of the surgical and anesthesiological techniques. Operation, in fact, is performed tension free, positioning a 'polypropilene' prosthesis, usually, contrary to the classical plastic techniques. Anesthesia is local, and is practised with a reduced quantity of appropriately composed mixtures.
METHODS: in our department, we have been operating selected patients with hernial pathology in one day surgery for about two years. The techniques that we use most often are represented by the plastics according to Lichtenstein or Trabucco. Local anesthesia is performed with a mixture composed from: 20 cc. of 1% lidocaine, 20 cc. 0.5% bupivacaine and 10 cc. sodium bicarbonate. An important step of the anesthesia is the 'flooding' of the inguinal channel using 10 cc. anaesthetic mixture which are infiltrated under the band of the oblique external muscle before proceeding with incision.
RESULTS: Starting from 1997 we have performed 82 operations for inguinal hernia as day surgery: 91% of the patients, were male while 9% were female. The mean age of the patients was 52 years (range 17–82). The disease present on the right side in 54% of the cases, on the left side in 46% of the cases.
CONCLUSION: During routine post operative controls, we observed no recidivation and no complication, with the exception of few cases in which a moderate hemorrhagic soffusion appeared around the surgical wound, and one case in which this soffusion extended to the scrotum. Both cases, however, healed completely in few weeks. The treatment of hernial pathology in O.D.S., effected with the Trabucco or Lichtenstein technique and performed in local anaesthesia, was well accepted by most patients. Finally post operative pain was controlled at home with oral analgesic drugs such as 'piroxicam-beta-ciclodestrina' or 'ketorolac trometamina' and was never reported as severe.

The incidence of hypotension during spinal anesthesia and monolateral spinal block

E Casaletti, AM Scandroglio, V Cedrati, C Gecele, A Casati

Università degli Studi di Milano, IRCCS H. San Raffaele, Milano, Italy

BACKGROUND: The purpose of this randomized, double-blind study was to evaluate if searching for an asymmetric spinal block affects the incidence of hypotension during spinal anesthesia.
METHODS: With Ethical Committee approval and patient consent, 120 patients undergoing lower limb surgery were placed in the lateral position with the side to be operated on dependent, and received 8 mg of 0.5% hyperbaric bupivacaine through a 25-gauge Whitacre spinal needle. Patients were randomized to one of two groups: 1) local anesthetic was injected with barbotage through a cranially directed needle orifice, then patients were immediately turned to supine (Conventional, n = 60); 2) local anesthetic was injected without barbotage with the needle orifice turned toward the dependent side, then the lateral position was maintained for 15 min (Unilateral, n = 60). A blind observer recorded noninvasive hemodynamic variables, as well as loss of cold and pinprick sensation and motor block on both operated and nonoperated sides.
RESULTS: The results are described in the following table.

	Unilateral	Conventional	P value
Clinical hypotension	3 (5%)	13 (22.4%)	<0.01
Clinical bradycardia	4 (6.7%)	5 (8.6%)	n.s.
Max senso-rylevelon dep. side	T9 (T12−T2)	T9 (T12−T3)	<0.0001
Max sensory level on non dep. side	L4 (/−T2)*	T9 (T12−T3)	<0.0001
Time max sensory level on dep. side	22 ± 8	18 ± 7	<0.05
Time max sensory level on non dep. side	25 ± 9	18 ± 7	<0.001
Regression of sensory by two segments	67 ± 19	60 ± 17	0.05
Regression of motor by one degree	120 ± 29	99 ± 28	<0.01

The incidence of hypotension (SAP decrease $> 30\%$ from baseline).
* $P < 0.0005$ differenze significant tra lato chirurgico e non

CONCLUSIONS: Achieving an asymmetrical distribution of spinal block by injecting a small dose of 0.5% hyperbaric bupivacaine through a Whitacre spinal needle into patients placed in the lateral position for 15 min reduces the incidence of hypotension during spinal anesthesia. This minimal-effect is a success during day hospital surgery

Percutaneous sclerotheraphy of cystic lymphatic malformations: a case of a large retroperitoneal localization

M Cajozzo[a], MP Mazzotta[a], G Greco[a], F Lupo[a], F Quatra[b], L Mandalà[a], P Bazan[a]

[a]*Department of Surgical, Anatomic and Oncologic Subjects, Section of General Oncologic and Thoracic Surgery (Chief: Prof P. Bazan), University of Palermo,* [b]*Division of Plastic Reconstructive Surgery (Chief: Prof. U. Colonna), University of Messina, Italy*

INTRODUCTION: Cystic Lymphatic Malformations (CLMs) are uncommon lesions that exhibit a slow but progressive growth, with rapid increases in the size open associated with infections. CLMs are more frequently localized in the head and neck ($> 75\%$) or in the limbs; by far less common is the abdominal and retroperitoneal localization leading to compression of the bowel, the major vessels and the urethers.
METHODS: A 31 year old woman twice operated for a large Retroperitoneal CLM (1982, 1997) was referred for the persistence of abdominal pain and subocclusive episodes. A sclerosing treatment with Tetracycline was performed on a residual large cystic lesion (diameter: 15 cm) situated in the epimesogastric region, after thoroughly emptying the cavity (500 ml of dark corpuscolated fluid). The patient was discharged from the hospital the same day without complications.
RESULTS: Disappearance of the symptoms, no complications, patient currently free of recurrences.
CONCLUSIONS: Well established for the initial treatment of CLM in the head, neck and limbs, sclerotherapy seems to be a promising tool also in the less common and less studied retroperitoneal localization of CLM. Sclerotherapy is a valid complement of surgical treatment, the latter being affected by frequent recurrences.

Regional block anesthesia in ambulatory oncologic surgery of the external ear: safe, handy and oncologically appropriate

M Colonna, F Quatra

Division of Plastic Reconstructive Surgery (Chief: Prof. U. Colonna), University of Messina, Italy

INTRODUCTION: External ear tumors (squamous or basal cells carcinoma and others) are frequently referred to our institution. Their treatment is both an oncologic and reconstructive challenge.
METHODS: The protocol of treatment for external ear tumors currently used at our institution is presented and the technique of anesthesia is described and discussed.
RESULTS: No local recurrences. No major complications. No dissemination of the tumor either clinically or radiologically proven subsequent to the operation.
CONCLUSIONS: Regional block anesthesia is oncologically superior to a perilesional infiltration, allowing the possibility of enlargement of the planned resection (including major amputation of the ear). General anesthesia is usually required only if a cervical node dissection is indicated or die mastoid is involved and is relatively sate.

Ambulatory surgery of anal fissure

F Sias, S Licheri

Villa S. Rita Day Surgery, Cagliari, Italy

INTRODUCTION: Anal fissure is a common very painful problem that causes significant morbidity. Medical treatment is mainly ineffective, except for local application of gliceryl trinitrate, still in experimental studies. Lateral internal sphinterotomy is a firmly established method for treating anal fissure. This procedure causes the reduction of anal resting pressure with immediate pain relief, and healing of the fissure in 2–4 weeks. It is possible to perform the operation on outpatient basis, using a modification of typical Notaras technique. With the patient in Sims position, we make a topical anaesthesia of the fissure with a lidocaine ointment or gel.
METHODS: Using a fine needle (27G) an anaesthetic solution of 2% lidocaine in 1:200,000 epinephrine is injected only in the left anal verge into the submucosal and intersphinteric space; a vial for odontological use containing only 1.8 ml of anaesthetic solution is sufficient. Under digital control we perform the sphinterotomy inserting into the intersphinteric space a Graefe knife for ophthalmologic use with disposable blades, dividing a measured height of internal sphincter fibres (the height of the fissure) and taking care not to penetrate the medial skin surface of the anal canal. Digital pressure is then applied to complete sphinterotomy and maintained for 3 minutes to ensure hemostasis. The full complete procedure's duration is 15 minutes, the mobilization is immediate and the patient goes home after another 15 minutes.
RESULTS: A total of 492 patients underwent ambulatory sphinterotomy between 1982 and 1998 with complete healing of the fissure in all patients. In 3 patients it was necessary to perform a second ambulatory sphinterotomy 1 month later, due to the persistence of pain. The complications include hemorrhage in 2 patients, spontaneously resolved, and infection with following fistula in ano treated with ambulatory fistulectomy. One of these is the only patient who had imperfect control of flatus.
CONCLUSION: These proposed skills make internal sphinterotomy an easy feasible procedure in outpatient surgery.

Surgical therapy of lower limb varices in day surgery clinic experience on two compared protocols

S Magagnotto, B Zanella, F Sordo, P Gazzani, G Aguzzi, S Riggio

Unità Operativa di Day Surgery—Nogara ULSS 21 Via Gianella, 1 Legnago, Verona, Italy

INTRODUCTION: In the period from 1/11/97 up to 30/7/98 c/o the Day Surgery Service of the O.C. of Nogara (ASL 21, Legnago Verona, Italy) a comparative study was carried out on 200 patients, subdivided in two groups of 100 each. All the patients were surgically treated for primitive varices of the lower limbs by long stripping of the big saphena vein and ligature of the perforating veins with eco-doppler guide.
METHODS AND RESULTS: All the patients, belonging to classes ASA 1 and 2, were enlisted without further exclusion criterion. For the 1st group of 100 patients the protocol foresaw: spinal anaesthesia; traditional surgical cuts with cutaneous sutures of the crural injuries, of the peri-malleolar ones and the ligature areas of the perforating veins, with stitches removal after 8 days; limb compression by an elastic bandage during 8 days and subsequent compression by an elastic stocking for the subsequent 33 days. For the 2nd group of 100 patient the protocol foresaw: local anaesthesia plus sedation during the stripping; limited surgical cuts and micro-cuts for the ligature of the perforating veins; suture of the crural injuries and of the peri-malleolar ones by means of the intradermal technique with reabsorbing materials; suture of the micro-cuts with steril-streep; compressive elastic stocking when dismissing for 30 days. The analysis was executed on: average intervention times calculated from the anaesthesia up to the operating room exit; deambulation and urination restore times; pain in the immediate post-operative etc.
CONCLUSIONS: The analysis of the obtained data widely confirms, both from the surgical, anaesthesiological and from the personal patient point of view, the validity of the treatment in local anaesthesia with sedation, connected with the micro-injuries, the intradermal sutures with steril-steep and the immediate use of the elastic stocking (monocollant) when dismissing.

A surgical dermatology unit in a day-surgery context: an experience, results and methods

V Mazzaglia, S Magagnotto, S Riggio, G Aguzzi

Unità Operativa di Day Surgery—Nogara ULSS 21 Legnago via Gianella, 1 Legnago, Verona, Italy

INTRODUCTION: Among the different organisational models of Day-Surgery described in the recent literature and formally proposed by the Veneto Region in Italy to the health services in its area of influence, the Hospitals' Network of the Azienda Sanitaria di Legnago N°21 (Legnago Local Health System) has identified the U:D:D:M: (Day-Surgery Independent Unit) as the more suitable model. This Unit is exclusively dedicated to day-time surgical treatment of minor cases. This approach decreases the workload in the departments of surgery of higher level and guarantees wider beds availability for pathologies of higher severity index. In line with this strategy, in Legnago's experience the Day-Surgery Unit, which is a multidisciplinary structure, includes among others a Surgical Dermatology subunit, headed by a dermatologist with proved experience as a surgeon, which electively deals with all of a bulk of different minor surgical procedures and meets the high public demand overlooked by higher level structures.
METHODS AND RESULTS: The data and results presented in this study are related to an experience conducted from November 15 1997 and October 10 1998. Pathologies, surgical and physical examination procedures, intervention methods, post-operatory monitoring and follow-up techniques are described, including a pros-and-cons analysis.
CONCLUSIONS: The study provides concrete recommendations on strategies addressed to the continuous improvement of health services performances by showing the advantages of 'equipping' a Day Surgery Unit with a Surgical Dermatology subunit. In the authors' experience this is a precious challenge on the road of curative services remodelling.

Outpatient hemorrhoidectomy: our experience

M Mistrangelo, P Capuzzi, M Caldart, D Labriola, S Ghiougi, F Corno

I Surgical Clinic, University of Turin, Italy

INTRODUCTION: Hemorrhoids are the most frequent disease seen in a coloproctological department. Etiology is still debated, but many factors are advocated in their development. Major symptoms are bleeding (bright red), prolapse of rectal mucosa and pain (specially in complicated hemorrhoids). These frequently occur at the end of defecation. We suggest that only symptomatic hemorrhoids should be treated. Treatment should be conservative or surgical and in our experience is guided by the worldwide accepted classification based on 4 degrees: I degree includes internal nodes; II degree internal hemorrhoids that protrude at the time of bowel movement but reduce spontaneously; III degree when hemorrhoidal protrusion requires manual replacement; and finally IV degree when hemorrhoidal prolapse is irreducible despite attempts at manual replacement. In I and II degrees conservative treatment or procedures like rubber band ligation, infrared photocoagulation sclerotherapy, cryotherapy are suggested; while in IV and advanced III degrees surgical treatment is advocated. Surgery is the more radical treatment and presents a low incidence of recurrence. Many techniques are proposed: closed hemorrhoidectomy like Ferguson, Whitehead, Parks, and open hemorrhoidectomy like Milligan–Morgan and Arnous. Economic policy and a long waiting list induced our department to perform an office hemorroidectomy.
PATIENTS AND METHODS: At the I Surgical Clinic, University of Turin, from January 1989 to August 1998 2194 patients suffering from hemorrhoids visited. Of these 1403 (63.9%) were treated with conservative therapy or with minor operative procedures; while 791 (36.1%) were treated surgically: 333 pt. (42%) were submitted to surgery in operating room, while 458 pt. (58%) were treated as an outpatient procedure. We performed Milligan–Morgan technique in almost all patients. All patients treated in the office were submitted to a Milligan–Morgan procedure under local anesthesia. Lidocaine 2% was the anesthetic of choice in the 87% of pt. and more rarely was Marcaine or Bupivacaine used. The injection of anesthetic was performed in intersphincteric space and subcutaneously. All patients were located in left lateral position. Outpatient treatment was excluded in patients affected by psychiatric diseases, coagulopathy, major disorders of heart, kidney, liver, lung, metabolic disorders, obesity and those with referred episodes of allergy to local anesthetics.
RESULTS: Complications occurring are hemorragy (6 pt.), urinary retention (2 pt.) and abscesses (1 pt.). Healing in all patients occurred within 3–4 weeks after surgery. Postoperative pain was treated with oral or i.m. analgesics.
CONCLUSIONS: Finally we suggest outpatient hemorrhoidectomy as the gold standard in treating hemorrhoids, considering its radicality (equal to that of operating room) and the same frequency of complications with a reduction of costs.

Day and one-day surgery in varicose veins disease in geriatric population

P Aurello[a], F D'Angelo[a], C Cicchini[a], GF Testa[b], V Borzomati[b]

[a]*Geriatric Surgery Service (First Department of Surgery) and* [b]*Department of Anesthesiology, University of Rome 'La Sapienza', Italy*

Day and one-day surgery is assuming a position of rising value in the current health politics of cost containment. The aim of the present study is to evaluate the safety and the acceptance of this type of surgery in elderly patients affected by varicose veins disease. Our study covers the period from January 1995 to October 1998. One hundred and forty-five patients aged above 65 years underwent ambulatory or 'one-day' surgery in general surgery setting. Twenty-two (15.2%) out of these patients were considered suitable for varicose veins of lower limbs surgery under local anesthesia plus sedation. All patients were ASA I and II. The procedures were 8 strippings of greater saphenous, 4 crossectomies, and, finally, 10 phlebectomy according to Muller and division of incompetent perforator veins. The anesthesia was performed under local infiltration, using mepivacaine 2% (doses less than 6–7 mg/kg) for crossectomy and further incisions combined, at the moment of the stripping, with a bolus of propofol (70–100 mg i.v.) for some minute of hypnosis. No complications were registered. All patients were discharged after 2–24 hours from surgery; none necessitated admission to hospital. Our study showed that the surgery of varicose veins under local anesthesia in old age is safe and gratifying for patients.

Intraoperative catheter echophlebosclerotherapy instead of stripping of the varicose veins (10 years experience in CAS RAS)

GD Konstantinova, TV Alekperova, ED Donskaya

Center of Ambulatory of Medical Division Russian Academy of Science, Russia

INTRODUCTION: The intraoperative catheter echophlebosclerotherapy (ICE) is method of choice in the treatment of varicose vein in one-day surgery.
MATERIAL AND METHODS: During last 10 years in CAS RAS 1070 patients have got surgical treatment of varicose veins which consist of crossectomy, ligation of perforating veins, catheterisation of short or long safenous veins with injection of 1–2% Aethoxysclerol under permanent compression. The diagnostic, pre-, intra- and postoperative control was performed by ultrasound method (Mikrodop, France; Panther2002, B&K Medical).
RESULTS: Varicose vein disease was successfully treated in all cases. There were no complications during operation and in postoperative period, there was absence of safenous nerve injury. Skin hyperpigmentation after injection of Aethoxysclerol disappeared during the first year. Small sections and intracutaneous sutures obtain high cosmetic effect. Duplex scanning control showed absence of blood flow in veins.
CONCLUSION: ICE is an alternative for the stripping of varicose veins due to low traumaticity and safety surgery. Ten years experience allows us to recommend ICE for surgical treatment of varicose vein disease in one-day surgery.

Duplex power phlebography (DPP) in ambulatory practice of phlebology

TV Alekperova, GD Konstantinova, ED Donskaya, ID Dvorina

Center of Ambulatory Surgery of Medical Division Russian Academy of Science, Russia

INTRODUCTION: We wish to show the necessity and efficiency of duplex power phlebography (DPP) in diagnosis and treatment of varicose veins in one-day surgery.
MATERIAL AND METHODS: There was developed simple and mini-invasive method (sclerosurgery—SS) for outpatient treatment of primary varicoses. Diagnosis of disease was carried out by means of duplex power scanning (B&K Medical, Panther-2002) with 7–8 MHz transducers sensitive for low velocity of blood flow. The operated limbs were evaluated by DPP in all stages of treatment: preoperative mapping, intraoperative visualisation and postoperative dynamic control. We performed 690 DPP in 230 patients in CAS RAS.
RESULTS: The preoperative DPP allows (a) to diagnose pathogenic mechanisms of varicosity, (b) to detect anatomical variations of incompetent perforants and junctions, (c) to make the cartography of the reflux-mode of primary varicoses. Intraoperative step ensures visualisation of catheter moving and controls sclerosant introduction in superficial venous system. Postoperative dynamic control evaluates the quality of surgical manipulations and superficial vein obliteration.

CONCLUSION: Our data indicate that DPP is an efficient and accurate method for depicting pathogenic mechanisms of varicose veins disease and should be used in routine practice of phlebology. Together with mini-invasive surgical and sclerotherapy treatment, it ensures radical and aesthetic facilitation of superficial venous insufficiency on an outpatient basis.

Use of remifentanil in ambulatory dental surgery: pre-emptive analgesia with oxicam and propacetamol. Is it sufficient?

C Plasman, O Detriche, J Massaut

Brugmann Hospital, Brussels, Belgium

INTRODUCTION: Remifentanil is a new analgesic with rapid onset, short action, which provides an excellent peroperative analgesia, and a rapid and good quality recovery without respiratory depression. It can be of value in ambulatory anesthesia provided we realize a pre-emptive analgesia for the postoperative pain.
METHODS: We study 30 patients, ASA1, operated in the one day surgery department, for impacted tooth extraction. The patients receive preoperatively 40 mg of tenoxicam IV or 40 mg oral piroxicam. At induction, we give a bolus remifentanil 1 y/kg. Anesthesia was maintained with 0.25 ykg/min remifentanil, sevoflurane 0.7% in a mixture 33% O_2/66% N_2O till the end of the operation. Propacetamol 30 mg/kg is perfused peroperatively. We measure the delay between the end of perfusion and spontaneous respiration, delay and quality of recovery and pain degree (visual score), need for supplementary analgesia, the rate of postoperative nausea and vomiting and time to discharge.
RESULTS AND CONCLUSION: still in analysis.

