

International Journal covering Surgery, Anaesthesiology, Nursing and Management Issues in Day Surgery

Abstracts from the IAAS 14th International Congress on Ambulatory Surgery



Bruges, Belgium 30th May–1st June 2022

> The Official Clinical Journal of the INTERNATIONAL ASSOCIATION FOR AMBULATORY SURGERY

Mark Skues & Madhu Ahuja, Editors-in-Chief

# The 14th Congress of the International Association of Ambulatory Surgery took place

in the beautiful city of Bruges, Belgium, from 30th May–1st June 2022. This conference was hosted by the International Association of Ambulatory Surgery in partnership with the Belgian Association for Ambulatory Surgery (BAAS) and the Dutch Society for Day Treatment and Short Stay (NVDK).

This was the first chance for the Ambulatory Surgery Community of nurses, surgeons, anaesthetists and managers to come together since the COVID Outbreak in 2020. The Congress provided an ideal platform for all to share their post COVID experience of resuming elective ambulatory surgery.

The theme for the meeting was 'let's take you home tonight'. It focused on how to maximise the use day surgery for vulnerable patients. The message communicated to all the delegates was that ambulatory surgery is safe for older patients, children, adults and children with special needs and many others. A multidisciplinary approach with planned discharge to allow safe and quick recovery in a patient's own home environment is the key for success in vulnerable patients.

Thanks are due to Prof Marc Coppens, Dr Xavier Falières, Luc Van Outryve and all of the convening Scientific and Congress Committees for their exceptional hospitality and organisation to make the meeting such a great success. This edition of *Ambulatory Surgery* contains the oral and poster abstracts that were presented, in person and virtually, at the Congress over the three day period. I hope you find them useful. With the changes in structure of the IAAS that occur every two years, Prof Douglas McWhinnie hands over the presidential baton to Dr Carlos Magalhães.

> Mark Skues & Madhu Ahuja Editors-in-Chief

# Cost effectiveness of procedural sedation and analgesia versus general anaesthesia for hysteroscopic myomectomy, a multicentre RCT (PROSECCO trial)

Julia van der Meulen (1,2), Lisa van der Zee (3), Sjors Coppus (1), Jaklien Leemans (1), Marlies Bongers (1,2), Helen Kok (4)

1. Máxima Medical Center, Veldhoven

- 2. Maastricht University, Grow School for oncology and reproduction, Veldhoven
- 3. Maastricht University, Faculty of Health, Medicine & Life Sciences, Maastricht
- 4. Alrijne ziekenhuis, Leiden, the Netherland

#### Introduction

Hysteroscopic resection is the treatment of first choice for symptomatic type 0–1 fibroids. Over the last decade, there has been a trend in moving gynaecologic surgery from a clinical setting with general anaesthesia (GA) to an outpatient setting with procedural sedation and analgesia (PSA).

#### **Materials & Methods**

This was a multicenter, randomised controlled trial with a non-inferiority design. Inclusion criteria were age > 18 years, maximum number of three type 0 or 1 fibroids, maximum diameter 3.5 cm, American Society of Anesthesiologists class 1 or 2. Women with clotting disorders or with severe anaemia (Hb < 5.0 mmol/L) were excluded. Women were randomly allocated to hysteroscopic

#### Results

209 women in 14 hospitals participated in this trial. 106 women were allocated to PSA and 103 women to GA. Percentage of complete resections was 87.8% in the PSA group and 88.8% in the GA group (difference, -1.01%; 95% confidence interval (CI),-10.36; 8.34, noninferiority, P=0.09). Admission time in the PSA group was shorter compared to GA: 240.5 versus 386 min (relative risk, -140.0 (95% CI

#### Conclusion

Hysteroscopic myomectomy for type 0 and 1 fibroids with PSA leads to shorter hospital admission time and significant cost reduction. Although for completeness of resection noninferiority of hysteroscopic myomectomy with PSA could not be demonstrated, the use of PSA was safe and there However, RCTs evaluating safety and effectiveness for hysteroscopic myomectomy with PSA are lacking. This study aimed to compare the effectiveness of hysteroscopic myomectomy using PSA with propofol or GA.

myomectomy using PSA with propofol or GA. Primary outcome was the percentage of complete resections, based on transvaginal ultrasonography 6 weeks postoperatively. Secondary outcomes were cost effectiveness, menstrual blood loss, quality of life, pain, recovery, hospitalisation, complications and re-interventions. Follow up period was 1 year.