Cost benefit analysis of the use of *ondansetron* following ambulatory surgery

A Majeed, J Coles, S Hull, WL Rowe

Norfolk and Norwich Hospital, Norwich, UK

Post operative nausea and vomiting (PONV) is a common cause of unplanned admission following ambulatory surgery. Unplanned admission place an expensive burden on the admitting unit. We have studied the cost benefit of using ondansetron to reduce the rate of unplanned admission following ambulatory surgery.
METHODS: Causes of unplanned admission were recorded over a two year period. At the start of year two a protocol including the use of ondansetron 4 mg IV was introduced and its effectiveness monitored every time the drug was used. The number of admission due to PONV during year two was compared to the previous year.
RESULTS: Thirty-four patients received ondansetron following which 4 (11.7%) patients had to be admitted due to persisting PONV. During the previous year 62 patients were admitted due to PONV.
DISCUSSION: Ondansetron 4 mg IV was effective in 88.3% patients with severe PONV not controlled by other antiemetics. Estimated savings following the first 7 months of invoicing ondansetron were £7,720 ($12,430); the return an investment was 3.364%.

Augmentation mammaplasty in ambulatory surgery.

JP Van Geertruyden, L Close, J Duchateau, S de Fontaine

Department of Plastic Surgery, University Hospital Erasme, Brussels, Belgium

INTRODUCTION: The last 70 consecutive cases of augmentation mammaplasty performed in our department were reviewed considering the operations in ambulatory surgery.
MATERIAL AND METHODS: Twenty-five of the 70 cases (36%) were performed in ambulatory surgery. Most of the others cases had associated procedure justifying hospitalisation and 3 patients asked for hospitalisation. The mean age was 32.5 years with range from 24 to 47. All patients were operated in a semisitting position. Drains were left in the undermining space after the operation.
RESULTS: One patient had a periareolar approach and all the others were in the inframammary fold. Twenty of 25 patients had the prosthesis placed in pre-pectoral position and five in retro-pectoral. The mean operative time was 72 minutes (pre-pectoral: 67minutes, retro-pectoral: 91 minutes). Two patients (8%) were admitted into the hospital for 24 hours following surgery, one because of reoperation for haematoma (implant in retro-pectoral position) and one because of important nausea. None of the patients had complication related to the ambulatory procedure. Drains were left in place until patients were discharged except for one who kept her drain home until the next day.
CONCLUSION: Augmentation mammaplasty is a safe procedure for ambulatory surgery, even when the implants are placed in retro-pectoral position. The benefit for the patients in terms of comfort and cost is noticeable, especially for an aesthetic procedure.

Should aspirin be discontinued before spinal anesthesia? A case report

W King-Chuen, W Rick Sai-Chuen

Department of Anesthesiology, Chang-Gung Memorial Hospital, Taipei, ROC Taiwan

HISTORY: A 33 year old woman had her right toes amputated in an accident and replantation microsurgery was performed. Postoperative medication included intravenous heparin 200 IU/hr and aspirin 300 mg/qd. Graft failure was noticed 10 days later. Heparin was discontinued 30 hrs before she was sent to the operating room to remove the failed graft. Spinal anesthesia was performed with bupivacaine 15 mg using a 25-gauge spinal needle. The anesthesia and surgery were uneventful. Unfortunately, progressive low back pain was found in the following 2 days. A subarachnoid hematoma extended from T12–L1 was diagnosed. Surgical removal of the hematoma was then performed.
DISCUSSIONS: Spinal anesthesia induced subarachnoid hemorrhage is a rare complication. In this case, heparin was not likely the precipitating factor as sufficient time allows adequate heparin metabolization before performing spinal anesthesia. Aspirin has an inhibition effect on platelet cyclooxygenase which lasts for 7–10 days; that makes it the most possible precipitating factor for this complication. Although recent aspirin consumption is not a contraindication, a 7 days discontinuance period of the drug is recommended before performing spinal anesthesia.

Day case anterior cruciate ligament reconstruction with a femoral nerve block for post-operative analgesia

MJ Curtis, G Samsoon, NHP Morgan, DL Clark

Kingston Hosp. Day Surgery Unit, Kingston upon Thames, Surrey KT2 7QB, UK

Reconstruction of the anterior cruciate ligament (ACL) is increasingly advocated as a Day Case procedure (1); we have previously presented a prospective evaluation of the femoral nerve block (FNB) for analgesia after arthroscopic knee surgery(2) and we now report a preliminary evaluation of the first 20 arthroscopically assisted ACL reconstructions at our institution using the same anaesthetic techniques.
PATIENTS: Eighteen males, 2 females, mean age 26.8 years (range 19–37 years), ASA I & II, underwent ACL reconstruction with a single-incision arthroscopically assisted technique, fixing Semitendinosus/Gracilis autografts proximally with an EndoButton (Acufex, Mansfield, MA) and distally with staples (Richards, Memphis, TN). Procedures were performed under general anaesthesia with FNB administered by a consultant anaesthetist with the aid of a nerve stimulator. Diclofenac 100 mg PR was given pre-operatively, and Diclofenac 50 mg tds with CoDydramol prn post-operatively. Pain scores were recorded using a visual analogue scale recorded at 1 and 4 hours after operation in the Day Surgery Unit and at 12 and 24 hours at home.

RESULTS: Nineteen of the 20 patients reported adequate analgesia with pain scores of 3/10 or less, 1 required two doses of intra muscular pethidine for post operative pain and was admitted overnight. Two further patients were admitted for post-operative nausea and vertigo treated by bed rest and observation, thought to be related to continuous infusion of Propofol. Eighteen of 20 patients were satisfied with use of this technique for ACL reconstruction. The mean duration of analgesia with the FNB was 36 hours and patients reported no difficulty with partial weightbearing braced in extension during the immediate recovery phase.
CONCLUSION: From the high patient satisfaction and low rate of complications we conclude that Day Case ACL reconstruction with FNB is a safe and well tolerated procedure (many patients report less discomfort than after previous arthroscopic meniscectomy with the use of intra articular Bupivicaine).

Galeazzi stabilisation of the patella—a modified technique for ambulatory surgery

MJ Curtis, N Morgan, G Samsoon, J Goodden

Kingston Hospital Day Surgery Unit, *Kingston upon Thames*, *Surrey*, *UK*

Ambulatory surgery of varicose veins of the lower limb performed in local anaesthesia

T Bonnesen, JH Petersen

Aabenraa County Hospital, *6200 Aabenraa DK*, *Denmark*

INTRODUCTION: A prospective study, including 110 consecutive patients undergoing surgery of varicose veins in the lower limb through minor incisions, in order to preserve the saphenous vein.
METHOD: The patients were admitted fasting to the ward. Surgery was performed in local anaesthesia. The varicose veins were extracted through minor incisions, max width 4 mm, with Oesch hook. The incisions were closed with suture strips, and a firm bandage was applied. At three months postoperatively control a questionnaire was fulfilled, concerning peroperative pain, satisfactory with functional and cosmetic results, desire for L.A. in case of new surgery and complications.
RESULTS: One hundred and six patientsd fulfilled the questionnaire. Seventy-one ligatures of the Saphenofemoral junction and its attributes, 10 ligatures of the Saphenopopliteal junction and 83 local resections were performed. Thirteen patients had peroperatively pains of which 12 expressed desire for L.A. in case of new surgery. Four patients had postoperative minor bleedings and 2 patients had superficial infections. One hundred and two patients were satisfied with the functional results. On a rating scale 1–10 the mean value for satisfactory with the cosmetic results were 8.4, range 3–10.
CONCLUSION: The method is safe, effective and gentle, and can be recommended for ambulatory surgery.

Groin hernia repair with polypropilene mesh (Nyhus approach) in ambulatory surgery

C Vicens, C Semeraro, JM Fort, R Perez, E Viteri, P Cabre, C Alerany

Clinica Quirúrgica Adrià, *Hospitals Vall d'Hebrón*, *Barcelona*, *Spain*

INTRODUCTION: We reviewed all patients who underwent the preperitoneal surgical approach for groin hernia repair, and a 1 year follow-up the last 4 years (1994–1997).
METHODS: In a total of 400 patients with both unilateral (80%) and bilateral (20%) hernias, 95.1% were found in men and 4.9% in women. Mean age of patients was 58 ± 13 years. Regarding daily activity: 29.3% were active, 34.4% were sedentary and 29.3% undertook strong activity. Eighty-seven percent had primary hernias and 13% had recurrent hernias. Classification following ASA was: 37.0% ASA I, 40.3% ASA II and 2.7% ASA III. Surgical procedures lasted 51 ± 18 minutes including bilateral and recurrent hernias. All patients were given antibiotic prophylaxis before the operation. We studied number of analgesics needed while in hospital and at home, pain, when they resumed normal activity, complication and relapses with a follow-up at 1,6 and 12 month post-opt.
RESULTS: Hospital stay was under 1 day in 74.4% of cases. Ninety-seven percent had none to moderate pain. While in the hospital, 24% needed no analgesics, 40.5% 1–4 doses and 11.4% more than 4 doses. At home 7.8% took no analgesics, 15.4% took 1–4 doses and 12.3% more than 4 doses. Normal daily activities were returned at 3.1 ± 2.3 days, 78.7% had no complications, 1.6% abscess, 4% had hematomas and 7% had seromas, ranging from slight to those needing aspiration or drainage. We had 2 (0.6%) relapses, one an underdiagnosed femoral hernia.
CONCLUSIONS: The groin hernia repair with polypropilene mesh by Nyhus approach is a good technique for ambulatory surgery and short stay surgery programs because of simplicity, safety, comfort for the patient and good results to short and medium term.

Surgical matrisectomy to correct ingrowing toe nail

J Mooney, RG McCoshim

The London Foot Hospital, *33 Fitzroy Square*, *London*, *W 1P 6AY*, *UK*

INTRODUCTION: We present a new surgical technique to correct onychocryptosis (O/C; ingrown toe nail). O/C is a common cause of foot pain and infection, particularly in teenagers and young adults, and can be difficult to treat in 'at risk' patients, such as those with diabetes mellitus or AIDS. The most common correctional technique for O/C involves chemical cauterisation of the exposed matrix after avulsion of the outer plate segment, under local anaesthetic (LA). That procedure requires the use of a digital tourniquet, has a prolonged healing time (4–6 weeks), and a 3–7% nail regrowth rate. The new technique is suitable for the majority of patients, including those classified as having an 'at risk' status.
METHOD: We report a series of 56 out-patients with O/C of the great toe (a total of 97 affected sulci). The procedure: dissection of the affected nail fold unit (the matrix pocket, nail bed and nail sulcus), via a 'hockey stick' incision through the eponychium and nail bed, after avulsion of the outer segment of the nail plate, under LA. All wounds received the same standard closure, dressings and after-care regime.
RESULTS: Mean follow-up period: 14 months (range 5–24 months); mean healing time: 10 days (range 5–14); regrowth/failure: 1 segment ($1/97 = 1.03\%$); post-operative infections: none; reported post-operative discomfort: minimal/none; cosmetic appearance after healing: excellent.
CONCLUSION: The new surgical technique to correct O/C has a greater success rate than chemical cautery, in terms of regrowth, time to healing, post-operative complications and appearance. We propose that it is the procedure of choice for all patients, including those classified as 'at risk'.

Reduced resource utilization in otologic ambulatory anesthesia

K Feddersen

Dep. of Anesthesia, *Fyns Hospital*, *South Center*, *5700 Svendborg*, *Denmark*

INTRODUCTION: Surgical procedures in out-patient units are more cost effective compared to in-hospital treatment. A main factor in economic calculations is the time used in the OR and a study of time usage was therefore conducted. Registration of time spent in the OR is standard procedure in our hospital.
MATERIAL: A retrospective study of all patients from 01/1995 through 06/1998 admitted for tonsillectomy ($n = 148$) and correction of nasal septum ($n = 88$).

RESULTS: Time required for in-hospital treatment was 75 (n = 175) and 105 (n = 40) minutes retrospectively. For out-patients the time requirement decreased through the years 1995–1998 for tonsillectomies from 63.5, 57.9, 52.0 to 46.2 min and for nasal septum corrections from 92.5, 94.2, 89.5 to 80.7 min. Time needed for surgery ('knife'-time) was almost constant, approx. 25 min for tonsillectomies and 55 min for septum corrections, in both situations: in-hospital and ambulatory treatment. The stepwise decrease is therefore linked to the anesthetic procedure, i.e. pre-surgery preparation and post-surgery extubation and wakening.
CONCLUSION: The integrated staff in the ambulatory unit has, over the years, reduced the OR procedure for 2 different otologic operations by 27% and 13%. The reduction in time used is therefore an economic improvement: compared to in-hospital treatment it is 38% or 29 min for tonsillectomies and 23% or 24 min for nasal septum corrections. Ambulatory surgery is advantageous not only for medical reasons but it also improves cost-effectiveness.

Modification of the thenar flap—a case report

J Wu[a], C-H Lin[a], F-C Wei[b]

[a]*Division of Trauma & Emergency Surgery*, [b]*Department of Plastic & Rec. Surgery*, *Chang Gung Memorial Hospital*, *Taipei*, *Taiwan*

INTRODUCTION: The coverage of the circumferentially degloved distal phalanx of the digit is rather difficult, since they include both volar and dorsal defects which may not be easily covered both sides at one time by the ordinary local flaps beside wrap around toe-to-hand transfer. A modified thenar flap was designed for the purpose.
METHOD: The volar and dorsal distal phalangeal defect can be 'wrapped around' with a modified thenar flap whose base was sloped away from the traditional horizontal base; further details will be presented.
RESULT: After division, the whole defect was well resurfaced with normal contour and the donor site was uneventful.
DISCUSSION: In the traditional thenar flap, kinking may easily occur over their horizontal base both distally or proximally; this may result in partial or even total loss of the flap. Also the donor site may always be left with raw surface which makes the self-home care more inconvenient as an ambulatory surgery. Besides providing coverage of a circuferential defect of a distal phalanx, this modified thenar flap can also avoid kinking of the base, and may leave the donor site closed primarily. All these make the ambulatory surgery much more safe and easy for self-wound care.

Increasing effectivity of ambulatory treatment of infected wounds by using CO_2 laser

VV Grubnik, OV Osipenko, YV Grubnik, P Sharma

Odessa State Medical University, *Dept. of Surgery*, *Odessa*, *Ukraine*

High incidence of infected-inflamed wounds in Ukraine requires adequate and effective treatment and is considered to be an important aspect of ambulatory surgery. We hereby analyse our experience of ambulatory treatment of 1130 patients with different infected wounds: 495 patients for infected post-operative wounds, 287 for abscesses, 102 for fascitis, 126 for mastitis, 120 for diabetic infected wounds of the toe, ankle and knee. Four hundred and thirty-five patients were treated by standard methods and 695 by CO_2 laser. After the laser beam application high sterility of the wounds was obtained which allowed to apply secondary stitches. In the group of patients with use of laser the duration of treatment decreased 2.7 times and the expenses on transportation and medication by 2.3 times.
CONCLUSION: CO_2 laser is effective as mode of treatment and in aspects of ecology in management of infected wounds in ambulatory surgery.

The first experience of ambulatory hernia repair in Ukraine

VV Grubnik, NR Bayazitov, P Sharma, R Parfentev

Odessa State Medical University, *Odessa*, *Ukraine*

The experience of introducing laparoscopic hernia repair in ambulatory surgery in Ukraine is analysed. Twenty-eight patients with inguinal hernia were operated laparoscopically for repair by intraperitoneal approach. The patients were discharged on the next day. Extensive pain was recorded in 15 cases. Intraperitoneal complications were observed in 2 cases, wound infection in 3 out of 28 patients, 2 were not satisfied by early discharge from the hospital. Forty-nine patients were operated by preperitoneal approach. Balloon dissection was used to develop the preperitoneal space without entering the abdominal cavity. No complications were observed. Pain was minimal. Forty-eight patients were discharged on the evening of the operation and early morning next day. The introduction of preperitoneal laparoscopic hernia repair for uncomplicated inguinal hernias is feasible in ambulatory surgery.

Local anaesthesia by infiltration in ambulatory surgery for Shouldice inguinal hernia repair, from 2% lidocaine to 0.75% ropivacaine, on 1500 patients

M Bordarier[a], Ph Legroux[a], S de Mortillet[a], F Demont[b]

[a]*General Hospital*, *Beziers*, [b]*General Hospital*, *Tours*, *France*

INTRODUCTION: The objective is to perform ambulatory surgery for Shouldice inguinal hernia repair after pre-operative local anaesthesia by infiltration using 0.75% ropivacaine 40 ml (300 mg) in order to study time required for installation of anaesthesia and duration of analgesia. Comparison with previous anaesthetic procedures using 2% lidocaine, then 0.25% marcaine on 1500 patients.
METHODS: Seventy patients, average age 63 (16–90), ASA 1, 2 or 3. *Local anaesthesia*: preparation of the patient: ice bags on inguinal area 20 minutes before operation; I.V. catheter; monitoring: scope, TA, sao2; location of 3 injection points; light I.V. sedative using 0.02–0.03 mg/kg midazolam $\pm$ 0.5–0.6 μg/kg fentanyl. *Materials used*: 23 G rachidian needle; 0.75% ropivacaine 40 ml (300 mg); betadine for skin disinfection. Subcutaneous tissue and muscle layers are directly infiltrated in 3 points: external edge of horizontal incision (innerside of femoral artery); spine of pubic bone; external orifice of inguinal canal. *Surgical operation*: for the 45 minutes average duration of operation, no I.V. adjuvant anaesthetic is necessary. Time between infiltration and incision is noted down, allowing to appreciate rapidity of action. Quality of analgesia is estimated during the per-operative period (on surgeon's and patient's request, 2% lidocaine possible supplement) whereas its duration and post-operative comfort are assessed using a questionnaire given to the patients when leaving hospital. *Post-operative protocol*: ice bags on inguinal area to be frequently renewed; immediate walking recommended; systematic oral analgesia (paracetamol).
RESULTS: *Of local anaesthesia using ropivacaine*: time required for installation, 10 minutes per-operative anaesthesia, 90% full, 10% lidocaine supplemented-post operative analgesia: 10 hours minimum (20%), from 10 to 24 hours (40%), more than 24 hours (26%), total (14%)-adherence to the technique: 100%. Comparison with lidocaine/bupivacaine protocols:

	2% lidocaine	0.25% bupivacaine	0.75% ropivacaine
Total dose (mg)	837.5 ± 111.1	100.75 ± 22.6	300
Time for installation	5 minutes	15 minutes	10 minutes
Maximal plasmatic concentration (μg/ml)	2.86 at T30	0.28 at T60	
Toxic doses (μg/ml)	4	1.6	
Duration of analgesia	1 hour	6 hours	10–24 hours

CONCLUSION: The rapidity of installation of analgesia, its long-lasting effect and the absence of toxicity at doses used provide high quality to ambulatory surgery for Shouldice inguinal hernia repair under local anaesthesia.

Preincisional ketamine: does it reduce postoperative pain in ambulatory gynecological procedures?

M Imran, J Holtz, P Siegel

Henry Ford Health System, Detroit, MI, USA

INTRODUCTION: Successful ambulatory surgery requires anesthetic techniques that reduce patient's postoperative pain. Preemptive analgesia can decrease pain and facilitate recovery. Ketamine is a noncompetitive N-Methyl-D-Aspartate [NMDA] antagonist with analgesic properties. Surgical trauma induces NMDA receptor activation, which results in hyperalgesia. We studied whether preincisional ketamine reduces postoperative discomfort and postoperative requirements for analgesics.
METHODS: A randomized, double-blinded study was conducted with 34 women, ASA status I & II, having elective laparoscopic tubal ligation. A standardized general anesthetic was conducted with fentanyl, propofol, cisatracurium; nitrous oxide and oxygen. Prior to incision patients received ketamine 0.15 mg/kg intravenously (study), or saline (control). Postoperative pain was measured with Visual Analogue Scores (VAS) and additional analgesic requirement documented.
RESULTS: Preincisional ketamine group reported significantly lower VAS upon admission to the Post Anesthesia Care Unit (PACU) ($P < 0.03$). These differences in VAS were present upon admission to the PACU, and for the following two hours. The saline group had greater analgesic requirement during PACU stay ($P < 0.05$).
CONCLUSIONS: Preincisional ketamine improves postoperative discomfort after general anesthesia for ambulatory gynecological procedures.

Comparative study of recovery characteristics of sevoflurane versus propofol anesthesia in outpatient anesthesia

F Bustos, J Porro, I Paredes, A Pérez-Fariña, A Cortes, R Gutierrez-Romero

Unidad de Cirugía Mayor Ambulatoria, Toledo, Spain

OBJECTIVE: To compare in a prospective and randomized study, the recovery profiles after general anesthesia with sevoflurane/nitrous oxide to a intravenous anesthetic technique with propofol in adult ASA I, II or III patients undergoing ambulatory surgery.
METHODS: Forty healthy patients were randomly divided into two groups. Anesthesia in sevoflurane group was induced with sevoflurane by an end-tidal concentration of 6–8% and was maintained between 1–1.5% with N_2O 65%. Intravenous anesthesia was induced with propofol (diprifusor) at target blood propofol concentration of 4–6 μg/ml and was maintained between 2–3 μg/ml with 65% N_2O. A laryngeal mask airway was inserted and then all patients received fentanyl and mivacurium when necessary.
RESULTS:

	Awakening (min)	Orientation time (min)	Aldrete 10 time (min)	Walking time (min)	Home readiness (min)
Propofol (n = 20)	11.7 ± 3.3	13.2 ± 3.6	16 ± 6	139 ± 40	175 ± 52
Sevoflurane (n = 20)	5.1 ± 3*	7.5 ± 3*	12 ± 5*	170 ± 55*	241 ± 64*

CONCLUSIONS: Sevoflmane anesthesia was acceptably rapid and associated with more rapid emergence; however, the propofol group patients were considered fit for discharge faster.

Ropivacaine 0.375% vs Ropivacaine 0.2% vs Lidocaine 1% for anaesthetic block field on day case pilonidal sinus

J Perez, F Malafaia, D Marques, M Almeida, P Lemos

Anaesthetics Department of Hospital Geral Santo António, Porto, Portugal

INTRODUCTION: Local anaesthesia with sedation is a good anaesthetic technique for day case pilonidal sinus, specially because this procedure is performed in the ventral decubitus position. Sometimes pilonidal sinus are larger than expected and the volume of local anaesthetic needed greater than the safest maximum dosage recommended. The new local anaesthetic ropivacaine seems to have less toxicity (cardiovascular and neurological) than others and allow in its 2 mg/ml concentration a total volume administration of l00 ml. The objective of the present study was to compare two different concentrations of ropivacaine with lidocaine 1% and to determine if ropivacaine 0.2% provides good sensory block field without related morbidity on a conscious patient.
METHODS: This prospective study included 60 patients ASA I, II and III proposed for day case pilonidal sinus. They were assigned to three groups, 20 patients each, according to local anaesthetic used: A) lidocaine 1% (< 7 mg/kg); B) ropivacaine 0.375% (< 200 mg); C) ropivacaine 0.2% (< 200 mg). All patients were sedated with alfentanyl 0.5 mg ev, and propofol 30 mg, ev, followed by an intravenous perfusion of propofol 2 mg/kg/h. Pain scores were assessed with a 10 point visual analogue scale (VAS) at discharge time, 48 h and 30 days after surgery. The 48 h pain score and other complications were assessed by a questionnaire that patients sent back to the DSU. The 30 days pain score and other complications were assessed by a phone-call. Any sign of an adverse event was recorded.
RESULTS: There was no statistical difference between the groups. No patient complained of pain greater than 4. All patients went home. None of them needed to be readmitted during the 30 days after surgery. In terms of satisfaction all patients reported levels above 7 on a 10 point numerical scale.
CONCLUSION: It seems that ropivacaine 0.2% provide good sensory block field and allow the greatest volume administration associated with low minor morbidity and high satisfaction levels.

Does dextropropexyphene makes any difference when associated to paracetamol and diclofenac for pain relief after day case circumcision?

P Lemos, F Malafaia, A Regalado, D Marques, M Almeida, A Meireles

Anaesthetics Department of Hospital Geral Santo António, Porto, Portugal

INTRODUCTION: Uncontrolled pain is one of the major causes of unplanned admission following day surgery. Strategies to manage pain efficiently are mandatory in order to increase acceptance of ambulatory surgery. The objective of the present study was to evaluate two different analgesic associations (dextropropoxyphene + paracetamol + diclofenac versus paracetamol + diclofenac) for postoperative pain relief following day case circumcision.
METHODS: This prospective, double-blind study, included 42 ASA I or II patients, that were assigned to two different groups: A (n = 22)—Algifene® (dextropropoxyphene 25 mg + paracetamol 300) plus diclofenac 50 mg, per os; B (n = 20)—paracetamol 1 g plus diclofenac 50 mg, per os. In both groups medication was given 30 min. before surgery, 45 min. after surgery and then 3 times a day, during five days. The patients were operated with a standard general anaesthesia protocol. Before the surgical incision, bupivacaine 0.25%, 5–7 ml, was infiltrated to perform a dorsal penile nerve block. Pain scores were assessed with a 10 point visual analogue scale (VAS) at 45 min., 90 min., 24 h and 48 h after the end of surgery. The 24 h and 48 h pain scores were assessed by a questionnaire that the patients sent back to the Day Surgery Unit. Any sign of an adverse event was recorded.
RESULTS: There was no statistical difference between both groups. No patient complained of pain greater than 4. All patients went home. In terms of satisfaction, 95.5% and 100% of the patients of group A and B respectively, reported their surgical experience as good or very good.
CONCLUSION: It seems that paracetamol plus diclofenac are effective enough for pain relief after day case circumcision. Low pain scores, low minor morbidity and greater satisfaction levels are key aspects for the success of ambulatory surgery programmes.

Decrease in mean stay into recovery-room of the surgery unit

R Pernas, FJ García, M Rodríguez, J Fuentes, J González, Fca López

H.U.G.E. Virgen de las Nieves, Granada, Spain

INTRODUCTION: In our hospital, the number of day-surgery patients grows everyday; most of them are classified as ASAI and ASAII, but recently ASAIII patients are been operated on. Nevertheless, the ASA classification does not decide the mean stay in the recovery room nor, the incidence of complications. On the contrary, the age of the patient, the kind and duration of surgery are the important factors for the length of stay in the recovery room.
METHODS: Retrospective and descriptive studies with 2056 patients operated on (1996–1998; two periods to compare results) were conducted. We recorded the age of the patients, the pattern of anesthesia and the mean stay in the recovery room (min).
RESULTS: In the first period, the mean age was 45.72 and in the second one, 46.30 years old. The pattern of anesthesia, in the first period, was 452 general A., 422 region A. and 139 local A. with sedation; in the second period, it was 499 general A., 403 region A. and 139 local A. with sedation. The mean stay in the recovery room was 74.23 min for the first period and 67.93 min for the second one.
CONCLUSION: In both periods the same anaesthetics and analgesics were used. We found that drugs nor mean age contributed to a decrease in the mean stay in the recovery room. We conclude that the decrease in mean stay is attributed to the specialized personal in our unit, in relation to the improvement of resources. Our unit functions, with a fiscal and administrative independence, have a separate attendance from the reference hospital.

Are the new healing dressings effective for open anal surgery?

MªA Prieto Reyes, E Ortega, A Silva, R Gonzalez Burguillos, JM Luque, M Bastes, J Lopez Narbona, F Gomez, A Fernadez

Hospital Universitario Virgen did Rocío, Sevilla, Spain

INTRODUCTION: Open anal surgery has many advantages, but the inconvenience of the time that is needed for the scaring, besides the nurse's cares, overalls after the defecation.
METHOD: We carried out a prospective study of 105 patients (68 men and 37 women, age half 39 years). 17 hemorrhoids, 58 sinus, 30 anal fistula. We divide them into 4 groups. Group I: Povidona iodada, Group II Iruxol, Group III alginato gel and Group IV carboximetil cellulose. We value the presence of infection, pain and comfort in the handling.
RESULTS: The presentations in I liquidate, ointment or gel are comfortable in 100% of the patients, and the most uncomfortable accustomed to dressing when applying them on the surface of the wound. There is more infection ($P > 0.05$ and $P < 0.01$) in the treated patients with Iruxol and Alginatos gel than in those treated with carboximetilcellulosa, for the biggest capacity in absorption of these last ones, overall in the sinus. The Iruxol and the povidona iodada irritate the wound and causes pain. The alginato gel has a local anesthetic effect, mainly with hemorrhoids. The periods of scaring are similar in the 4 groups.
CONCLUSIONS: The different types of studied cicatrizant do not accelerate the time of scaring but if they improve the conditions of their evolution.

Can anal surgery be included in a program of ambulatory surgery?

MªA Prieto Reyes, JL Blanco, J Mena, R Glez Burguillos, L Cuaresma, R Santos, F Gomez, A Fernandez, M Bastos

Hospital Universitario Virgen del Rocio, Sevilla, Spain

INTRODUCTION: Anal surgery has the inconvenience of presenting postoperative complications that require hospital re-entrance.
MATERIAL AND METHODS: A study prospective of 384 patients, (269 men and 115 women, age 34) who under went anal surgery.
RESULT: We operate on 44 hemorrhoids cases, 37 fissures; 100 fistula annals, 203 pilonidal sinus. They present postoperative complications in 33 patients (8.5%): hemorrhages 15 (3.9%), infection 7 (1.8%), relapse 11 (2.8%). The pilonidal sinus cases have the most complications 20 (5.2%). In 6 cases (1.5%) they re-entered suffering from bleeding, within the first 48 h. In 4 of them, re-entry was before 5 h after surgery, for an incorrect suture. Infection only appears in the sinus cases (6 pseudomona, 1st. Faecalis).
CONCLUSIONS: The postoperative complications of the anal surgery do not contradict the inclusion of this in a program of Ambulatory Surgery. Some of them are also due to bad practice, for which their incidence can be reduced until values minimize.

Percutaneus A1 pulley release of trigger digits in children

M Vidosavljevic, Z Golubovic, D Milanovic, G Janjic

University Children's Hospital, Belgrade, Yugoslavia

INTRODUCTION: Interest in percutaneus release A1 pulley of trigger digits in children increased because of advantages of this method.
METHODS: We treated 19 patients with 24 triggering fingers during a two years period. The first group of 12 patients (14 fingers) were treated by percutaneus release and by classic operative treatment. In the first 2 patients we noticed a slight injury of the lateral side of the tendon, and in others we corrected the technique and the angle of approach to the tendon. After that we did not have any damage on the tendons. 7 patients (10 fingers) we treated solely by percutaneus release and had satisfactory results.

RESULTS: Treatment was successful in all patients. All pulleys were found to be completely divided at open exploration. We didn't have injuries of A2 pulley, nerves or vessels and there were no recurrences.
CONCLUSION: Avoiding the risks of total anesthesia, minor physical trauma, and positive economic effects, as well as excellent results and no complications, suggest that this technique is a good choice of method in the treatment of trigger finger in childhood.

The use of injectable teflon for augmentation of the pharyngeal wall in the correction of velopharyngeal insufficiency

Z Golubovic, D Zamaklar, N Davidovic, D Milanovic, I Rakic

University Children's Hospital, Belgrade, Yugoslavia

INTRODUCTION: The use of Teflon is proposed for correcting velopharyugeal insufficiency (VPI) with posterior pharyngeal wall augmentation. Velopharyngeal insufficiency that remains after surgery and treatment by a speech pathologist were the indications for this procedure and diagnoses were established upon nasoendoscopic findings.
METHODS: We treated 8 children with this method. Teflon (2.5–5cc) was injected through a device designed for a STING procedure in therapy of vesicoureteral reflux. Several injection points are necessary to raise a good Passavant's ridge.
RESULTS: Nasoendoscopical findings and the speech intelligibility of 8 patients were evaluated preoperatively and postoperatively. Speech intelligibility was not always dramatically improved but in all patients there were some improvements. Normal nasal resonance was achieved in 5 cases, and hypernasality persisted in 3 cases. Regurgitation of fluid and food during swallowing was improved in all patients.
CONCLUSION: The procedure is easy and can be achieved on an outpatients' basis. Teflon is an acceptable pharyngeal wall implant material to correct VPI when the specific criteria are met based on nasoendoscopic diagnosis.

Major ambulatory and short stay surgery: an option in oral and maxillofacial surgery?

M Nuñez, J Fernández, A Cuesta, A Martinez, C Ramirez, C. Navarro

Ambulatory Surgery Unit. Hospital Virgen de las Nieves. Granada. Spain

INTRODUCTION: In the area of oral and maxillofacial surgery (OMS), major ambulatory and short stay techniques are considered as an effective alternative for some pathologies which need general anaesthesia. Presented below is an overview of our results.
METHODS: Retrospective analysis of the records of all patients treated by the OMS team of our unit on ambulatory and short stay basis in the period May '97–May '98. The analysed data were categorized as number of patients, sex, age, treated pathology, anaesthetic procedures used and mean stay.
RESULTS: 106 patients underwent surgical procedures on a short stay basis. Ratio man:woman 1:1. Average age 36.5 years old. The most frequent treated pathologies were wisdom teeth, maxillas cysts, including canines teeth, and miscellaneous pathologies. Average stay 0.8 days. General anaesthesia was the most frequently performed, although sometimes (recently) we used local anaesthesia with sedation for some types of processes and patients.
CONCLUSION: In the OMS area, ambulatory surgery units are of great value, facilitating the treatment of patients and pathologies without the need for prolonged hospitalisation.

Proctologic surgery on ambulatory basis. Is it feasible?

IM Villar, IB Garcia, PM Ruiz, JT Torres, MJ Muñoz, M Vargas

Ambulatory Surgery Unit, Hospital Virgen de las Nieves, Granada, Spain

INTRODUCTION: Some controversies persist regarding the ambulatory management or benign proctologic pathology (PP): haemorrhoids (HE), anal fissures (AF) and perianal fistulae (PF). The results of PP treatment in an ambulatory and short stag surgical unit are displayed.
METHODS: We included the patients operated on since May '92 to October '98, valuing epidemiological, surgical and anaesthetic (local plus sedation -LAS- or general -GA-) data, type of hospitalisation (day surgery -DS- of short stay surgery -SSS-), mean stay (MS), morbidity (Mor.) and readmission (Re.) rates.
RESULTS: 997 PP operations were performed. Results are divided by pathologies:

Pathology	Patients		Anaesthesia (% patients)		MS	Hospitalisation (% patients)		Mor.	Re.
	n°	%	LAS	GA	Days	DS	SSS	(%)	(%)
PF	364	36.5	22	78	0.49	61.8	38.2	4.3	1.41
HE	288	28.9	80.2	19.8	0.47	63.3	36.6	6.6	2.0
AF	345	34.6	14.2	85.8	0.18	84	14	2.3	0
Total	997	100	36.1	63.9	0.37	70.7	29.3	4.2	1.0.

CONCLUSION: The PP surgery is safe and feasible in ambulatory and short stay surgical settings, keeping high assistance quality and a low complications rate.

Treatment of inguinal hernia on ambulatory short-stay basis

JM Villar, JB García, PM Ruiz, JT Torres, MT Villegas, AM García

Ambulatory Surgery Unit, Hospital Virgen de las Nieves, Granada, Spain

INTRODUCTION: We present a retrospective analysis of results in the treatment of inguinal hernia (IH).
METHODS: We included all patients that underwent IH operations in our unit from May '92 until October '98, analysing epidemiological data, anaesthetic, hospitalisation and surgical technique used, morbidity, and recurrence rate.
RESULTS: 2746 IH operations were performed in 2592 patients (154 bilateral IH). 5.1% were recurrent IH. Mean age was 47 years old (range 15–88). The most employed surgical techniques were Marcy–Bassini, Lichtenstein and Shouldice. General anaesthesia was used in 19.5% of cases, local plus sedation in 80.5%. Two thirds were treated in the day hospital, while one third were admitted overnight. No mortality. Morbidity in 3.9%. Readmission rate in 0.9%. Global recurrence rate was 1.7% (in 2127 cases with over one year follow-up).
CONCLUSION: IH surgery on ambulatory and short stay regime is a safe, feasible and cost-efficient procedure, with good results in terms of morbidity and recurrence rate. Surgical and anaesthetic techniques should be individualised according to the patient and pathological characteristics.

How to improve the cosmetic aspect of the wounds in varicose vein surgery

B Roche, J Deléaval, Ch Robin, M-C Marti

Outpatient Clinic for Surgery, HUG, Geneva, Switzerland

Varicose vein surgery is not only a functional procedure but also an esthetic one. In order to reduce the size of the wounds generated by the stripper, we apply a stitch on the head of the stripper. We pull the vein on the stripper. The guide is pulled back by the inguinal incision. The distal incision is small (less than 3 mm) and may be closed by a Steristrip which gives excellent esthetic results. We applied this technique to 368 patients; in two cases we were unable to pull back the stripper incarcerated in the fat. Patients were very satisfied with the cosmetic aspect of the wounds.

Review of results and efficiency if arthroscopically assisted reconstruction of anterior cruciate ligament was performed as a short stay procedure

N Prados Olleta, JL Martín Gómez, E Callejón Arriola

Hospital Universitario Virgen de las Nieves (UCAP S. Juan Dios), Granada, Spain

INTRODUCTION: In our Hospital, anterior cruciate ligament reconstructions were performed under conventional hospitalization. Since April 1997 operations were done as a short stay procedure in a satellic unit. This study was carried out to investigate the efficacy and safety of the procedure.
METHODS: The first group of 75 patients who underwent endoscopic anterior cruciate ligament reconstruction in the short stay unit were retrospectively reviewed. Patellar bone–tendon–bone autografts or allografts were used. All patients received a general anaesthesia. The time of discharge was one or two days. All patients received prophylactic antibiotics and subcutaneous injections of low-molecular weight heparin as a preventive measure against thromboembolic events. Patients were followed postarthroscopy for a minimum of 12 months. Complications and functional results were evaluated.
RESULTS: Two patients required readmission for a febrile process without evident septic arthritis. One patient was re-operated on for a condral patellar lesion and another for a meniscal fracture. No short- or long-term postoperative complications could be attributed to the protocol.
CONCLUSION: We found short hospitalization a good alternative to conventional hospitalization which is safe and efficient.

Personal modification of Ferguson's closed hemorrhoidectomy

P Buffatti

Division Chirurigica, Osp. Massalongo, Trefnago-Verona, Italy

Antibiotic prophylaxis in the elective treatment of wall hernias using prosthetic mesh in ambulatory surgery

A Jiménez, MD Arribas, M Elía, E Esteban, E Insignares, M Martínez

U.C.M.A. Hospital Universitario Lozano Blesa, Zaragoza, Spain

INTRODUCTION: It is accepted that antimicrobial prophylaxis is important to prevent postoperative wound infection in hernia repair surgery with the insertion of a mesh. A single dose regimen using different antibiotics is being effective in many studies.
METHODS: Among 456 patients with abdominal wall hernia, hernioplasty with polypropylene mesh was performed in 271 patients (88 per cent men, median age 54, bilateral 44) with a total of 278 inguinal, 28 femoral, 13 umbilical, 3 epigastric and 2 incisional hernias (16 recurrent). Patients were divided into two groups according to the particular criteria of each surgeon: A—Hernioplasty with a single dose of second generation cephalosporin or amoxclav in the anaesthetic induction, 111 patients, and B—Hernioplasty without antimicrobial prophylaxis, 160 patients. Wound infection was defined as the presence of seroma or purulente discharge in the surgical wound with or without positive bacteriology. Comparison among groups was established with StatView 4.1 program applying ANOVA test with quantitative variables and χ^2 test with qualitative variables, with a level of signification of 0.05.
RESULTS: Both groups were homogeneous in age, sex, distance to unit, type of hernia, ASA physical status and length of surgery. Wound infection in the first thirty days after surgery was 0.9 per cent in antibiotic prophylaxis group and 6.2 per cent in the group without prophylaxis, with statistical differences between them ($p = 0.02$). However, there were not differences in other minor postoperative complications, inadequate pain control, urinary retention, nausea-vomiting nor wound haematoma, ($p = 0.2$). Hospital admission and readmission after discharge were necessary in 8.1% and 1.8% in the prophylaxis group and 10.6% and 1.8% in the no prophylaxis group, without significant statistical differences ($p = 0.78$).
CONCLUSION: 1. Antibiotic prophylaxis is necessary in the surgical treatment of abdominal wall hernias in a day surgery unit because it decreases the rate of wound infection significantly. 2. Antibiotic prophylaxis has no influence in unexpected hospitalisation nor in other minor postoperative complications within the first month after surgery.