-169.0; -109.0). Total societal costs were significantly lower with PSA: €3319 (506) versus €5585 (661) with GA (difference, -2266 (95% CI -3640; -847). No significant differences in other secondary outcomes were found. No serious anesthesiologic complications occurred and conversion from PSA to GA was not required.

were no differences in quality of life and other clinical outcomes. These results can be used by gynaecologists and anesthesiologists to better inform patients and perform this procedure in an outpatient setting under PSA.

# Paul Zilberman, Zev Davidovics Hardassah University Medical Centre, Jerusalem, Israel

Children for gastroscopy are induced by mask with oxygen and N2O. After the child is deep enough and all the standard monitors are applied an i.v. line is inserted and the rest of anaesthesia is conducted with a mask providing oxygen and i.v. doses of Propofol titrated to child's response. The endoscope reaches the child's oral cavity and beyond through a perforation cut through the face mask and a mouthpiece. The use of a regular oxygen mask makes the control of the airways sometimes problematic while keeping the child breathing.

In accordance with the GI colleague, we considered that an LMA might be helpful but with a certain adaptation: once the endoscope tip is above the LMA's cuff, this one is deflated and the endoscope slides over the left margin of the cuff. The oxygen flow is reduced to the metabolic needs (calculated by Brody's formula initially but adapted to the child's specific needs). When Et MAC reaches 1.5 the SEV is reduced to 2% and a weight based LMA is inserted. It is very important that the LMA be well lubricated on its left and side as this is the path the endoscope will engage. The breathing circuit is connected and manual ventilation checked. At this step the APL valve is closed at about 3-4 cm H<sub>2</sub>O and the oxygen flow adapted so that the breathing bag does not collapse at the end expirium, to prevent atelectasis. The mouthpiece is inserted as shown in the picture, so that the LMA's tube passes through the right opening. Thus, the tube is deflected from the endoscopist's instrument leaving a manoeuvre space for the anesthesiologist. Then the child is turned on the left side. During this period the endoscopist passes the instrument through the medial channel of the mouthpiece. Once the endoscope is above the LMA's cuff, this one is deflated, and the endoscope is advanced down the oesophagus. Sometimes a small resistance is encountered but easily dealt with after some experience is acquired. The LMA cuff is not re-inflated as the endoscope pushes the deflated cuff forward thus creating a good seal. The anesthesiologist needs to manually keep in place the LMA in order to prevent dislodging it with the to and fro endoscope movements, even if it's well lubricated. A fixation device that will release the anesthesiologist's hand is under development. For older children an excellent but expensive LMA gastro is used.

# Bethan McLeish, Andrew Garnham Royal Wolverhampton NHS Trust, UK

#### Introduction

Parathyroidectomy may be indicated for the surgical management of primary and tertiary hyperparathyroidism. We present the results of an

#### **Materials & Methods**

All patients who underwent parathyroidectomy by a single general surgeon practising in the United Kingdom between 01/01/2018 and 10/11/2021 were included. Retrospective case note review identified demographics, indication for surgery, perioperative investigations, length of stay, success of

#### Results

43 patients were included in the audit. 88.4% of parathyroidectomies were performed for primary hyperparathyroidism and 11.6% for tertiary hyperparathyroidism. 76.3% of patients with primary hyperparathyroidism underwent both ultrasound and radionuclide imaging prior to surgery with the aim of localising the adenoma. Localisation of adenomas on imaging was concordant between ultrasound and radionuclide scan in 41.1% of cases. Intra-operative parathyroid hormone assays were

#### Conclusion

Pre-operative imaging modalities used to localise parathyroid adenomas are often non-concordant, creating challenges when planning the surgical approach to parathyroidectomy. A further project aims to establish the positive predictive value of each imaging modality in our unit. We were not routinely checking Adj. Ca at time points recommended by national guidance. Our routine practice involved audit comparing the peri-operative management of patients undergoing parathyroidectomy against national guidelines.