Anorectal surgery on ambulatory basis

MD Arribas, A Jiménez, MJ Palacios, F Carranza, C García-Algora, M Martínez

U.C.M.A. Hospital Universitario Lozano Blesa, Zaragoza, Spain

INTRODUCTION: Many anorectal diseases can be operated on ambulatory basis. In our one day surgery unit, hemorrhoids, anal fissure, anal fistula and pilonidal cyst represent 12 per cent of patients. The aim of this study is to review the results in the last three years
METHODS: Retrospective study of 212 patients who underwent anal surgery on ambulatory basis (136 males, 76 females; mean age 35) from September 1995 to September 1998. One hundred and sixty nine patients (80%) were classified as ASA 1 physical status, 41 (19%) as ASA 2 and only 2 (1%) as ASA 3. The most frequent pathologies were pilonidal cysts 109, anal fissure 56, anal fistula 33 and hemorrhoids 28. The following procedures were performed: hemorrhoidectomy 30, internal anal sphincterotomy 56, fistulectomy 19, fistulotomy 16, excision of pilonidal cyst and primary suture 24, pilonidal cyst marsupialisation 48 and pilonidal cyst excision without suture 37. Local anaesthesia was used in 35 cases, epidural in 15 cases, spinal in 132 and general in 30. The length of stay of patients at the unit and the follow up details during the first thirty days of postoperative period were registered in a database elaborated with Stat View 4.1 program.
RESULTS: The mean duration of surgery was 26 min. Four patients had minor intraoperative complications. No major postoperative complications were recorded, but 29 patients (14%) developed minor postoperative complications: wound infection (8), wound bleeding (6), urinary retention (5), delayed healing (3), inadequate pain control (2), fever (2). The mean discharge time of patients was 7.30 p.m. One hundred and ninety eight patients (93.4%) could be discharged normally but 11 (5.2%) required admission to hospital and 3 (1.4%) had to come back to the hospital. The reasons of the unexpected admissions were: a more extensive procedure (4), wound bleeding (3), fever (2), urinary retention, syncope, hypotension, social problem, headache (1).
CONCLUSION: 1. Anorectal surgery on ambulatory basis is feasible and safe. 2. Spinal anaesthesia provides a fast recovery without complications. 3. The percentage of postoperative complications and unplanned hospitalisations registered in anorectal surgery are similar to other specialities in ambulatory surgery.

Haemorrhoidectomy with circular stapling: the treatment of choice in an ambulatory setting

C Boccú, PL Fania, R Isoardi, S Duodeci, C Belloni, E Lazzarini, C Racano, GB Motta, L Ragni

Div. di Chirurgia Generale Presidio Ospedaliero di Cittadella (PD), Italy

INTRODUCTION: Haemorrhoidectomy is a common treatment for third grade symptomatic haemorrhoids, and the use of day surgery has increased because of increasing pressure on hospital beds. The aim of the present study is to compare the effectiveness and outcome of two surgical haemorrhoidectomy techniques, with the circular stapler and the conventional Milligan–Morgan, conducted as an ambulatory procedure.
MATERIALS AND METHODS: A group of 6 consecutive pts (median age 51 yrs, range 38–68; 2 F, 4 M) underwent haemorrhoidectomy with the stapler between June 98 and November 98 (group A). A control group of 10 consecutive pts (median age 42 yrs, range 31–73; 9 M, 1 F) were treated with the conventional Milligan–Morgan techniques (group B). Before surgery all patients were interviewed using a standard questionnaire, followed by rectal exanunation, endoscopy and evaluation by an anaesthetist. Group A: 2 pts presented second-degree haemorrhoids, 4 pts were third-degree. The anaesthesia used was: spinal in 2 pts, peridural in 3, general in l. Group B: 8 pts had third-degree haemorrhoids, 2 pts were fourth-degree. Anaesthesia was spinal in 5 pts, peridural in 4 and general in 1.
RESULTS: There was no significant difference in total operating time. Group A had a shorter median time to first void (1 day vs 2 days), a

shorter median time to first bowel action (1 day vs 2 days) and a shorter median hospital stay (1 day vs 2.5 day). Group A needed less analgesic coverage (1.7 vs 3.4 days). Post-operative complications were respectively: haemorrhage (1 case in group A), oedema (4 cases in group B). There were no late sequelae. None of the patients have had recurrence of haemorrhoids.
CONCLUSION: Haemorrhoidectomy with the circular stapler is well established in an ambulatory setting, safe, less painful and involves a shorter hospital stay. The long-term effectiveness and complications of the technique are undetermined as yet. The results need to be confirmed on a larger number of cases and with a longer follow-up.

Knee arthroscopy in ambulatory surgery

Ph Petchot[a], Ch Laubreaux[b], J Fritschi[a]

Department of Orthopaedics[a] and Anaesthesia[b], Clinique Ste Marie, Pontoise, France

INTRODUCTION: Knee arthroscopy is an accepted ambulatory procedure in our establishment since 1990.What is the percentage of release in day case surgery? What motivates such plug type in cost and what is the rate of failure in day case surgery are the questions.
METHODS: A retrospectively study was performed on 286 patients undergoing knee arthroscopy during 1997.
RESULTS: 247 patients undergoing knee arthroscopy in ambulatory procedure were included. For 39 (13.6%) patients day case procedure was impossible. The group of ambulatory surgery procedure patients: 38% women and 62% men. The mean age is 41 years. Only 20 patients were ASA 3. All patients had a general anaesthetic. The average stay duration is 4 hours (2 h 30 to 6.h). An operative procedure has been realized in 220 patients, 209 having meniscectomy. 7 (2.8%) patients required overnight stay: 3 for anaesthetic reasons, 4 because of belated exit. The remaining patients had no major complications. All patients have been revised in consultation by the surgeon.
CONCLUSION: The knee arthroscopy, including the intra articular operative procedure, is achievable in ambulatory surgery. The rate of failure is moderated as condition to respect scrupulously criteria of selection.

Local anesthesia for ambulatory inguinal hernia repair

L Masoni, L de Anna, J Montori, M Gasparrini, G Pascarella, A Montori

III Dept. of Surgery University 'La Sapienza', Rome, Italy

INTRODUCTION: One of the principles of surgery is that no anatomic element must be ''pulled'' and kept in position by a structure that is under tension. This rule may be violated by trying to keep together structures that are not physiologically one over the other giving an inevitable tension. It is from these words that Lichtestein arrived at the principle of the ''tension free'' techniques by Lichtestein or Trabucco. These techniques are indicated both for the primary and recurrent hernias and they are the ''gold standard'' being followed only by 0.2% of recurrences.
METHODS: From 1990 to June 1998, 213 patients (Pts) have been operated on for inguinal hernia; of these 186 male (87 right, 75 left and 24 bilateral) and 27 female (12 left and 15 right). The age rate was between 25 and 81 years (median age 58 years). A group of 76 pts (64 male and 12 female) underwent local anesthesia; in 18 pts (14 male and 4 female) we used a troncular block with 20 cc. of ropivacaine 3.75%. All the pts underwent an alloplasty with marlex mesh and plug fixed with 2–3 prolene stiches. All pts. filled out a form in order to have an estimation of the entity and the length of post-operatory pain and the reduction of the normal daily activities.
RESULTS: The overall post-operatory stay was 1.5 days with a range varying between 1 and 4 days. The morbidity rate was of 6.5% with no mortality. All pts underwent local anesthesia with troncular block, and were discharged within 6 hours postoperatively. With a maximum follow-up of 8 years, the recurrence rate was 0.4% of which 60% was already operated for hernia.
CONCLUSION: Local anesthesia with troncular block offers good results in terms of intraoperatory compliance, reducing postoperative discomfort encouraging an early discharge.

Hemorroidectomy (HRD) under local anesthesia: our experience

L Masoni, G Pascarella, M Gasparrini, J Montori, M Otti, F Marzano, M Onorato, A Montori

III Dept. of Surgery, University "La Sapienza", Rome, Italy

INTRODUCTION: The aim of our study is to assess the safety and effectiveness of ropivacaine in reducing the perioperative discomfort in patients (pts.) undergoing HRD under local anaesthesia.
METHODS: Between June and September 1998, 20 consecutive patients (9 males and 11 females, median age 50 years) have undergone HRD using ropivacaine 10%, while in a control group of 20 patients we used xylocaine and mepivacaine cloridrate 2%. I.V. sedation (Propofol) has been used in 2 cases only. A bilateral pudendal block is established by injecting the perianal area with total 30 to 40 ml of anesthetic through a 25–27 gouge needle. HRD by Ferguson technique is then performed by using a Pratt dilator. All pts have been kept at bed rest for only 2 hours postoperatively with no dietary restrictions. All pts have been given an 11-box Visual Analogue scale (VAS) with scores ranging between 0 to 10 for pain evaluation at 1, 2 and 3 hours postoperatively.
RESULTS: Local infiltration has been tolerated well by the 38 pts operated with no additional use of I.V. sedation. They report a short lasting burning sensation during the injection with no significant ECG modification. Insertion of the dilator gives the patients a tolerable feeling of fullness; vagal stimulation has induced bradicardia in 4 cases, vomiting in 1 case only. The median pain score according to the VAS 11-box scale at 1, 2 and 3 hours postoperatively has resulted respectively 1.1 (range 0–7), 1.6 (range 0–7) 1.4 (range 0–5) for the study group while 1.5 (range 0–7), 1.8 (range 0–7) and 1.5 (range 0–6) for the control group. At the 4th postoperative hour, 15 pts (5 of the study group and 10 of the control) required I.V. administration of ketorolac for pain.
CONCLUSION: Ambulatory HRD under local anesthesia with ropivacaine gives better results in terms of compliance and pain control up to the 3rd postoperative hour if compared to xylocaine and mepivacaine cloridrate.

One-day breast surgery: managerial and organizational problems

V Pasta, M Monti, M Monti Jr, E Orsi, G Merlino, GP Bianchini, S Veneroso, F Boccaccini

The one-day breast surgery foresees an accurate pre-operatory selection of the patient, an efficient pre-ospedal service, a valid organization of presence on the territory so as to permit a ''protected'' discharge of the patient from the Hospital and also the availability of a readmission in the case of post-operatory complications or a different operation from that one planned is needed. The selection of the patients will note the different pathologies (excluding the latent malignant tumors), the distance from hospital and house (not more than 50–70 km.), the compliance and the emotions of the patients, the contemporary coexistence presence of other associate pathologies and the active presence of a person with whom they live. The patient will be clearly informed about the operation she needs and the possibility it could change in relation to the result of the intra-operatory specimen examination by the pathologist; she needs to clearly know the complications connected to the operation and the post-operative course too. Operations must be performed inside the operating theatre in the most rigid respect of the common norms of blankness. The most frequent pathologies of the breast, available in a day-surgery unit are fibroadenoma, benign mammary dysplasia, duct papilloma, adenoma of the nipple, duct ectasia, mono or bilateral gynaecomastia, lipoma, insertion of breast prosthesis, nipple reconstruction and biopsy of the axillary nodes. The most important rules

concerning the organizational model are: to organize the working activity of the surgeons and nurses, qualifying the staff, to collect casesheet with the clinical history of the patient, to work out pre-operatory, intra-operatory, post-operatory protocols, guarantee the continuity of care, protocols of complications and/or emergency management, protocols checking the quality of applied service.

Attendance changes in inguinal hernia repair using an ambulatory surgical center

O Colomer, A Garcia, J Font, AM Arner, I Ayguavives, E Mestres

Corporació Sanitaria Pare Tauli, Centre Quirurgic Ambulatori, Sabadell, Spain

INTRODUCTION: The ambulatory surgery center (ASC) of Sabadell hospital was inaugurated in September 1997 as a separate unit to boost 'day surgery'. The aim of this study has been to assess the first surgical results of the inguinal hernia repair.
PATIENTS AND METHODS: From October 97 to October 98, 240 inguinal hernia repairs were made in adult patients. In all cases we used the Linchtenstein technique under locorregional or local anaesthesia whit sedation. Phone control were made during the first 24 hours and the patients were seen in the outpatients unit on days 7 and 30 after the surgical procedure.
RESULTS: The substitute index was 0.61. The waiting days for operations decreased by 21%. The mean hospital stay was 6.75 hours versus 3 days in conventional hernia surgery. The postoperative morbidity was 10%, specially surgical wound pain (4.1%) and serohematic collections (3.7%). 96.7% of the patients were discharged at the same day.
CONCLUSIONS: 1. The surgical ambulatory procedure for inguinal hernia repair is safe and well accepted for the patients. 2. When this procedure is done in ambulatory surgical centers, hospital stay, waiting list and safe money are decreased.

Recurrent inguino-crural hernia: our surgical treatments

L Conte, V Durastante, V D'Aietti, A Cinque, M Travaglini

1st Dep. of General Surgery, 'S.M. della Misericordia' Hospital, Udine, Italy

When recurrence of hernia occurs, it is a frustrating pathology both for the surgeon, who works to prevent it as well as for the surgeon who must confront it. Recurrent hernias has a multifactor cause and in addition the type of previous hernioplasty, the knowledge, experience and technical ability of the surgeon who performed it. A fact which is certain though, is that the recurrence is drammatically higher in series which are examined in "blind" versus those examined by each surgeon among its own cases. On a total of 1432 cases of hernia surgery performed over 6 years, we observed 66 cases of recurrent inguino-crural hernia, equal to 4.5% of the total, with a 58/8 ratio between M/F, an average age of 59 in a 15–85 range, which may be classified as follows:

Inguinal	Crural	Bassini	Post-temps.	Prosthesis	1st recur.	2nd recur.	3rd recur.
64 (97%)	2 (3%)	43 (65%)	20 (30%)	3 (4.5%)	44 (66%)	15 (23%)	7 (11%)

Of these, 9% were bilateral with recurrence on one side and 14% strangulated. Notwithstanding that more techniques should be part of each surgeon's ability wanting to perform modern hernia surgery, we grant great consideration to the anterior tension-free sutureless technique as proposed by Trabucco, and we performed it on 45% of patients at the first recurrence. Eight percent of patients were treated with the Lichtenstein technique, 9% with the Stoppa technique, 2% with the Wantz technique, 2% with the Rives technique. The pre-peritoneal technique according to Trabucco was performed in 34% of patients. The anesthesia was local in 60% of cases, spinal in 10% and general in 30% of cases. Recurrence 2%, pseudorecurrence 4.5%. Post-operative complications 15.5%: haematoma inguino-scrotal (4.5%), suppuration of the surgical wound without need of removing the prosthesis (2.5%), seromas (7%), testicular atrophy (2.5%). A bothersome inguinal neuralgia remained in 4.5% of cases, which was then treated with pain relievers and local anaesthetic injections and resolved in about two months.

Pregnancy and anaesthesia in day surgery setting

A Gregg, P Saunders

Royal Hospitals NHS Trust Day Surgery Unit, London, UK

INTRODUCTION: The effects of anaesthesia on organogenesis in the 1st trimester of pregnancy are contentious rather than significant, and the psychological and medicolegal implications cannot be underestimated.
METHODS: A survey of 100 day surgery units in the United Kingdom was designed to reveal the nature and extent of policy with respect to pregnancy stems prior to anaesthesia, preoperative patient information, as well as method and stage of documentation, pregnancy testing versus date of last LMP, gynaecological versus other surgical procedures and the contentious areas of minors and perimenopausal women.
RESULTS: A significant number of DSUs had no well defined policy for pregnancy assessment prior to anaesthesia and in some units the use of pregnancy testing was nonexistent.
CONCLUSIONS: Documented evidence of date of LMP and lack of pregnancy should not preclude the use of pregnancy testing, particularly in gynaecological procedures. However, its widespread use may still be considered not only uneconomical but complicated by matters of consent, confidentiality and psychological nature.

Remifentanil: the ideal opioid for ambulatory paediatric bronchoscopies?

P Kessler, Y Alemdag, S Kessler

Zentrum der Anästhesiologie, J.W.Goethe-Universität, Theodor-sternkai 7, D60596 Frankfurt, Germany

INTRODUCTION: Inhalational techniques for paediatric bronchoscopies invariably lead to a significant amount of environmental contamination. The new ultashort-acting opioid remifentanil has a rapid offset of effect and seems to be a suitable adinvant for ambulatory procedures such as most of the bronchoscopies. The aim of this prospective, randomized study was to compare three different total intravenous techniques for ambulatory paediatric bronchoscopies with regard to circulation, side-effects and anaesthesia associated time intervals.
METHODS: Following institutional ethic committee approval, 90 children (<6 years, ASA I–III) without premedication were randomly assigned to receive either propofol/ketamine or propofol/remifentanil or propofol alone. In addition to obtaining a recovery score, we measured systolic blood pressure (SAP), heart rate (HR) and oxygen saturation at defined points in time as well as side effects and anaesthesia associated time intervals.
RESULTS: Times from end of anaesthesia to extubation, to transfer to normal ward (recovery) and to discharge at home were significantly shorter in the remifentanil/propofil group (see Table).

	Propofol/ ketamine	Propofol/ remifentanil	Propofol
Age (months)	27.2 ± 18.0	28.6 ± 21.4	28.3 ± 20.3
Bronchoscopy (min)	26.9 ± 12.7	26.4 ± 13.0	24.1 ± 10.8
Extubation time (min)	8.9 ± 5 5	34 ± 2.4**	6.8 ± 5 0
Recovery time (min)	14.9 ± 8.1	6.1 ± 2.7* *	10.8 ± 4 5
Discharge time (h)	4.23 ± 1.45	2.44 ± 0.87*	3.87 ± 1.12
Propofol (mg/kg)	8.34 ± 4.8	3.31 ± 1.7**	9.87 ± 3.4
Ketamine (mg/kg)	2.45 ± 1.2		
Remifentanil (μg/kg)		34.16 ± 15.6	

CONCLUSIONS: The combination of remifentanil/propofol for paediatric bronchoscopies allows for stable circulation and rapid recovery and discharge of the children.

Central venous access (CVA) in ambulatory surgery

L Moresco, S Bertoglio, P Meszaros, C Di Somma, F Cafiero, A Peressini, PL Percivale

Oncologia Chirurgica Universitaria dell' Istituto di Oncologia Clinica e Sperimentale dell' Universita' di Genova,m, Italy

A safe CVA is a nearly obliged step in the management of oncological patients. Between January 1985 and October 1998, 1497 consecutive adult patients underwent placement of a device for long term subcutaneous venous access at our institution. The choice of the site of access and the device's characteristics were based on several factors, such as: the disease's stage and its natural history, as well as patients' compliance and performance status. Of the patients, 1275 (85.2%) were port accesses while 222 (14.8%) where external tunnelled catheters. Patients characteristics were: breast cancer: 680 (45.42%), gastrointestinal cancer 483 (32.26%), soft tissue sarcomas 94 (6.27%), other malignancies 122 (8.14%), nutritional support 188 (7.8%). In 1240 subjects the procedure was performed in DH. In 210 cases we implanted accesses on 'in bed-patients' while in 68 cases placement was performed according the 'one day surgery' patient's management. Out of the 1240 DH patients, 79 required hospital admission for a period of 24–48 hours. Perioperative major complications were PNX in 42 cases (2.8%) and sepsis in 26 patients (1.7%). Late complications, requiring the removal of the access, occurred in 124/1275 (9.8%) of the port series and in 51/222 (23%) patients with external tunnelled catheters. Infection and drug extravasation were the main causes for devices removal. Average survival of port devices was 490 days (range 42–1960) versus 154 days (range 38–455) of the external catheter series. Ambulatory surgery, day surgery or 'one day surgery' appears the standard regimen of choice for long term CVA device implant.

Usefulness of bipolar scissors for ambulatory surgery

Bo Stenquist, Bjorn Bergdahl

Department of Surgery, Lundby Hospital, Gothenburg, Sweden

INTRODUCTION: Using bipolar diathermy the prongs of the forceps are the treatment electrodes and no ground connection is necessary. The current from the generator is passed only through the prongs and the tissue in between. A localized coagulation with minimal lesion of the tissue is achieved. However, cutting is not possible with this device.

METHODS: Power Star Bipolar Scissors (Ethicon) were attached in parallel with a pair of regular bipolar forceps (for general haemostasis) to a computerised bipolar coagulator, CoAComp. (1) and the equipment was tested at ambulatory surgery.