surgery, complications and follow up. Management was compared against national guidelines, including the recommendation that albumin-adjusted serum calcium (Adj. Ca) is measured prior to discharge as a baseline, and at 3-6 months to confirm whether surgery has been successful.

used in 100% of parathyroidectomies for primary hyperparathyroidism. Drains were used in 14.0% of cases. 39.5% of cases were performed as a day case (ambulatory) procedure. Adj. Ca was checked before discharge in 68.4% of cases and checked at 3-6 months post-operatively in 48.6%. Standard practice was to arrange endocrine follow up in 2 weeks, with an average of 18 days until the first follow up Adj. Ca check.

intra-operative parathyroid hormone assays with follow up Adj. Ca measured two weeks postoperatively. A good proportion of cases were performed as a day case (ambulatory) procedure, which incurs benefits for patients and service planning. This is made possible by avoiding the use of a drain unless necessary.

# Ambulatory surgery for anatomical thulium laser enucleation of the prostate (A single-center report of 56 cases): Virtual Presentation

# Zhihui Zou, Hu-Yongtao, Zhang-Ligang, Cheng-Jia, Ge-Qinta, Lu-Yao, Zhang-Jing, Li-Fang, Song-Zhen, Hao-Zongyao, Liang -Chaozhao

The First Affiliated Hospital of Anhui Medical University, China

#### Objective

To evaluate the feasibility and safety of thulium laser transurethral enucleation of the prostate (ThuLEP) in the treatment of benign prostatic hyperplasia (BPH) in an ambulatory surgery mode

#### Methods

Between October 2021 and March 2022 in the First Affiliated Hospital of Anhui Medical University, a total of 56 BPH patients received outpatient screening and underwent day-surgery ThuLEP in general anaesthesia. Patients completed all preoperative examinations during the pre-

#### Results

Average age and prostate volume were  $61.6\pm5.2$ (52-75) years and 52.6±28.5 (20-98) mL, respectively. All procedures were successfully completed with a mean operation time of  $37.5\pm20.4$ min. All patients were allowed to drink and drink after recovery from anaesthesia. a decrease in haemoglobin and sodium content of  $0.8\pm0.3$  g/ dL and  $0.2\pm0.2$  mmol/L, respectively. Average postoperative irrigation was  $16.3\pm2.1h$ , and indwelling catheterization time was  $22.1\pm3.7$  h. All patients were discharged in the morning on the first postoperative day. The average hospital stay was  $16.7\pm2.5$  h, the total hospital stay was

#### Conclusion

This is the first report of ThuLEP in an ambulatory surgery model. The preliminary results show that ambulatory surgery of ThuLEP is safe, feasible, economical and effective under the conditions of suitable patients and available techniques and can be promoted in qualified hospitals.

hospitalization period, and the operation was arranged on the day of admission. All operations were performed by Dr. Zou. Drinking and eating were started at the time of postoperative anaesthesia revival. Bladder irrigation and urinary catheter were stopped on the first postoperative day and the subsequent discharge evaluation was conducted. The baseline data, perioperative results, rehabilitation, hospitalisation expenses, functional results and complications of the first postoperative month were prospectively recorded.

 $21.6 \pm 0.5$  days, and the total hospitalisation cost was 13130±320 RMB. The 1-month follow-up results showed a substantial improvement in the International Prostate Symptom Score (from  $25.9\pm6.0$  to  $5.0\pm3.0$ ), Quality of Life (from  $5.1\pm0.8$  to  $1.5\pm1.3$ ), Maximum urinary flow rate (from  $8.5 \pm 4.8 \text{ mL/s}$  to  $22.5 \pm 7.7 \text{ mL/s}$ ), compared to the baseline (all P < 0.001). Five patients received indwelling catheterization after removal of the catheter. Five patients were diagnosed with anterior urethral stricture and three patients experienced bladder neck contracture.

# Ambulatory surgery is a safe, but underutilised alternative in elective inguinal hernia repair

#### André Francisco Couto Dias Portuguese Surgical Research Collaborative, Faculty of Medicine, University of Lisbon

#### Aim

Ambulatory surgery is recommended for elective inguinal hernia repair, but is underused, even when clinically indicated and in low-risk patients. This study aimed to compare complication rates between

#### Methods

Prospective multicentric cohort study including consecutive patients undergoing elective inguinal hernia repair in Portugal (October-December 2019). Patients with hospital admission greater than one night were excluded. The primary outcome was postoperative complication rate (any Clavien-Dindo

#### Results

A total of 828 patients were included from 32 hospitals, 738 (89,1%) of which were male and 716 (86.4%) of which had unilateral hernias. 433 (52.2%) were operated as day-case and 395 (47.7%) with overnight stay. There were no significant differences in post-operative complications between patients undergoing day-case and overnight stay

#### Conclusion

This study did not show significant differences in postoperative complications between patients undergoing day-case or overnight stay after elective inguinal hernia repair, even after adjustment and in patients with low clinical risk. These findings underscore the importance of actively promoting patients undergoing day-case vs overnight stay and highlight patient populations with low clinical risk in which the advantages of ambulatory surgery may be untapped.

grade). An unadjusted (Chi-square) analysis was performed as well as a logistic regression adjusting for age, sex, BMI, ASA grade, operative technique, type of anaesthesia and other defined risk factors. Patients with low clinical risk were included in a sensitivity analysis (Age<80y, ASA grade I and II).

surgery [43 (9.9%) vs 39 (9.9%), p = 0,650], which remained non-significant in the adjusted analysis [OR 1.08 (95% CI 0.66-1.76)]. These findings were replicated in the low-risk subset of patients [38 (10.1%) vs 36 (12.5%), p = 0,384], and there was, additionally, an excess of major complications in the overnight stay group (p=0.036).

more effective, safe, and less invasive perioperative management strategies such as ambulatory surgery, particularly in the face of the current COVID-19 pandemic, in close collaboration with anaesthesia departments, social services and PCPs.

# **Analysis of the factors influencing the same-day discharge of gynaecological day surgery:** Virtual Presentation

#### Yu Zeng Chengdu

Women's and Children's Central Hospital, School of Medicine, University of Electronic Science and Technology of China

## Objective

To analyse the influencing factors of same-day discharge of patients with gynaecological day surgery,

# Methods

The medical records of patients who underwent day surgery in the gynaecological day surgery centre of a tertiary-care university hospital from March 2021 to March 2022 were analysed retrospectively. All patients were managed in strict accordance with Enhanced Recovery After Surgery (ERAS) Society guideline during the perioperative period. According

#### Results

1327 patients were included in this study, including 938 patients (70.69%) in the same-day discharge group and 389 patients (29.31%) in the non-sameday discharge group, with an average age of 35.41  $\pm$  8.611 years, an average operation time of 34.50  $\pm$  34.018 minutes and an average anaesthesia time of 48.71  $\pm$  37.619 minutes. Univariate analysis showed that there were significant differences in

#### Conclusions

There are many factors affecting the discharge of gynaecological day surgery. In clinical practice, it is necessary to strictly screen patients, control the level of surgery, reduce the operation time and improve in order to provide reference and basis for the clinical practice of follow-up day surgery.

to the discharge time, the patients were divided into same-day discharge group and non-same-day discharge group. The related clinical indexes such as age, reproductive history, complications, operation level, operation time, anaesthesia time and blood loss were analysed by univariate and multivariate analysis.

complications, operation level, blood loss, operation time and anaesthesia time between the two groups (P < 0.05). Multivariate regression analysis showed that operation level (OR=1.700, 95%CI (1.368, 2.111), P=0.000) and operation time (OR=1.021, 95%CI(1.005, 1.038), P=0.011) were independent factors affecting the discharge of patients undergoing daytime surgery.

the medical level, so as to shorten the postoperative hospital stay and reduce the incidence of delayed discharge of gynaecological day surgery.

## Fangyuan Zhong

Chengdu Women's and Children's Central Hospital and School of Medicine, University of Electronic Science and Technology, China

#### Context

Natural orifice transluminal endoscopic surgery (NOTES) has been an achievement in the field of minimally invasive surgery. Yet the vantage of

# Objective

To compare the advantages between the V-NOTES and laparo-endoscopic single-site surgery in same day

#### Setting

Tertiary-care university hospital.

#### Participants

The 207 enrolled patients had accepted V-NOTES and laparo-endoscopic single-site surgery in gynaecology procedures from February 2021 to March 2022.