RESULTS: The set-up has been tested for 6 months on 60 patients referred to day-case surgery. The principal surgical procedures were: hernia surgery 30, haemorrhoidectomy 9, other ano-rectalsurgery 8, excision of axillary sweat-glands 6, and removal of subcutaneous tumours 4. No postoperative bleeding, infection or other adverse events were registered.

CONCLUSION: Bipolar scissors are an alternative to cutting monopolar diathermy resulting in efficacious haemostasis. It can be used without restriction in all patients and in many different surgical specialities.

REFERENCE: 1. Bergdahl B, Stenquist B. An automatic computerised bipolar coagulator for dermatologic surgery. J Dermatol Surg Oncol 1993;19:225-227

Relationship between objective and subjective evaluations of an ambulatory treatment: sclerotherapy of haemorrhoids

P Petrin[a], P Segalina[a], A Cantona, GP Rupolo[b], L Farinea[c]

[a]Patologia Speciale Chirurgica CLOPD and [b]Psicologia Medica, University of Padova, and [c]Ospedale di Castelfranco Veneto (TV), Italy

INTRODUCTION: Injection sclerotherapy remains a universally popular method for the treatment of first and second degree haemorrhoids in the outpatient clinic. The ultimate judgement regarding the procedure must be made by the physician as well as by the patient. The aim of this study was to investigate the patient's point of view and to compare the findings with the clinical objective data.

METHODS: Seventy-three patients (48 males and 25 females, mean age of 50 years) with only second degree haemorrhoids and no other anorectal diseases or major clinical problems were evaluated by a surgeon and underwent repeated injections of 1% polidocanol (Atossisclerol®), 0.5–1 ml per haemorrhoid. From 6 months to 2 years later the patients were clinically reassessed by the same surgeon and separately submitted to a purposely prepared disease-specific questionnaire by a psychologist.

RESULTS: The result was referred to as 'good' in 79% of the cases by the surgeon and in 78% by the patients; 'poor' in 21 and 22% respectively. The surgeon's evaluation was 'good' in 82% of the of cases referred to as 'good' by the patients, and in 62% of cases referred as to 'poor'. The patients' evaluation was 'good' in 53% of the cases referred to as 'good' by the surgeon and in 28% of the cases referred as 'poor'. Objective ad subjective result evaluations matched when compared for: a) general health, b)well being variation, c) number of injections, d) time elapsed from the sclerotherapy. They did not match when compared for: e) age of the patients, f) need of more sclerotherapy.

CONCLUSIONS: Whereas on the whole the surgeon and patients share a similar evaluation of the treatment results, in individual cases the correlation appears to be fairly weak. Aged patients seem to over appreciate the treatment, while the surgeon seems to overestimate the need of continuing the therapy.

Personal experience in the positioning of TIS (totally implantable system)

G Festa, U Tommasino, A Frezza, W Craus

Università di Napoli, Istituto di Oncologia Dip. Med. Chir., Naples, Italy

INTRODUCTION: The availability of a safe and long lasting venous access is indispensable for pharmacological and nutritional treatment in patients who undergo a medium or long term parenteral therapy. In fact, the use of a substance which is potentially sclerosant and the repetitive puncturing of the vein make the peripheral system unusable.

METHOD: Eighty-four patients were selected, all either cancer patients or with AIDS, all of whom needed long term infusion therapy. Eighty-four TIS were introduced in these patients between July '96 and July '98, during an operation in the operating theatre under local anethesia, without sedation. There were frequent checkups to follow the positioning of the catheter through a new transcutaneous system, the cath finder—the camera was usually placed level to the 2nd–3rd intercostal space.
RESULTS: Of the cases, 60% were considered very good, 30% good, 4% discreet and 6% bad. The total complication (28%) never had any influence over the use of the system, except in three cases where it was necessary to remove the port. No grave complications occurred, such as pneumothorax, plexi brachial lesions, haemorrhages, dislocation of the catheter, etc.
CONCLUSIONS: The management of this experiment, which was difficult in the beginning, was improved thanks to a 'learning curve' of the non-medical health workers; the advantages to the patients were a better quality of life; and, last but not least, a completeness to the pharmacological therapy.

Sevoflurane (S) provides a faster recovery than propofol (P) for outpatient children undergoing magnetic resonance imaging (MRI)

LJ Van Obbergh, L Soubiron, I Marces, F Veyckemans

Anesthesiology, UCL Medical School, 10 av Hippocrate, B1200 Brussels, Belgium

INTRODUCTION: Sedation is often required for MRI in children (1). P has been used (2), S has however never been described. We compared the use of S and P for MRI in outpatient children.
METHODS: After institutional approval and parental consent, anesthesia was induced in 50 ASA I or II children with S up to 8% for insertion of a laryngeal mask airway (LMA). In P group, this was followed with a P infusion (l0 mg/kg/h) and in S group 1.5% S was delivered through a semi closed circle system (King CO_2 absorber and F Universal coaxial circuit (King Systems, Noblesville, IN 46060,)). Heart Rate (HR) and SpO_2 were recorded. $ETCO_2$ and S were sampled in the LMA. Duration of the procedure (T1) and time required from the end of the P infusion or the S inhalation to the removal of LMA (T2) were recorded. The recovery score (RS) (from 1 to 6) as described by Steward (3) was observed after removal of LMA (RS0), after 15' (RS15), 30' (RS30) and 60' (RS60). Statistical analysis was performed with a *t*-test or a Mann–Whitney rank sum test. Significance was set at $P < 0.05$.
RESULTS: (mean + SEM)*$P < 0.05$

	S group ($n = 25$)	P group ($n = 25$)
Age (months)	40 ± 7.7	37 ± 5.8
Weight (kg)	14.6 ± 1.5	14.2 ± 1.3
T1 (min)	27.5 ± 1.7	29.2 ± 1.9
T2 (min)	3.32 ± 0.66	8.92 ± 0.89 *
RS 0	5.0 ± 0.25	2.7 ± 0.26 *
RS 15	5.5 ± 0.21	3.7 ± 0.31 *
RS 30	5.8 ± 0.16	4.6 ± 0.32 *
RS 60	5.9 ± 0.04	5.56 ± 0.20

No complication was observed in either group.
CONCLUSIONS: This study demonstrates that S used in children undergoing MRI provides a faster recovery and better early sedation scores when compared to P. This would allow an earlier discharge from the recovery room to home.

REFERENCES: 1. Eur J Anaesth.14: 236, 1997. 2. Anaesth 47: 706, 1992. 3. Can Anaesth Soc J 22 :111, 1975.

Dermatosurgical, day surgery and general surgery: interactions, purposes and results

Mauro Ponsetto, Antonio Bergantino, Sebastiano Vaccarisi, Roberto Scala, Mauro Obialero

Osp. Cuorgnè div. Chir. Gen. Primario, Resp. Day Hospital e Day Surgery, Azienda USL 9 Ivrea (TO) Italy

INTRODUCTION: Though dermatological ambulatory surgery is also defined as 'small surgery'. This practice can often with problems of uncertain solution, concerning the aspect of the lesion (neyus or melanoma, for instance) or its dimension or its location. Each case requires a specific attitude. In the first instance a dermatologist is usually consulted to investigate the nature of the lesion, in the second the best possible coverage must be carefully planned, and finally aesthetically. Relevant lesions need extreme accuracy in each operating phase. For these necessities our division formed in November 1996 a dermatosurgical unit which works in close cooperation with a dermatologist and performs such interventions as those mentioned above.
METHODS: starting from November 1996 our dermatological unit has treated with monthly operating sessions 140 patients, 18 of whom had no specific indication. The most frequent cases were represented by epitheliomas 38, nevi 35, cysts, keratomas, lipomas etc., 49. In 29 cases interventions were performed with transposition of proximal edges, in 5 cases patients underwent dermo–epidermal grafts. In the remaining cases a classical lozenge incision was uped. Lipomas were excised with the 'squeezing' technique in 9 cases, while 1 case of multifocal lipomatosis was treated with liposuction. A giant tuberous nevus of the scalp in a teenage girl was treated with a lutaneous expander and subsequent excision to excellent aesthetic results. Finally we treated several scar revisions and performed some escharectomies.
RESULTS: After about 2 years of activity the dermatosurgical unit has specialized in the diagnosis and treatment of particular cases location, type and size of the lesion.
CONCLUSIONS: The good results and the low incidence of complication suggest that this activity is worth fully expanding.
ACKNOWLEDGEMENTS: Thank you to Paolo Magnani, M.D., for his contributions.

The diabetic foot and the fibrin paste

L Cerchione[a], G Ceccarelli[a], C Trojani[b], M Foschi[a], AC Babini[a], M Parenti[b], L Forlivesi[a]

[a]Department of Surgery and [b]Diabetologic Unit, Rimini Hospital, Rimini, Italy

The diabetic foot consists of morphostructural alterations due to neuropathic or vasculopathic alterations or both of these. It is a serious and disabling complication of diabetes often joined to a bacterial infection. An emblematic case is the following: the patient F.M., 72 years old, II° type diabetic since 1965, was hospitalised in May 1995 (Medicine Unit) for 'phlegmon at the right foot'. His foot was oedematous, painful, and pus due to abscess collection was discharged from the first toe and the second and third metatarsals. The foot X-ray showed areas of bone-reduction borne by basal phalanges. The electro-myography pointed out a sensitomotoria neuropathy. The therapy administered during the hospitalisation was both medical (insulins, antibiotics, vasoactive drugs) and surgical (incision, drainage and cleaning using 2% Betadine solution—24 hours). Then the patient could leave the hospital and was treated as an outpatient from August 1995. At the time the lesions were between the second and the third Wagner phase. Successively the patient underwent a steady antibiatical therapy both systematically and locally and a disinfection using Fertomcidina (salicylic acid–sodic iodide). In February 1996 the patient had two fistolous

stems at the metatarsals and at the sole. The patient was then subdue a first treatment using fibrin paste (Tissucol) and Fertomcidina (ratio 8:1) and to a second treatment after two weeks from the former. The patient was then clinically recovered.

The over-pressure oxygen therapy and the diabetic foot

L Cerchione[a], G Ceccarelli[a], C Trojani[b], P Benzi[a], AC Babini[b], M Parenti[b], L Forlivesi

[a]*Department of Surgery and* [b]*Diabetologic Unit*, *Rimini Hospital*, *Rimini*, *Italy*

INTRODUCTION: The diabetic foot consists of morphostructural alterations due to neuropathic or vasculopathic alterations or to both of these. It is a serious and disabling complication of diabetes.
METHODS: The therapeutical approach to this kind of pathology is both systemic (metabolic control, vaso-active drugs, antibiotics) and local (surgical curettage, enzymatic cleaning). Beside the above-mentioned therapy the over-pressure oxygen therapy plays an important role; this therapy increases the oxygen in the plasma, it has bactericidal action and stimulates the function of the fibroblast. The over-pressure oxygen therapy was administered to 7 patients (3 female and 4 male), diabetic from 35/2 years (average 18), all of them were on insulin and their average age was 66/4. The patients had lesions, and could be classified as follows according to Wagner: II phase = 2 patients, III phase = 2 patients, IV phase = 2 patients, V phase = 1 patient. All patients underwent transcutaneous oxymetry at the beginning of the therapy and at the tenth visit.
RESULTS: The patient belonging to the II phase of Wagner recovered after 3 months, the other patients recovered within less then 14 months; there was only one exception, a patient belonging to the IV phase underwent a greater amputation.
CONCLUSIONS: Our experience witnesses that the over-pressure oxygen therapy is a valid aean and it becomes even more effective the sooner its therapeutical employment begins; it must be considered as one of the most important mean in the therapy of the diabetic foot.

Recent experience in day surgery port-a-cat implantation in oncological patient

Fulvio Peradotto, Antonio Bergantino, Sebastiano Vaccarisi, Mauro Ponsetto, Mauro Obialero

Osp. Cuorgnè div. Chir .Gen. Resp. Day Hospital and Day Surgery, *Azienda USL 9 Ivreas (TO) Italy*

INTRODUCTION: The necessity to infuse chemotherapeuticals and other drugs to oncological patients causes lesions to peripheral veins, so in many centres external catheters like the Hickman or totally implantable catheters like the port-a-cath are preferentially used.
METHODS: In our day hospital and day surgery unit we have been using for some time such systems for a better management of infusional therapy in oncological patients. Our favorite system is the port-a-cash because it requires a more simple management. To date we have positioned 12 port-a-cash, 7 of which are in male and 5 in female subjects. The patients' mean age was 62 years (range 45–76). The catheter was positioned whilst in the operating unit, local anaesthesia was performed by a surgeon, while the anaesthesiologist was in an adjoining room. The subclavial vein was mainly used through a trans-cutaneous vein puncture with the Seldingher technique. The correct position of the central vein was always verified through a chest X-ray. Follow up of patients was performed in our oncological day hospital, where chemotherapy was practised. We report no cases of pneuthorax and one case of catheter abstraction; in this instance the port-a-cash was removed and a new one was positioned after about a month, with no side effects.
RESULTS AND CONCLUSIONS: In our opinion totally implantable systems allow a better administration of chemotherapeuticals, as this can substantially reduce the technical problems connected to frequent vein punctures with the risk of phlebitis or extravasation in the subcutaneus tissue.
ACKNOWLEDGEMENTS: Thank you to Paolo Magnani, M.D., for his contributions.

Propofol vs Propofol + Midazolam in minor gynaecological day surgery

F Massimo, D Lo Sapio, C Eziandio, A Schettino, B Primerano, R Galoppo, C Aurilio, M Chiefari

Istituto di Anestesia, *Analgesia*, *Rienimazione*, *Terapia Intensiva: II Servizio di Anestesia*, *Seconda Università di Napoli*, *Italy*

INTRODUCTION: The quality of surgery intervention associated with day surgery has greatly improved thanks to the development of new drugs provided with quick and predictable kinetics. We compared sedation with Propofol (P) versus sedation with Propofol + Midazolam (MP) in patients undergoing minor gynaecological day surgery.
METHODS: After obtaining written consent, we subdivided at random 66 patients, ASA I–II, between 18 and 58 years of age, undergoing diagnostic and therapeutic curettage (DTC), uterine canal revision (UCR), oocyte pick-up (OPU) and biopsies into two groups, GP and GMP (see Tab. 1).

Tab. 1	Operation	Time	Operation	Time	Sedation
GP	OPU	15+/−5	UCR	7+/−3	Atropine 0.01 mg/kg after 5 min
	DTC	7+1−3	biopsies	3+/−2	Propofol 2 mg/kg
GMP	OPU	15+/−5	UCR	7+/−3	Atropine 0.01 mg/kg+midazolam
	DTC	7+/−3	biopsies	3+/−2	0.03 mg/kg after 10 min. propofol 1 mg/kg

Vital parameters were monitored. We evaluated level sedation using the Ramsey scale, degree of retrograde amnesia, patients' comfort, approval by surgeons and the discharge rate.
RESULTS: (see Tab. 2).

Tab. 2	Operation	Additional bolus	Degree of sedation	Awakening	Recovery	Amnesia	Hospital-ization
GP	OPU 2	4	4	Quick	30 min	Yes	3 hr
	DTC	0	4	Quick	30 min	Yes	3 hr
	UCR	0	4	Quick	30 min	Yes	3 hr
	Biopsies	0	4	Quick	30 min	Yes	3 hr
GMP	OPU		5	Quick	2 hr	Yes	12 hr
	DTC	0	5	Slow	2 hr	Yes	12 hr
	UCR	0	5	Slow	2 hr	Yes	12 hr
	Biopsies	0	5	Slow	2 hr	Yes	12 hr

We examined the discharge rate after 3 hours for GP and after 12 hours for GMP.
CONCLUSIONS: Bow study protocols were effective. We prefer the propofol. administration by oneself for short interventions (<10 min) and we choose the M + P association for long interventions (>10 min).

Is there is still any place for new techniques in hernioplasty? P.A.D.: about ten cases, surgical lines and review of the literature

E Baraglia, F Fabi

ULSS no. 9, Divisione di Chirurgia Generale, sede di Oderzo, TV, Italy

INTRODUCTION: Good results have been obtained in the treatment of inguinal hernia by using prosthesis. However, there is still uncertainty on 'free tension' and 'sutureless' techniques regarding traction, tension, dislocation, torsion, wrinkle and the consequences on the postoperative period. Here we propose and describe a new technical procedure to resolve these problems: P.A.D., by polipropylene (Prolene). This technique is suitable in all primary inguinal hernia in males and in most recurrent: it is composed of two layers superposed and fixed to some structures of inguinal canal on one side only, opposite to the other, to allow movement of aponeurothic and muscular structures of the inguinal region. P.A.D., as a technique, is very easy to perform, safe, and avoids most of the problems related with other techniques, giving a comfortable postoperative period.
MATERIALS: Ten patients, with primary inguinal hernia have been subjected to P.A.D. procedure. None had problems or complications. The operative time was very short, and the use of analgesic very poor.
RESULTS AND CONCLUSIONS: The follow up is too short and the cases very few to point to significant results, but the theoretical base that supports this operation is really convincing. The results of other authors give, in more than 500 cases treated, evidence of remarkable reduction in use of analgesics due to a better comfort achieved, and the follow up is long enough to allow to affirmation that this technique assures the results in terms of recurrence like a 'tension free' and offers the postoperative comfort of a 'sutureless', all in one operation.
KEYWORDS: P.A.D. (Protesi Autoregolantesi Dinamica)
REFERENCES:
Amid P.K.: Surg. Today, 25: 7.1995, 619–25.
Gilbert A.I.: Int. Surg. 1995, 80: 4–8.
Valenti G.: UTET periodici–3a edizione.

Surgical treatment of proctological diseases under local anesthesia: experience on 314 consecutive cases

M Basile, F Di Fabio, M Pacella, S Gidaro, F Frino

Univesità degli Studi 'G. d'Annunzio', Chieti, Pescara, Cattedra E1a Divisione di Chirurgia Generale, Pescara, Italy

INTRODUCTION: Several among the so called 'proctological diseases' can be surgically treated on a day-surgery basis. The choice of local anesthesia could contribute to a cost-control policy and meet patients' expectations. Although practised with good results and excellent patient compliance local anesthesia protocols are not adopted everywhere. This paper is focused on our experience on this subject.
METHODS: A group of 316 consecutive patients observed during the 1993–1998 period was considered. Performed surgical procedures were as follows:

Procedures	*No. cases*	*%*	*Nights*
Hemorrhoidectomies	148	47.1	1
Anal sphyncterotomies	114	36.3	0
Rectocele (plastics)	13	4.1	1
Vaporization of anorectal lesions	5	1.6	0
Abscesses an fistulas	26	8.3	1
Local resection of rectal neoplasm .	8	2.6	2
Total	314	100	

In all cases the surgical procedure was preceded by a pharmacological preparation (atropine, opioids and antihistamine agents). A multiple perianal infiltration was performed by means of a specific device (quadriject, Sapirned ,Alessandria, Italy). Local anesthesia during the first three years was performed by using mepivacaine 1% plus sodium bicarbonate; actually we use ropivacaine 10 mg/cc. Since two years ago a local application of mepivacaine cream (Emla, Astra) preceded the operation.
RESULTS: In 28 cases (8.9%) vagal activation signs were noted during the operation (the procedure was never interrupted). In 6 patients (1.9%) temporary urinary catheterisation was necessary postoperatively. General patients' compliance was excellent.
CONCLUSIONS: Our experience of surgery under local anesthesia was rewarded by very good results in terms of patients' acceptance and surgeons' satisfaction.

Anal fissure: surgical treatment under day-surgery regimen

M Basile, F Frino, M Pacella, S Gidaro

Univesità degli Studi 'G. d'Annunzio', Chieti, Pescara, Cattedra E1a Divisione di Chirurgia Generale, Pescara, Italy

INTRODUCTION: Anal fissure represents one of the most frequently encountered disturbances during common proctologic practice. Surgery has been for years the prominent therapeutic option. Actually a few different approaches are described. Our group still maintains a formal surgical indication for all cases of chronic and recurrent fissures. Our experience on this subject during the last five years is summarised in this paper.
METHODS: A group of 114 patients is considered. All patients have been studied preoperatively according to a protocol including clinical examination, rettosigrnoidoscopy, anuscopy. The degree of anal sphincter spasm was estimated comparatively by means of electromanometry and digital estimate by one of the authors (M.B.) during the first two years; and subsequently by digital evaluation alone. In 104 cases (92%) anal fissures were accompanied by sphincter high pressure. In 10 cases normal anal pressure was found, 5 of them being recurrences. Among those 1 had been previously treated by us with closed sphincterotomy, and 4 previously subjected to open procedures came from elsewhere. All the surgical procedures were performed under local anesthesia alone. All the high pressure cases underwent a closed sphincterotomy. The others were treated by posterior anuplasty. Hospital discharge was always obtained in the 1st postoperative day.
RESULTS: The follow-up period was 6–60 months. No major complications were observed. In 1 case (0.9%) a slight hemorrhage was controlled by conservative means. In 10 cases (8.8%) perianal hematoma was observed but no specific treatment was required. In no cases decal incontinence was noted. No recurrence were noted but in 1 case (0.9 %) (already described).
CONCLUSIONS: In our experience the surgical approach to chronic and recurrent anal fissures still proves to be an easy to perform, well tolerated and reliable surgical procedure.

Chronic constipation as a consequence of obstructed defecation: the surgical option

M Basile, GS Gidaro

Univesità degli Studi 'G. d'Annunzio', Chieti, Pescara, Cattedra E1a Divisione di Chirurgia Generale, Pescara, Italy

INTRODUCTION: Surgical therapy in cases of serious constipation stands as a controversial matter. The exact pathophysiology of the disturbance still needs to be elucidated. Rectocele or internal intussusception have been interpreted by our group as surgically reparable defects and treated. Our results are reported in this paper.

METHODS: Sixteen cases of constipated subjects were included in this group. Slow transit constipation coming from colonic inertia was excluded. In all patients obstruction defecation symptoms were present. A combined diagnostic protocol was carried out in all cases which included: intestinal transit time, dephecography, dynamic anuscopy; in cases of spastic pelvic floor syndrome the surgical approach was excluded. Eleven patients were found affected by rectocele and were submitted to Block transanal plication. In 6 patients in which we advised anal internal intussusception we performed a closed stapled internal mucosectomy; in 1 of those cases a double purse string suture was necessary. All operations were performed under local anesthesia and on a day-surgery basis.
RESULTS: No significant complications were observed. In 1 of the 'stapled' cases, during the operations firing time the proximal purse string suture escaped the instrument's head and had to be removed later, with no consequences. In all 'Block' cases a postoperative clinical improvement was observed. At the control defecographies performed 6 months after the operation, a meliorated picture resulted; nonetheless in a 2 year period, in 5 cases (45.4%), symptoms referring to obstructed defecation recurred. One of those cases underwent later stapled mucosectomy. In 2 out of the 5 patients (40%) submitted to stapled mucosectomy, no satisfactory result was obtained. A mild symptom attenuation was reported but still obstructed defecation persisted. A satisfactory postoperative defecation frequency and activity was reported in the remaining 3 cases (60%).
CONCLUSIONS: We consider our results encouraging but still too preliminary to draw definite conclusions on this difficult surgical subject.

Office-therapy in low grade hemorrhoidal disease: our experience

M Basile, M Nanni, F Frino, GS Gidaro

Univesità degli Studi 'G. d'Annunzio', *Chieti*, *Pescara*, *Cattedra E1a Divisione di Chirurgia Generale*, *Pescara*, *Italy*

INTRODUCTION: Office methods for the treatment of low-grade hemorrhoids have been largely improved ultimately. Our group's 5-years experience is outlined in this paper.
METHODS: Our office proctologic practice started in 1993. A group of 227 patients (164 males and 63 females) was considered. All patients were examined clinically and by rettosigmoidoscopy and anuscopy. In case of sphincteric spasm the treatment was not applied. Anuscopic classification results were (degrees): Ist 75 cases (33%), IInd 100 cases (44%), IIIrd 47 cases (21%); five patients (2.2%) had recurrent hemorrhoids (previous surgery elsewhere). Advanced cases were excluded. Treatment was performed on an outpatient basis. All patients underwent pretreatment enemas and oral antibiotic therapy. Rubber band ligation and sclerotherapy were used simultaneously. Each session focused on one hemorrhoid pedicle at a time. Intersession time was 15 to 21 days. The average of 3 per-patient session number was carried out. The treatment sessions were performed by using 'selflight' (Sapimed, Alessandria, Italy) anuscopes and suction ligators equipped with silicone rings. No anesthesia was required.
RESULTS: At the end of treatment a sensible relief of symptoms was obtained in 219 cases (96.5%). In 8 IIIrd degree circumferential cases the outcome was not satisfactory enough and the patients were assigned to surgical protocols. In 15 cases (6.6%) immediate pain-control therapy was required. In 7 cases (3.1%) post-treatment side hemorrhoidal thrombosis was observed, probably due to sclerotizing fluid extravasation. In 1 case significant post-treatment pain and mucosal necrosis were observed. Hospitalization and conservative treatment were resolutive. During a 6–60 month follow-up period no recurrences were observed.
CONCLUSIONS: In our experience rubber band ligation was found to be an appropriate, well tolerated and cheap technique. A good case selection allows the results' optimization.

One year results of regional anaesthesia for outpatients surgery: superselective monolateral spinal anaesthesia and spinal anaesthesia with patient in sitting position with low anaesthetics doses and non traumatic pencil point spinal needles

A Baisi[a], A Cavalca[b], ME Lorenzetti[c], AR Zanoni[a], C Carusillo, A Viotto[b]

[a]*Servizio di Anestesia e Rianimazione*, [b]*Divisione di Chirurgia Generale*, [c]*Divisione di Pediatria*, *P.O. Nuovo Montecchi di Suzzara*, *Azienda Ospedaliera C. Poma-Mantova*, *Italy*

INTRODUCTION: The use of regional anaesthesia became more and more popular in our hospital until in 1998 it was being used in: 85% of all anaesthetic procedures in the orthopaedic field, 60% in the obstetrics field (99% for cesarian section), and 45% in general surgery. The matured experience led us to use superselective monolateral spinal anaesthesia and spinal anaesthesia with the patient in sitting position also for outpatients surgery. We present our results in 1998.
METHODS: As anaesthetic drugs we used 0.5 % hyperbaric bupivacaine except for bilateral herniorraphy, where we used 1% hyperbaric bupivacaine injected with small size, non traumatic needles (Sprotte, 25 G e 29 G e Withacre, 27 G). The spinal administration techniques were:-for saphenectomy: lumbar puncture L2–L3 with 0.6–0.8 ml of 0.5% hyperbaric bapivacaine with homolateral decubitus maintained for 8 minutes;-for hemiorraphy: lumbar puncture L1–L2 with 0.6–0.8 ml of 0.5% hyperbaric bapivacaine (monolateral) with lateral position for 8 minutes and lumbar puncture L2–L3 with 0.8–1.0 ml of 1% hyperbaric bupivacaine (bilateral) in sitting position during the anaesthetic procedure, than supine decubitus;-for proctologic operations: lumbar puncture L4–L5 with 0.4–0.5 ml of 0.5% hyperbaric bupivacaine in sitting position, than in bending position for 5 minutes;-for appendecetomy: lumbar puncture L2–L3 with 1.2–1.4 ml of 0.5% hyperbaric bupivacaine in lateral decubitus for 3 minutes, than in supine decubitus. Criteria for dismission were: good control of pain, either itself either by analgesic oral or rectal drugs, no vomiting and/or urinary retention and/or fever, no post-operadve bleeding.
RESULTS: In 1998, 225 general surgery operations under spinal anaesthesia were performed Namely: 100 mono- or bi-lateral herniorraphies; 50 saphenectomies; 30 proctologic procedures; 30 appendectomies; 15 urologic procedures. Among these, 195 (86.6%) were performed in day surgery. Almost all patients (216/225) though as excellent intraoperative analgesia. Of the remaining 9: 1 patient required general anaesthesia (canula C.O.P.A. and conscious sedation with 0.15 gamma/kg/m remifentanyl), in the remainig 8 patients it was enough 0.25% bupivacaine local infiLtration by surgeon. Intraoperative true hypotension occurred only in 13 patients, needng ephedrine and fluid infusion and one or two 5 mg ephedrine boli. In the other 213 patients blood pressure drop was controlled only by ephednne boli without intra- or post-operadve fluid infusion. Among the 30 patients submitted to appendecetomy under spinal anaesthesia, only 1 needed propophol sedation because of discomfort during tractions on the mesenterium. It was underliver appendix and patient presented vomits. No problems occurred in the remaining, cases. All patients interviewed on dismission from the hospital, liked the anaesthesiologic technique and would like to repeat the same in a further operation. Among 195 patients submitted to a surgical operation, only 3 required instay in hospital., Namely: 1 patient submitted to right inguinal herniorraphy because of accidental puncture of the 'dura' with introducer of 27 G Withacre needle. This patient was submitted to blood patch with positive outcome within 5 hours and dismission the day after. Two patients, submitted to right saphenectomy and haemorrhoidectomy, because of significant bleeding during stripping and post-operative haemorrage. Except the above-mentioned patients, no one presented post-spinal headache. Urination and walking have been precocious, on average within 3 hours from the end of the surgical procedure. In submitted to bilateral hemiorraphy patients, within 4 hours from the end of the surgical procedure.

CONCLUSIONS: In outpatients surgery superselective spinal anaesthesia presents certain advantages: easy procedure; short onset time of anaesthetic block; good mioresolution; low extension and easy control only by vasopressors of the sympathetic block; fast recovery of walking and urination; decreased incidence of post-operative complications; very low incidence of post-spinal headache (in our only case was anyway due to a mistake during the anaesthetic procedure); decreased necessity of post-operative care; therefore the possibility of short hospital stay duration and at the end, high popularity index by patients. All these things together with further economics savings (materials and drugs) versus general anaesthesia procedures.

Two new plugs for trabucco inguinal hernia repair

GD Bocchiotti[a], C Terlizzi[a], M Morelli[a], E Robotti[b]

[a]U.O. di Chirurgia Generale and [b]U.O. di ChirurgiaPlastica Ospedali Riuniti di Bergamo, P.O. Nizza Monferrato, ASL 19, Asti, Italy

INTRODUCTION: No surgical technique ever met such widespread acceptance as inguinal hernia repair. The Trabucco procedure, founded upon a 'tension free' concept, is performed under local anesthesia, is less painful, allows a quick postoperative recovery, and has pratically solved the problem of recurrence. While new prosthetic materials have become available on the market, parallel variations of the original technique have been proposed: especially, the use of a more rigid prosthetic mesh (Hertra 1) which does not require sutures for fixation and conforms readily to the underlying surface. The issue remains whether a preperitoneal plug is necessary, since the inguinal area is fully covered by the prosthesis. Trabucco himself, after describing a dart-shaped plug, recently proposed a ring-like plug, 5 cm in diameter, which surrounds the spermatic cord.

METHODS: We have been using clinically, since the end of 1997, a similar device, which we gradually modified to improve its function. In indirect inguinal hernias, a wedge is removed from the external ring (3.5–4 cm in diameter). Once sutured, the device will resemble a truncated cone (Figs. 1 and 2). Being of lesser diameter than the one described by Trabucco, the ring can be more easily placed in the pre-peritoneum. Also, not being flat, it better withstands abdominal pressure. In direct inguinal hernias, we use a plug derived from the 7 cm T1 disk of a Herniamesh prosthsesis (Fig.3), of ovalar shape and with the hole for the spermatic cord eccentrically. This device can be placed in the preperitoneum by opening the transversalis fascia in true hernias, or simply placed subfascially, after undermining the fascia starting from the deep inguinal ring, when the transvasalis fascia is only weak. In all cases, the fixation around the cord allows no shifting or dislocation.

RESULTS AND CONCLUSIONS: Although we lack appropriate follow-up, we believe that the two variations to the prepentoneal plug described above are both easy to perform and provide better reinforcement.

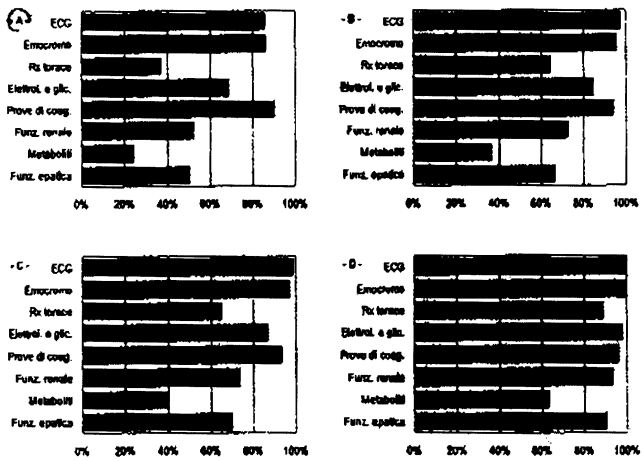
Tests to be taken by the patient in case of surgical intervention, results of a survey questionnaire filled in by 281 centers of proctologic surgery

F Gaj[a], N Buzzi[b], A Restifo[b], F Scardamuglia[a], F Tonelli[c]

[a]II Clinica Chirurgica, Policlinico Umberto I, Roma, [b]Centro Consulenze, Firenze, [c]Dipartimento di Chirurgia Generale, Ospedale di Careggi, Firenze, Italy

The SICP (Italian Society of Colon Proctology) has implemented, with the technical and organizational support of the *Centro Consulenze of Florence*, a Census of Proctology Surgery Centers at a national level. Data collection was carried out in the May–October period of 1998 (data collected refer to the year 1997). A questionnaire was sent to 1292 hospitalization centers, and to members of the two scientific societies in the specialty. The questionnaire included sections on: patients' demographic data, available resources and activities in colon proctology, pre-operative procedures, anesthesiology evaluation and techniques, anesthesiology related risks. Data management and analysis have been carried out by means of a relational computerized database in Windows environment (Access). By 31.10.98 we received 302 completed questionnaires. Of these, 281 were returned by the same number of Proctology Surgery Centers. The figures below show responses pertaining to tests performed on the patients considered for surgical options, taking into account the various patient assistance regimens (A = Outpatient Procedure; B = Day Surgery; C = Day Hospital; D = Ordinary Hospital Stay).

(A) Data refer to 153 Centers from the total sample of 281 Centers; (B) Data refer to 188 Centers from the total sample of 281 Centers; (C) Data refer to 179 Centers from the total sample of 281 Centers; (D) Data refer to 265 Centers from the total sample of 281 Centers.



Anesthesiological techniques most frequently employed, taking into account the different types of pathology, results of a survey questionnaire filled in by 281 centers of proctologic surgery

F Gaj[a], N Buzzi[b], A Restifo[b], F Scardamaglia[a], F Tonelli[c]

[a]II Clinica Chirurgica, Policlinico Umberto I, Roma, [b]Centro Consulenze, Firenze, [c]Dipartimento di Chirurgia Generale, Ospedale di Careggi, Firenze, Italy

The SICP (Italian Society of Colon Proctology) has implemented, with the technical and organizational support of the *Centro Consulenze of Florence*, a Census of Proctology Surgery Centers at the national level. Data collection was carried out in the May–October period of 1998 (data collected refer to the year 1997). A questionnaire was sent to 1292 hospitalization centers, and to members of the two scientific societies in the speciality. The questionnaire included sections on: patients' demographic data, available resources and activities in colon proctology, pre-operative procedures, anesthesiology evaluation and techniques, anesthesiology related risks. Data management and analysis have been carried out by means of a relational computerized database in Windows environment (Access). By 31.10.98 we received 302 completed questionnaires: of these, 281 were returned by the same number of Proctology Surgery Centers. The table below shows the percentage distribution of the most frequently employed anesthesiological techniques, taking into account the pathology involved (A = general, B = subarachnoid peridural, C = truncal, D = local, E = local + sedation, F = sellar, G = selective of spinal cord, H = other techniques. Plus = Two or more of the above).

	A	B	C	D	E	F	G	H	Plus	Total
Hemorrhoid I	11.3	15.0	1.3	31.9	15.6	5.6	7.5	8.1	3.8	100.0
Hemorrhoid II	13.4	20.9	1.0	21.9	12.9	9.0	11.4	5.0	4.5	100.0
Hemorrhoid III	22.6	24.4	2.2	4.4	6.3	13.3	18.9	0.4	7.4	100.0
Hemorrhoid IV	29.3	23.0	1.9	3.0	4.4	13.7	18.5	–	8.3	100.0
Hemorrhoidal thrombosis	13.2	11.8	0.4	53.2	9.2	3.2	6.4	0.4	2.4	100.0
Anal tissue	16.7	16.7	2.2	25.8	10.2	10.5	11.8	0.4	5.8	100.0
Anal abscess	27.5	11.7	1.8	19.0	15.8	7.3	10.3	1.5	5.1	100.0
Anal fistula	28.8	21.9	1.8	3.3	5.1	14.2	19.0	–	5.8	100.0
Coccygeal fistula	27.8	20.9	1.5	18.7	8.8	4.4	13.2	–	4.8	100.0
Condyloma	12.0	10.8	1.2	37.3	14.1	9.5	9.1	0.8	5.0	100.0
Hypertrophic anal papilla	7.2	6.8	0.5	65.3	12.6	3.6	3.2	–	0.9	100.0
Local excision neoplasta	31.8	17.9	1.7	8.5	9.4	6.8	17.9	0.9	5.1	100.0
Other conditions	40.0	20.0	–	20.0	–	–	–	20.0	–	100.0

Role of the anesthesiologist, results of a survey questionnaire filled in by 281 centers of proctologic surgery

F Gaj[a], N Buzzi[b], A Restifo[b], F Scardamaglia[a], F Tonelli[c]

[a]*II Clinica Chirurgica, Policlinico Umberto I, Roma,* [b]*Centro Consulenze, Firenze,* [c]*Dipartimento di Chirurgia Generale, Ospedale di Careggi, Firenze*

The SICP (Italian Society of Colon Proctology) has implemented, with the technical and organizational support of the *Centro Consulenze of Florence*, a Census of Proctology Surgery Centers at the national level. Data collection was carried out in the May–October period of 1998 (data collected refer to the year 1997). A questionnaire was sent to 1292 hospitalization centers, and to members of the two scientific societies in the speciality. The questionnaire included sections on: patients' demographic data, available resources and activities in colon proctology, pre-operative procedures, anesthesiology evaluation and techniques, anesthesiology related risks. Data management and analysis have been carried out by means of a relational computerized database in Windows environment (Access). By 31.10.98 we have received 302 completed questionnaires: of these, 281 were returned by the same number of Proctology Surgery Centers. The following table shows the responses to the questionnaire concerning some aspects of the anesthesiological procedure.

	YES	NO	Not Av	Total
Do you believe that the presence of an anesthesiologist is required even when the surgical procedure is performed with local anesthesia?	64.8%	33.1%	2.1%	100.0%
Do you believe that for outpatient proctologic surgery it is sufficient that the anesthesiologist be available on call?	48.0%	49.8%	2.1%	100.0%
Does your center provide a full 24 hr. surgical and anesthesiological assistance?	94.7%	3.9%	1.4%	100.0%

Not Av = Response Not Available; data refer to all 281 Centers from the total sample of 281 Centers

Procedures to be performed as preparation to the surgical intervention: results of a survey questionnaire filled in by 281 centers of proctologic surgery

F Gaj[a], N Buzzi[b], A Restifo[b], F Scardamaglia[a], F Tonelli[c]

[a]*II Clinica Chirurgica, Policlinico Umberto I, Roma,* [b]*Centro Consulenze, Firenze,* [c]*Dipartimento di Chirurgia Generale, Ospedale di Careggi, Firenze, Italy*

The SICP (Italian Society of Colon Proctology) has implemented, with the technical and organizational support of the *Centro Consulenze of Florence*, a Census of Proctology Surgery Centers at the national level. Data collection was carried out in the May–October period of 1998 (data collected refer to the year 1997). A questionnaire was sent to 1292 hospitalization centers, and to members of the two scientific societies in the specialty. The questionnaire included sections on: patients' demographic data, available resources and activities in colon proctology, pre-operative procedures, anesthesiology evaluation and techniques, anesthesiology related risks. Data management and analysis have been carried out by means of a relational computerized database in Windows environment (Access). By 31.10.98 we have received 302 completed questionnaires: of these, 281 were returned by the same number of Proctology Surgery Centers. The following table shows the responses to the questionnaire concerning some of the procedures performed as preparation to the surgical intervention.