#### **Main Measurements And Results**

Multiple outcomes belonging to 207 patients were analysed. The readmission rate of the two groups was zero. After the accomplishment of Wilcoxon Rank-Sum Test, especially in the median, there were statistically significant differences between the V-NOTES group and laparo-endoscopic singlesite surgery group regarding postoperative pain score (0 vs. 1 scores, p=0.026), duration period

#### Conclusions

These comprehensive data revealed the capacity of V-NOTES to raise surgical efficiencies. V-NOTES in gynaecology procedures demonstrated sufficient

V-NOTES in gynaecology procedures remains obscure.

discharge in gynaecology procedures. Design: Retrospective observational study

Intervention: Surgical relevant information on patients in same day discharge was collected and 64 females underwent V-NOTES.

of anesthetization (90 vs. 101 minutes, p=0.025), execution time of surgery (65 vs. 80 minutes, p=0.015) and estimating blood loss (20 vs. 40 millilitres, p<0.001). Treatment with V-NOTES resulted in convenience, both with respect to time saving and haemorrhage volume in surgery and with respect to quality of prognosis.

feasibility and provided the new medical strategy compared with laparo-endoscopic single-site surgery.

# **Feasibility and safety of bipolar-plasma transurethral enucleation and resection of the prostate in ambulatory surgery mode:** Virtual Presentation

# Zhihui Zou, Hu-Yongtao, Zhang-Ligang, Cheng-Jia, Ge-Qintao, Hao-Zongyao, Liang -Chaozhao

Department of Urology, The First Affiliated Hospital of Anhui Medical University, China

#### **Introduction and Objectives**

To evaluate the feasibility and safety of bipolarplasma transurethral enucleation and resection of the prostate (B-TUERP) in the treatment of benign

#### **Materials And Methods**

Between January 2021 to July 2021 in the ambulatory surgery room of our hospital, a total of 32 patients accepted B-TUERP. All operations were performed by Dr. Zou. Drinking and eating were started at 6-hour post-surgery, stopping bladder irrigation takes the same time as removing the

#### Results

Average age and prostate volume were  $63.0\pm7.7$ (52-82) yr and  $45\pm29$  (20-104) mL, respectively. All procedures were successfully completed with a mean operation time of  $35.5\pm18.8$  min, decrease in haemoglobin and sodium content of  $0.4\pm0.3$  g/ dL and  $0.2\pm0.2$  mmol/L, respectively. Average postoperative both irrigation and indwelling catheterization time were  $16.7\pm2.9$  hours. All patients were discharged from hospital with anaesthesia (PADS)  $\geq 9$  points, except for one patient who was observed for another day in the general ward due to dizzy blood. The average hospital stay was  $21.6\pm3.4$  hours, and the total hospitalisation cost was  $11056\pm645$  RMB. The 3-month follow-

#### Conclusion

This is the first report of B-TUERP in the ambulatory surgery model. The preliminary results show that B-TUERP in ambulatory surgery model is safe, prostatic hyperplasia (BPH) in the ambulatory surgery mode.

catheter, and the patients were discharged after being evaluated on the morning of the first postoperative day. The baseline data, perioperative results, rehabilitation, hospitalisation expenses, functional results, and complications at the third postoperative month were reported.

up results showed a substantial improvement in Maximum urinary flow rate (from  $8.5 \pm 4.8$  ml to  $24.7 \pm 5.9$  ml), International Prostate Symptom Score (from  $25.9 \pm 6.0$  to  $4.3 \pm 3.1$ ) and Quality of Life (from  $5.1 \pm 0.8$  to  $1.2 \pm 1.2$ ) compared to baseline (P all < 0.001). Three patients accepted another 3-day indwelling catheterization after removal of catheter before being discharged. Three patients were diagnosed with anterior urethral stricture and one patient experienced bladder neck contracture. No other complications above Clavien grade II occurred during this study. Single centre, small sample size are the major limitations of this study.

feasible, economical, and efficient when surgical technology and patients' physical conditions are available.