	YES	NO	Not Av	Total
Is a venous peripheral route established before performing an outpatient surgical procedure?	67.3%	23.5%	9.3%	100.0%
Prior to the surgical procedure:				
a. Does the patient routinely fill in the informed consent sheet?	90.4%	8.9%	0.7%	100.0%
b. Is the patient provided with all relevant information regarding pre-operative standard procedures and post-operative risk-related limitations?	98.8%	0.7%	0.7%	100.0%
c. Is all relevant information (see a. and b.) provided in written form and is the patient asked to sign his/her agreement to the above information upon admission to the center?	70.1%	28.1%	1.8%	100.0%
In your opinion is additional medical legislation needed in order to protect the physician and the patient?	39.9%	54.4%	5.7%	100.0%

Not Av = Response Not Available; data refer to all 281 Centers from the total sample of 281 Centers

Young surgeon training and one day surgery

F Trombetta, R Moscato, F Moro, S Sandrucci, B Mussa

Dip. di Oncologia-Sez.di Chirurgia Oncologica, Torino, Italy

It is common opinion that day surgery must be performed by or under supervision of an expert surgeon. Italian rules for the Surgical Specialization Institution orders young surgeons to perform a good number of little and medium difficulty surgical interventation. So, in our One Day Surgical Unit live together surgical educational purpose and quality as mondial study report. We plan a young surgeon training program divided in two steps: 1) 20 Trabucco's hernioplastic like second operator, 2) 10 Trabucco's hernioplastic like first operator under tutor. Six young surgeons will complete training (70%) at the end of 1999. Actually they performed like first operator 43 intervention under 133. The follow up (10 months) shows no difference in conversion or complication or recurrence between expert surgeon and young surgeon under tutor. We think that One Day Surgery could be a training ground for young surgeons under tutor.

Our experience of ambulatory phlebectomy

LR Marcellino, E Sessa, SC Vaudo, MV Marcellino

Istituto III Clinica Chirurgica, Policlinico Umberto I, Università degli Studi di Roma 'La Sapienza', Rome, Italy

Ambulatory phlebectomy, described and developed by Robert Miller, is a well codified technique. Once the indication therapy is established, the operation develops without premedication, only in asepsis conditions, in a well equipped ambulatory. Vertical paths are first drawn, and after disinfection, they are anesthetized. Some little cutaneous incisions permit the introduction of a crocket of phlebectomy, to cut, to take and to extract varix. In this way it is possible to extract the whole variceal path wrapping on a linear or vertical or curved mosquito forceps the insufficient vein, interrupted between an incision and the other. No vein ligature is needed. The suture of the wounds is not necessary, because of the small sides of the incisions. The patient is mobilized at the end of the operation after applying a sterile medicament and an elastic cover to be brought for three weeks. It is not necessary to be out of work. The results are excellent both functionally and aesthetically, seams disappear after some weeks or months. A good knowledge of local anaesthesy permits to operate at the same time large varices. Besides phlebectomy it is also possible to utilize crossectomy or short stripping (internal or external stripper). Hospital care is necessary for patients with very large varices and with massive reflux, at risk or anxious, or those who live far away or alone. Our experience considers 70 patients, 55 females and 15 males aged from 25 to 65 years. Thirty females and 10 males have been operated of saphenectomy plus exeresis of the collaterals; 25 females and 5 males of varicectomy of leg or thigh. The immediate and time results have been very good. There have been no recurrences. Thirty-five percent of the cases have required sclerotherapy after three months.

Barron's hemorrhoid elastic ligature: our experience

LR Marcellino, E Sessa, SC Vaudo, MV Marcellino

Istituto III Clinica Chirurgica, Policlinico Umberto I, Università degli Studi di Roma 'La Sapienza' , Rome, Italy

I and II degree hemorrhoid treatment practices are different, such as Barron's elastic ligature. Hemorrhoid ligature consists of inserting a rubber ring at the base of the hemorrhoid bag above the pectineal line where the mucous membrane contains a small number of nervous fibers and is not sensible through terminal or lateral applicator. The patient is kept in a ginecological position. In this way choking and necrosis of the hemorrhoidal tissue take place in about 4 days. The elastic remains in place for about 10 days with the necrotic stump also causing a hemostatic effect. We have also executed one application for each visit with two visits per patient at a distance of about 15 days. Three visits have been sufficient to eliminate hemorrhoids completely in 80% of the cases; the remaining 20% required the fourth visit. From January 96 to January 98 we treated 64 patients (40 males and 24 females) affected from first and second degree hemorrhoids. Thirty cases showed first degree hemorrhoid and 34 showed second degree ones. Patients have been subjected to 3, 6, and 12 months follow up and 80% revealed complete recovery while 20% showed an high improvement. Post operatory complications are represented by: pain 28% well controlled by using common analgesics, rectal tenesmus solved with use of analgesic and antispastic, little bleeding for some days and spontaneously ceased. According to these results we can state that elastic ligature for I and II degreed hemorrhoids is a valid technique alternative to hemorrhoidectomy, easily executed and without complications.

Ambulatory operation of inguinal hernia with protests

LR Marcellino, E Sessa, SC Vaudo, MV Marcellino

Istituto III Clinica Chirurgica, Policlinico Umberto I, Università degli Studi di Roma 'La Sapienza', Rome, Italy

High biologic compatibility protesic beds permit to obtain better results in ambulatorial surgical treatment of inguinal hernia. Propylene is biologically perfect and it mixes with muscular tracts and the aponevrosis and it realizes a physiologic plastics maintaining normal physiopathologic mechanisms. Over an 8 year period we have executed 190 plastics for inguinal hernia using propylene beds (Marlex); ten of them were female. One hundred and ten cases where recurrences, 80 were bilateral, 50% were recurrent or plurirecurrent. Trabucco's technique has been used. There were no cases of urgency and we used local anesthesy. No complications were noted except urinary retention in three cases of bilateral hernia plastic. Prosthesis removal has not been necessary and thanks to a perfect follow-up scheme on patient's way of life there have not been recurrences. In conclusion the Trabucco method with Marlex protests is easy and safe and allows the patient to leave the bed and go home immediately. In some cases of heavy patients we advised 3 days of rest before starting work again. This surgical method should be considered the best treatment for primitive and recurrent inguinal herniae because of the fast operation time, family and working life and low expense.

Lower extremities varices ambulatorial treatment

LR Marcellino, E Sessa, SC Vaudo, MV Marcellino

Istituo III Clinica Chirurgica, Policlinico Umberto I, Università degli Studi di Roma 'La Sapienza', Rome, Italy

Varices ambulatorial surgical therapy is more and more accepted because it is better liked by patients and can considerably reduce the social cost of the illness. From March 1996 to December 1998 we have selected 75 patients, 42 females and 33 males, according to some medical tests such as Doppler velocimetry to dismiss the patient on the same day, on an anesthesiologic practice, 1.5% Mepivacaina and Propafol solution has been used during stripping time. Particular care shall be done on cross hemostasis and in the application of the bandage executed with Tensoplast after stripping; later the patients have used the elastic tutor for about 50 days and have taken antiedemigegen and phlebotropic drugs for the first 10 days. Thirty-five out of the 75 patients have been dismissed the same day, the remaining cases have been controlled until the following days. Ninety percent of the cases showed no symptoms while the remaining 10% of the cases had a noticeable improvement. Varices ambulatorial surgery should satisfy the principles of simplicity, esthetic and innocuousness, that can be easily achieved with a careful instrumental and clinic study and with the obvious case differences.

Lichtenstein hernioplastic tension free in one day surgery. Our experience

MV Marcellino, E Sessa, SC Vaudo, LR Marcellino

Istituto III Clinica Chirurgica, Policlinico Umberto I, Università degli Studi di Roma 'La Sapienza', Rome, Italy

Treating inguinal hernia we have worked to have a selective and elastic behavior, open to different techniques to be used according to the patient, his body, his age and the different physiopathologic mechanism that has caused it, a method for any single case. The operation is executed in local anesthesy. The inguinal canal is opened and the hernia is identified. If there is an indirect bag it is opened to explore the bottom of the canal simply inverting it in the abdomen without cuttings, sutures and ligatures. If the direct bags are big, they can be inverted with a simple absorbable suture of invagination. A 5–10 cm of prosthesis bed coating is required. The upper limbus is set by using a 2/0 Prolene continous suture, it immobilizes the bed into the lacunar ligament and then we proceed along Poupart ligament beside the internal ring. The spermatic cord comes out by an incision in the bed and in the internal ring. The whole structures around are cleaned up. If it is not possible to identify the genitofemoral nerve, we extract the inferior muscolar cremasteric band, whose muscolar fibers always contain the nerve with the spermatic vessels, through a separate exit in the internal ring. The upper limbus of the bed is secured, without pulling, with a continous suture as far as the sheath of the rectus and the muscle and the upper tendon. A single suture brings the bed incisions laterally to the Poupart ligament as far as the sheath of the rectus and the muscle and the upper tendon. A single suture brings the bed incisions laterally to the Poupart ligament as far as the internal ring. In this way tissue approach is avoided. Since the patient is awake and able to cooperate, he is asked to cough and to execute Valsalva maneuver to test the repair texture. Obliqual external aponeurosis is closed on the cordon with an absorbable and continous suture. This technique has been experimented on 60 patients operated in hernioplasty for the first time or recurrences. The first cases have been subjected to a 5 years follow up. For the moment there have not been recurrences. This must be considered as a preliminary notice, considering the short period of control; however, the collected results have been satisfying. We have noticed no infective phenomenon. The patient can return to work two days after the operation.

Patients' requirements in case of surgical intervention: results of a survey questionnaire filled in by 281 centers of proctologic surgery

F Gaj[a], N Buzzi[b], A Restifo[b], F Scardamaglia[a], F Tonelli[c]

[a]II Clinica Chirurgica, Policlinico Umberto I, Roma, [b]Centro Consulenze, Firenze, [c]Dipartimento di Chirurgia Generale, Ospedale di Careggi, Firenze, Italy

The SICP (Italian Society of Colon Proctology) has implemented, with the technical and organizational support of the *Centro Consulenze of Florence*, a Census of Proctology Surgery Centers at the national level. Data collection has been carried out in the May–October period of 1998 (data collected refer to the year 1997). A questionnaire has been sent to 1292 hospitalization centers, and to members of the two scientific societies in the specialty. The questionnaire includes sections on: patients' demographic data, available resources and activities in colon proctology, pre-operative procedures, anesthesiology evaluation and techniques, anesthesiology related risks. Data management and analysis have been carried out by means of a relational computerized database in Windows environment (Access). By 31 October 1998 we have received 302 completed questionnaires: of these, 281 were returned by the same number of Proctology Surgery Centers. The table below shows the responses to items concerning patients' requirements and preparation in case of surgical intervention.

It is made sure that the patient:	Yes (%)	No (%)	Not Av (%)	Total (%)
Is able to understand and accept/reject the proposed course of action	100.0	–	–	100.0
Is able to comply with the proposed medical therapy	99.8	0.4	0.4	100.0
Can rely on a person that constantly assists him/her in the post-operative period	88.0	15.5	1.4	100.0
Spend the first post-operative night in a site not far (<100 km) from the hospital where the surgery was performed, or any other medical center indicated for reliable assistance	72.8	21.3	5.8	100.0
Lives in a home environment with hygienic conditions sufficiently good so that he/she can reasonably comply with the post-operative medical therapy	69.0	28.4	4.7	100.0
Is or is not pregnant	82.5	11.8	5.5	100.0
If yes, does the center proceed with the test?	60.1	91.0	8.3	100.0

Not Av = response not available; data refer to 277 centers from the total sample of 281 centers.

The Lichtenstein hernia repair on day hospital regimen

U Ginanneschi, M Rizzi, P Fabiani, A Dell'Antonio, L Tenze, F Maghetti

Istituto di Chirurgia Generale, Università degli Studi di Trieste, Italy

The most important etiologic factors of adult groin hernia and hernia recurrence are the weakness of the transversalis fascia and the tension on the suture line: the use of prosthetic mesh, performing a 'tension free' repair, allows to act on both the etiologic factors. Local anesthesia permits to perform an hernioplasty with short postoperative hospitalization. At our institute, we performed 228 groin hernia repairs with Lichtenstein technique (there were 32 bilateral hernia) employing a Marlex mesh; the patients age was 24–96 (media 66.7) years. Hernias were classified as Nyhus 2 in 59 cases, Nyhus 3a in 53 cases, Nyhus 3b in 96 cases and Nyhus 4 in 20 cases. We performed operations under local anesthesia in 227 cases (only one patient, who presented a bilateral groin hernia and an umbilical hernia, had general anesthesia); 212 procedures were done using Lidocaine and/or Bupivacaine and the last 15 employing Ropivacaine. A total of 2.5% of the patients had local postoperative complications (seroma, hematoma, wound infection). The postoperative hospital stay was shorter than 8 hours in 70 cases (35.7%); 82 (42.3%) patients chose to remain in hospital for 24 hours, mostly for social reasons (91.4% of them were 70 or older); 22% of patients had a postoperative stay longer than 24 hours due to local complications, or mainly to pre or postoperative urologic diseases or medical problems. In 207 patients checked, after a median follow up of 2.2 years, we did not record any recurrence. Our results confirm that Lichtenstein groin hernia repair

under local anesthesia is easily and safely performed in a center not exclusively treating hernia and in very aged patients too. This technique provides a remarkable decrease in hospital cost, mostly because of the low percentage of local complications and low recurrence rate. We suggest that Lichtenstein hernioplasty should be the ideal choice of day hospital groin hernia repair.

Inguinal hernia repair: our experience

B Ceccopieri, PL Binda, M Mazzoleni, R Apostolo, P Fragapane

II Divisione Chirurgia Generale, *Ospedale Mauriziano*, *Torino*, *Italy*

INTRODUCTION: Actually many 'tension free' hernioplasty techniques are proposed. Trabucco's technique, sutureless, that uses a pre-shaped, no memory, rigid mesh of monofilament polypropylene, is the most successfully applied. It is an easy operation, producing less postoperative pain, requiring a short hospitalisation involving a low report of recurrences and that you can do with subcutaneous local anaesthesia. The authors report their experience in inguinal hernioplasty, performed during the period 1/12/96–31/12/98 in their surgery division.
METHODS: Two hundred and seventy-five inguinal hernioplasty (191 primitives and 16 recurrences) have been performed in 197 patients, 177 males and 20 females, with an average age of 66 years (range: 6–90 years). One hundred and eighty-four (96.7%) of the patients with primitive hernias had Trabucco's operation, 5 patients (2.6%) had Liechtenstein's operation and 2 children (0.7%) had Ferguson's hernioplasty. Local anaesthesia has been performed in 169 cases: general anaesthesia was applied in 26 cases (usually bilateral hernias) and in 2 cases rachianaesthesia. Fifteen recurrent hernias had Trabucco's technique and only 1 case Liechtenstein's operation. Local anaesthesia was used in 5 cases and general anaesthesia in the others.
RESULTS: Few and not significant complications have been observed during the postoperative period; at the moment no recurrences have been identified even if the follow-up is not long.
CONCLUSIONS: According to their experience, the authors suggest the use of Trabucco's technique with main importance to a pre-shaped, no memory, rigid mesh of monofilament polypropylene.

Which role for the videolaparocopic appendectomy in day surgery?

Rollino R, Pagella R, Maimone M, Cotroneo A

Department of General and Minimally Invasive Surgery, *Clinica 'Salus' Alessandria*, *Italy*

INTRODUCTION: Recent studies have shown that laparoscopic appendectomy is a reliable technique with may advantages over the traditional technique. However, it is still not considered the method of choice by some surgeons. It could be interesting to allocate it within the Day Surgery
METHODS: From May 1991 to December 1998, we performed, in our General Surgery and Mini-Invasive Surgery ward, 650 operations using videolaparoscopy. Starting in May 1995, we began to perform appendectomies using laparoscopy in order to determine the advantages and the possibility of an eventual introduction in the Day Surgery. Up to May 1998, 160 laparoscopic appendectomies were performed, 38 on male patients and 122 on female patients. The average age was 25 years (range 15–61). The Hasson technique was used to perform the pneumperitoneum. We used 3 trocars: a 10 mm umbelical trocar, a 12 mm suprapubic and 5 mm in the left iliac fossa. The mesenteriolum appendicis vermiformis was coagulated with the bipolar clamp or, in particular situations (subserous or retrocecal appendix or diffused adherence), a crochet or monopolar forceps were used. The stump was treated with double ligature and was not sunk with tobacco pouch.
RESULTS: It was only necessary in one case to convert due to hemorrhaging of the wall, following introduction of the suprapubic trocar. We did not encounter any complications in any of the other opeartions carried out using laparoscopy. We noticed the following associated pathologies: 1 Mechel diverticulum, 15 ovario-cystis, 8 salpingitis.
CONCLUSIONS: The interesting datum arising from our case-report, in the absence of complications in the appendectomies carried out through laparoscopy. With the good postoperative comfort, it could enable the videolaparoscopic appendectomy to enter in the field of Day Surgery for the catarral appendicitis as well for the chronical appendicitis, excepted the phlegmonus, necrotic types or the ones complicated by peritonitic events.

Treatment of hemorroids in day surgery: our experience

G La Malfa, NA Belnome, M Salidra, V Bartolo, S Di Mauro

Div. Chirurgica, *Policlinico Universitario*, *Univ. di Messina*, *Italy*

Abstract not received.

Treatment of varicose veins in a day-surgery unit. Early results

R Casals, A Pelayo, R Fernandez-Paredes, MC Mias, E Curia, L Perez-Ruiz, B Bucci*

General Surgery Div. & Day-Surgery Unit, *University Hospital 'Arnau de Vilanova' of Lleida*, *Catalonia*, *Spain* **General Surgery Div. European Inst. of Oncology*, *Milan*, *Italy*

Abstract not received.

Open free-tension hernia repair in a day-surgery unit. Early results

R Casals, A. Pelayo, S. Torres, MC Mias, L. Perez-Ruiz, B. Bucci*

General Surgery Div. & Day-Surgery Unit, *University Hospital 'Arnau de Vilanova' of Lleida*, *Catalonia*, *Spain* **General Surgery Div. European Inst. of Oncology*, *Milan*, *Italy*

Abstract not received.

Dermatologic surgery: is it still a Cinderella?

A Alinovi, M Guadagni, A Zucchi

Dept. of Dermatlogy, *University of Parma*, *Italy*

Most physicians still do not realize that Dermatology is the speciality that deals with medical and surgical diseases of the 'skin organ'. Traditional dermatology has been changing in the last 50 years and more and more dermatologists are doing an ever-increasing member of surgical procedures in their practices. The dermatologic surgeon is uniquely trained in the diagnosis and surgical treatment of diseases and disorders of the skin, benign and malignant tumors, aging of the skin and cosmetic procedures. The surgical modalities employed by the dermatologists include curettage and desiccation, classic cold steel incisional surgery, sequel node dissection, dermoabrasion, hair transplantation chemical surgery, micropigmentation technique, Moh's micrographic surgery, sclerotherapy, son tissue augmentation, liposuction, laser surgery, grafting procedures, nail surgery. These procedures are usually performed in an ambulatory setting, such as an office treatment room or a surgical suite. Under special circumstances, a hospital surgical operatory unit may be utilised. The main characteristics of the dermatologic surgeon are the following: best clinical evasion of the skin problem to be taken care of; wide spectrum armamentarium of treatment modalities; best cost/benefit ratio.

Day surgery and breast diseases. Our experience

S Tinozzi, M Benedetti, C Bianchi, L Castagnoli, G Morone, E Negri, G Dicorato, D Scicchitano, G Bassanini, A Todde

Patologia Chirurgica II, *IRCCS Policlinico S. Matteo*, *Università di Pavia*, *Italy*

Surgical treatment of breast diseases is considered a good indication to day surgery because it involves a clean and quick surgery with low

risk and low postoperative complications. Not only benign diseases are suitable for day surgery but also malignant tumors and plastic surgery. New anesthetic drugs have a primary importance to allow safe day surgery procedures; anesthesia may be general, regional or local. A careful selection of patients is also important. We leave out patients with severe cardiopulmonary diseases (ASA > II), with coagulopathy and allergy to local anesthetics if local anesthesia is needed. Our experience is related to 408 operations performed in *Patologia Chirurgica II of the University of Pavia*, *IRCCS S. Matteo Hospital* and to 51 cases of plastic surgery in the *Servizio di Chirurgia Ambulatoriale del Centro Diagnostico Italiano* (*Milan*). We divided our operations in ambulatorial surgery, day-hospital and one day-surgery. Regarding postoperative complications, we had hemorrhage in 2 cases, 5 serious wound infections, 9 seromas in axillary clearances and 4 hematomas. Twelve patients had postoperative hypotension.

Ambulatorial surgery	N°	Day-Hospital	N°	One Day-Surgery	N°	Day-Hospital Plastic Surgery	N°
Incisional biopsy	41	Quadrantectomy	5	Mastectomy	4	Breast volume augmentation	15
Excisional biopsy	49	Wide local excision	39	Quadrantectomy	6	Reduction mammoplasty	9
Wide local excision	25	Axillary clearance	12	Wide local excision	23	Mastopexis	4
Steretaxic biopsy	14	Benign tumor excision	34	Axillary clearance	15	Reconstruction	5
Cutaneus biopsy	29	Recurrence excision	8	Benign tumor excision	4	Nipple-areola surgery	18
Limphnodal biopsy	38	Male mastectomy	13	Recurrence excision	27		
Recurrence excision	13			Male mastectomy	8		
Total	209	Total	111	Total	88	Total	51

Post-operative analgesia in day-case surgery

A Cuomo[b], G DeNovellis[a], A Minale[a], M Ferrara[a], A Maresca[a], A Macarone Palmieri[a], M Pinto[b]

[a]*Departments of Anaesthesia and Intensive Care*, *Hyperbaric Therapy*, *Antalgic Therapy*, *University 'Federico II'*, *Naples*, *and* [b]*National Institute Cancer 'G. Pascale'*, *Naples*, *Italy*

The necessity to grant a good analgesic post-operative covering in day-case surgery is often undervalued. There are many possible conducts in the use of local anaesthetics, nonsteroidal antiinflammatory drugs or paracetamol. Local anaesthetics can be used whether for infiltration of the wound or for external application. In the former case, their use grants a good analgesic covering and one can add, if required, the next systemic administration of analgesics. The external application of liniments containing local anaesthetics is indicated for the analgesic conduct following the removal of little cutaneous or mucous tumours. Non steroidal antiinflammatory drugs are surely the most used drugs for post-operative analgesia in day-surgery. The latter drugs can be administered whether systemically or for oral and rectal intake. The first administration is usually given intra-operatively. Paracetamol is a drug showing a strong analgesic activity. Its use in post-operative analgesia is new in comparison to that of nonsteroidal antiinflammatory drugs also for the introduction on the market of its precursor propacetamol administered systemically (iv to be preferred). Moreover, paracetamol is also found on the market in addition to codeine whether as tablets or suppositories. Independently of dosage of any component, tablets, in our opinion, are especially suitable for postoperative analgesia following minor facial surgery. On the other hand, rectal administration is the best pharmacological choice in children.

The rhinoseptoplastic in day surgery

M Meglio[a], A Macarone Palmieri[a], D Testa[b], A Cuomo[a], A Maresca[a], M Salafia[b]

[a]*Departments of Anaesthesiology*, *University 'Federico II'*, *Naples;* [b]*Institute of Ontolayngology*, *Head and Neck Surgery*, *University 'Frederick II'*, *Naples*, *Italy*

Rhinoseptoplastic is an operation of short duration and low surgical postoperative risk. The introduction of sedative-hypnotic and analgesic medicines with short emivite allowed us to elaborate an anaesthesiologic protocol apt to the execution of this operation in day surgery. Our study was realized on 30 patients, ASA I-II. All of the patients were premedicated i.m. 30 min. before the operation with atropine 0.01 mg/kg and midazolam 0.03 μg/kg/min. In the operating-room, an endovenous infusion of remifentanyl 0.05 μg/kg/min was realized. After 5 min, a local anaesthesia was realised through infiltration of 5 ml of mepivacaine (2%) with epinephrine (1/70 000). An antiedemic prophylaxis was practised through desametasone and application of an ice bag. The patients are controlled for at least 6 h. The discharge is preceded by an evaluation of the neuropsychic and neuromuscular recovery and by a surgical control. The premedication with midazolam and the infusion of remifentanyl allows to effect the infiltration of local anaesthetic with only the slightest inconvenience for the patient. The conditions of operability in bleeding terms were considered satisfactory by the surgeon. We do not have to signalize any case of breathing depression or any other important complication. Once the results were seen, the adopted anaesthesiologic protocol represents, in our opinion, an efficient alternative to the general anaesthesia or to the traditional neuroleptoanalgesia for the rhinoseptoplastic, by allowing its execution in day surgery.

Carpal tunnel syndrome in day surgery

G. Stevanato[a], A. Rapanà[a], F. Guida[a] C Conti[a], G. Rizzo[a], C. Mezzina[b], G. Michieli[b], G Trincia[a]

[a]*Neurosurgical Division and* [b]*Neurological Division*, *'Umberto I' Hospital*, *Mestre*, *Venezia*, *Italy*

During the last three years, we have performed 185 carpal tunnel release in Day-Surgery in 158 patients. Among them there were 136 females (86%) and only 22 males (14%), the mean age was 57.8 years (range: 28–88) and 15% of the patients complained of a bilateral syndrome.

Almost all of the patients (97%) underwent a preoperative electromiographic (EMG) study in order to assess both the need and the correct moment for surgery. A decrease of the sensitive speed of the median nears below the limit of 35 m/sec, in the presence of the classical clinical picture, could represent a valid indication for the surgical decompression of the entrapped nerve. For the very few cases (3%), in which the EMG was not feasible, or the clinical picture we not diagnostic for a carpal tunnel entrapment, we have utilised the MRI as a diagnostic tool being able to visualise the whole trend and the site of maximal nerve compression.

All of the patients were given benzodiazepine preoperatively; all of the operations were performed under local anaesthesia by means of a subcutaneous injection of Naropina (75 mg/ml) that couples a good duration without the typical side effects described for many over local anaesthetic drugs. The transverse carpal ligament is cut under direct visual control. In 10% of the cases, because of the presence of epineurnal scars due to the long lasting compression of the nerve, the epineurolysis has been performed with the help of the intraoperative microscope. Movements of the affected hand are limited during the first 7–10 postoperative days with the use of a light plastic splint. In our experience, the 'Day Surgery' treatment of the carpal tunnel gave good results with minimal hospitalisation.

Thyroid resection under local anesthesia. 'Come back' of an old technique?

JJ Starzewski, J Kozera J, Z Lorenc, J Donocik

Department of General Surgery, Saint Barbara Hospital, 41-200 Sosnowiec, Poland

For a long time, thyroidectomy under local anesthesia (LA) used to be a standard. The advent of modern anesthetic techniques, namely LA, is rarely used in this procedure nowadays. However, cost saving pressure of hospital management authorities has changed the situation. Some 34 patients underwent subtotal thyroidectomy under LA in this institution during November and December 1998. There were 30 females and 4 males (mean age 40.6 years) with euthyreotic. multinodular. benign (FNAC-negative) goitre. The patients were divided into there groups according to the goitre size estimated by preoperative usg measurement and the specimen weight. 9 patient had small goitre (up to 75 ml). 19 medium size (up to 115 ml) and 6 large (above 115 ml). After draping, the operative field was infiltrated with 0.5% Lidocaine (3 mg/kg b.w.). Also Diazepam (0.3 mg/kg b.w.) and Petydine (1 mg/kg b.w.) were injected i.v. in the divided doses during the procedure. Pulsoxymetric and ECG monitoring were conducted. Mean operating time was 40 min. There were no postoperative complications. All patients were discharged the next morning. Patients satisfaction with the procedure was estimated using a subjective 10 score scale. The score never dropped below 7.

Ambulatory laparoscopic cholecystectomy

L Leone, A Younes

Department of Surgery, Pierangeli Clinic Pescara, Italy

OBJECTIVE: To evaluate the feasibility, convalescence and cost effectiveness of L.C.-descriptive study.
SUBJECTS: 370 patients under L.C. 70% ASAI-II, 30% ASA III
OPERATIONS: L.C. by a standard four cannula technique: propofole and local anaesthesia, pre-emptive analgesia, prophilactive antiemetics. Patients were selected for day case if they were under 50 years old; and expressed their intention to be discharged the same day, none of them had a history of jaundice or any anaesthetic controindication and if there was an adult at home to look after them: The median hospital stay was 14 hours (12–24 hours); the median number of days off work or recreational activity was five days. This technique allowed us to reduce the cost by about 60%; pain and vomiting were the main factors that compromised the duration of convalescence after L.C.
CONCLUSIONS: L.C. can be performed as an outpatient operation in more than half of the selected patients.

Nervous disorders after Lichtenstein hernia repair

D. Fontana, V. Della Beffa, M Fusca, M D'Agata, R. Leli

Department of Surgery B-G. Bosco Hospital, Turin, Italy

INTRODUCTION: Today, the widespread adoption of alloplasty in hernia repair has virtually eliminated their recurrence. Differences between each technique could be pointed out considering some less relevant problems, as sensibility disorders: hyphosesthesia, anaesthesia, paraesthesia and neuralgia secondary to nerve entrapment. In Lichtenstein repairs with mesh fixation by suture, it is theoretically easier to entrap a nerve than in sutureless techniques, as Trabucco repair. In order to verify the prevalence of nervous disorders in Lichtenstein repairs, we have audited a series of patients treated in our Department.
METHODS AND MATERIALS: From 1993 to 1997, 641 patients underwent hernia repair. Among this series, 134 patients—147 Lichtenstein's repairs—were interviewed by phone. AII patients suffering from some disturbance were visited. During the operation, the ileohypogastric nerve was always isolated and the ileoinguinal and genitofemoral nerves were also isolated whenever visualised. The polypropylene mesh was fixed by nonreasorbable suture.
RESULTS: We have found 7 cases with nervous disturbances (4.7%): (1) Paraesthesia and mild pain in inguinal region; (2) Neuralgia two years after repair lasting until now, hyphoaesthesia in inguinal region and to thigh root; (3) Neuralgia for 6 months; (4) Pain on pubic tubercle. Hyphoaesthesia to thigh root and anaesthesia to inguinal region; (5) Hyphoaesthesia to inguinal region; (6) Lasting pain to inguinal region; (7) Hyphoaesthesia to inguinal legion. No patients required new surgical treatment for pain intolerance. Anti-inflammatory drugs wereadministered orally and local corticosteroid infiltration was used in some cases.
CONCLUSION: The literature review shows the major interest of authors is focused on recurrence and on important persistent neuralgia The others less relevant nervous disorders are rarely considered. Our analysis on a sample of Lichtenstein repairs from our series finds a fair number of such cases. We believe that only a careful follow-up, inclusive of thorough neurological examination of superficial sensitivity, can find out slight disturbances. We wonder weather some new technical trick is to be adopted to reduce the incidence of such disorders (absolutely sutureless technique, reabsorbable suture, limited cord dissection, no pubic fixing stitch).

Stripping of greater saphenous vein: randomized trial comparing regional, general and spinal anesthesia

M Pisacreta, T Porretta, R Gornati, A Pelucchi, B Moltemi, B Balzarotti, H Kuriharae, AM Taschieri

Clinica Chirurgica II, Università degli Studi di Milano, Ospedale L. Sacco, Milan, Italy

In our Institution, from September 1994 to February 1996, we carried out a randomized trial for patients affected by varicous veins treated with complete stripping of the greater saphenous vein comparing region, general and spinal anesthesia; we included 50 patients for each group without any exclusion criterion. Patients were contacted 3 months after surgical treatment to evaluating early postoperative complications relating to anesthesia, including cephalagia, vomiting, legs paresthesias and acute retention of urine. We considered naurological complications, like located transitory hypoesthesia or complete anesthesia for saphenous nerve lesion. Finally, we estimated tolerance for surgical treatment with local anesthesia (using the Scott-Huskisson scale) and resumption of work. Our data show that local anesthesia is well accepted; we registered no early postoperative complications and patients resumed their activities earlier than if treated with general or spinal anesthesia. No patients treated with local anesthesia were affected by saphenous nerve lesion (0% versus 1.2% in other groups). In our hospital, we have registered 321 operations with local anesthesia between September 1994 and March 1998. In this group, we performed 223 complete strippings of the greater saphenous vein and 98 partial strippings.

Phlebology in day surgery: short stripping of the long saphenous vein

B Bonfiglio, A Zecca, B Micali

Chirurgia generale V, Policlinico Universitario, Messina, Italy

Abstract not received.

One year results of regional anaesthesia for outpatients surgery: superselective monolateral spinal anaesthesia and spinal anaesthesia with patient in sitting position with low anaesthetics doses and non traumatic pencil point spinal needles

A Baisi[a], A Cavalca[b], ME Lorenzetti[c], AR Zanoni[a], C Carusillo[a], A Viotto[b]

[a]Servizio di Anestesia e Rianimazione, [b]Divisione di Chirurgia Generale, [c]Divisione di pediatria, P.O. Nuovo Montecchi di Suzzara, Azienda Ospedaliera C. Poma, Mantova, Italy

Abstract not received.

Remifentanil for urological day surgery

A Maresca[b], A Cuomo[a], L Cocco[a], F Santo[a], G De Novellis[a], A Macarone Palmieri[a], M Meglio[a]

Department of Anaesthesiology, Paeciatric Intensive Care, Hyperbaric Therapy and Antalgic Therapy, University 'Federico II', Naples and National Institute Cancer, 'G Pascale', Naples, Italy

INTRODCUTION: The aim of this study was to evaluate the efficiency of remifentanil vs fentanyl during urological day surgery procedures such as: fimosis, varicocele, idrocele, transuretral resection in accordance with saches technique, turb, by total anaesthesia.
METHODS: Informed consent was obtained from 80 patients, age range from 15 to 60 years; ASA I–II. The patients were randomised into 2 groups: OR (44 patients) and F (36 patients) receiving respectively remifentanil and fentanyl as analgesic. The conduct of anaesthesia was determined as it follows: group R. premedication with atropine 0.01mg/kg and remifentanil infusion 5 min prior to the induction at a rate of 0.25 g/kg/min.; maintenance by TIVA with propofol and remifentanil 0.25 μlg/kg/min. Drugs infusion was discontinued at the beginning of cutaneous suture or at the removal of the endoscopic tools. Fifteen minutes prior to the anticipated end of the procedure, ketoralac (0.5–0.6mg/kg iv) was administered. Records of ECG, HR, NIBP, SpO_2, $EtCO_2$ and side effects were made. In post-operative period, all these parameters were monitonzed at 5, 30, 60, 120 min and at the discharge.
RESULTS: Operations had a mean duration of 45 ± 15min and monitoring parameters showed $< 10\%$ of pre-operative values. In the group R 31 patients needed a remifentanil increase to 0.501 μg/kg/min during the more painful periods of procedure. In group F 18 patients received one bolus of fentanyl when operation took over 40 min. In group R VAS was 22 ± 15 mm at 5 min; 18 ± 12 mm at 30 min.; 38 ± 11 mm at 60 min.; 36 ± 8 mm at 120 min.. For both group when VAS was over 45 mm, ketoralac was given (0.5 mg/kg). Side effects observed were: epigastrium pain, nausea, vertigo itching. These effects in group R occurred up to 30 min having cardiovascular and respiratory stability.
CONCLUSIONS: Rapid metabolism of remifentanil grants an excellent intramperative analgesia in urological day surgery allowing also a rapid and safe discharge.

Nursing

Patients' experience of oral day case surgery—feedback from a nurse led pre-admission clinic

K Clark, R Voase, G Cato, IR Fletcher, PJ Thomson

Oral Surgery Day Unit, Newcastle Dental Hospital, Newcastle upon Tyne, NE2 4AZ, UK

INTRODUCTION: A nurse-led pre-admission clinic (PAC) was introduced in 1996 to help reduce patient failures and cancelled operations on the day of admission and to improve pre-operative patient assessment and education for oral day case surgery. This clinic has become a successful and versatile tool in both the management and the validation of the day surgery theatre lists and is now an integral component of clincal care in our day unit[1].
METHOD: In order to investigate patients' perceptions of their day care experience and to ascertain their views on their PAC appointment, a questionnaire was sent to 208 day care patients operated upon between October 1997 and March 1998. Twelve questions were asked relating to details of their PAC visit and subsequent surgical experience.
RESULTS: Results will be presented to summarise the patients questionnaire response, the patients perceptions of the PAC and the oral day surgery, the usefulness of PAC in pre-operative preparation and to record relevant additonal patient comments.
CONCLUSIONS: The role of a nurse-led PAC in improving the quality of patient care for day surgery will be discussed.
1. Improving Patient Throughput for Oral Day Case Surgery. K. Clark, R. Voase, I.R. Fletcher, P.J. Thomson. Ambulatory Surgery (1998).

Result of the postoperative 400 phone surveys in the ambulatory surgery

A Fernandez, F Velasco, T. Aguilar, P Lora, R Glez Burguillos, MA Prieto Reyes, M Bastes

Hospital Universitario Virgen del Rocio, Sevilla, Spain

INTRODUCTION: The postoperative phone survey in the first 24 hours carried out by the infirmary, after the surgical intervention, is a form of postoperative control.
METHOD: We studied the phone survey of 400 interviewed patients of general surgery, 246 men and 154 women, aged 42. Intervened pathology: hernias 169; anal surgery 172; benign breast 32; and other 27.
RESULTS: A total of 93 patients did not answer (23.25%) the contact telephone number that they left in the unit. Eight patients had fever (3%), 165 had pain (44.47%), and 148 (82.22%) gave analgesia, 11 (4.1%) had nausea and 12 (4.5%) had vomiting, tolerant of drinking liquids 241 (90.9%) and of solids 239 (90.1%), and 18 (6.7%) had difficulty in urinating. There are no significant differences for any of the analyzed variables.
CONCLUSIONS: The complications that can be presented in the first 24 h are minimum and are similar for the hernial, the anal pathology, and the breast.

Influence of patients information in an ambulatory major surgery unit

C Ramirez, A Martinez, E Mochon, A Herrera, M Nunez, C Molina

Ambulatory Surgery Unit. Hospital Virgen de las Nieves. Granada. Spain

INTRODUCTION: The information received by the patient before initiating Ambulatory Surgery is a decisive factor both in perception of the units effficiency and in reducing pre-surgery anxiety. Presented below is an overview of the influence of information on the opinion of our patients.
METHODS: As part of a wider anonymous questionnaire handed to patient on discharge, questions regarding the following areas were made: adequacy of pre-admission information, level of anxiety, level of pain, and evaluation of the unit. Answers were requested at the first check-up in outpatient clinic. Data was analysed statistically (Statgraphics Plus® 3.1.).
RESULTS: 707 patients completed the questionnaire. 84.4% felt that they had been well informed. 74.5% stated that they felt calm on arrival at the surgical area. Average level of pain: 3.4 (of 0 to 10). 98.5% evaluated their experience as excellent or good. A significant difference was detected in pre-surgery levels of anxiety and unit opinion according to whether or not the patient felt well-informed.
CONCLUSION: Pre-surgery information has a positive influence on reducing patient's anxiety before surgery and on their unit opinion.

A day experience…walking your child through it

Kim Lee

Royal Children's Hospital, Melbourne, Victoria, Australia

Many children or parents look at a hospital experience as anything less than daunting. This anxiety arises mainly from a fear of the unknown and commonly held perceptions. The challenge to nursing

staff is to offer an environment that helps to alleviate to an extent, some of these fears and anxiety. Day Centre staff consider it fundamentally important to have a simple understanding of the procedures involving Day Surgery. A graphical presentation was considered to be one of the best mediums to assure parents and children. These graphics, contained within a series of pictures, depict a child being admitted and taken through various procedures up to the child's discharge. The said pictures also incorporate information on the location of each facility. Other strategies employed to positively influence parents and children are the use of different modalities such as, music therapy, use of calico dolls, and play therapy. Parent's presence is also encouraged in the induction and recovery rooms. Anecdotal evidence suggests these strategies contribute to a positive short stay experience for children and parents.