# General Surgery Department role in the Ambulatory Surgery Unit

# Ainoa Benavides dos Santos, Lluís Antonio Hidalgo Grau, Jordi Valls Soler, Ernest Bombuy Gimenez

Hospital de Mataró

#### Introduction

General Surgery Department (GSD) activity is essential for overall results in the Ambulatory Surgery Unit (ASU). Our GSD is the reference for 275.000 inhabitants and develops complex surgery,

#### **Material and Methods**

We consider the ASU activity between 2017-2021. Among 30.293 surgical procedures performed in the ASU, 4.709 were done by the GSD (15.5%), which represents the third highest activity rate, after Ophthalmology and Orthopaedic Surgery.

#### Results

Results are expressed as percentage of ambulatorization in the table.

There was a progressive inclusion for malignant diseases in thyroid surgery, with total thyroidectomy and limited lymphadenectomy. Anal surgery includes haemorrhoidectomy (we perform also stapled

#### Conclusions

The General Surgery Department plays a valuable role in our ASU, contributing to the overall ambulatorization rate. The basket of procedures like metabolic surgery and colorectal surgery. Only complex procedures for liver, biliary and pancreatic surgery are excluded.

We evaluate the % of Ambulatorization, and the specific rates of substitution for five groups of surgical procedures: cholecystectomy, thyroid and parathyroid procedures, anal surgery, abdominal wall hernia repair and breast surgery.

anopexy when indicated), fistuli treatment and anal fissure treatment (lateral internal sphincterotomy). There is also a progressive increase of laparoscopic approach for hernia repair. Breast surgery nowadays includes axillary lymphadenectomy and mastectomy in selected cases.

of the GSD can be increased progressively, always preserving patient's safety.

#### Ana Ciscar, Aino Benavides, Marina Vila , Joan de la Cruz, Luis Hidalgo Hospital de Mataró, Consorci Sanitari del Maresme

#### Introduction

Laparoscopic cholecystectomy is a common procedure. Ambulatory surgery (AS) is an alternative to hospitalisation that is progressively carried out, with many advantages in terms of quality and cost effectiveness. The outbreak SARS COVID-2 pandemics at the beginning of 2020 affected the AS activity. Our main objective is to compare our

# **Material and Methods**

All patients who were operated on laparoscopic cholecystectomy from January 2019 to December 2019 are included. Substitution Index (SI) rate, which is defined as the substitution of ambulatory care for inpatient hospital, is determined. We compare retrospectively the outpatient and inpatient groups of patients by using demographic characteristics (age, gender, body mass index (BMI), physical status American Society of Anaesthesiology

#### Results

A total of 179 patients are analysed. Substitution index (SI) rate is 52,5%. There are no significant statistical differences between both groups except for age, ASA and pathological history. There are no differences in terms of complications, late admissions, or unplanned consultations. BMI, operative time, and recovery period show significant

#### Discussion

The outpatient laparoscopic cholecystectomy is a safe procedure both in inpatient and outpatient setting. BMI, operative time, and recovery period could results in laparoscopic cholecystectomy between inpatient and outpatient basis in terms of quality indicators. Secondary objectives are to identify risk factors for outpatient failure and to evaluate how the SARS COVID-2 pandemic affected the outpatient laparoscopic cholecystectomy rates in our hospital.

score (ASA); pathological history; ultrasonographic findings and post operative follow-up (complications, re-operations, unplanned consultation, and late admissions). The risk factors for ambulatory surgery failure are identified. We compare the SI rates between January to June of 2019 (pre pandemic period) and the same period of 2020 (pandemic period).

differences in the bivariant analyses. On the other hand, only recovery period is identified as a risk factor for AS failure in the multivariant analysis. The pre pandemic and pandemic SI rate are 50% and 35% respectively. From 13th March 2020 to 4th May 2020, elective cholecystectomies were completely cancelled.

be identified as possible risk factors for AS failure. Pandemic caused an important slowdown in surgical procedures and a relevant decrease in AS rates.

# Minimal Invasive Complete Duct Excision with Ultrasound-Guided Vacuum-Assisted Breast Biopsy: A Novel Technique for Pathological Nipple Discharge: Virtual Presentation

# Yinguang Gao, Zhicheng Ge, Xiang Qu Beijing Friendship Hospital, Capital Medical University, Beijing, China

# Background

The conventional examinations for diagnosing the cause of pathological nipple discharge (PND) mainly include ultrasonography, mammary fiberoptic ductoscopy, and mammography; however, each of

# Methods

Women confirmed of having PND undergoing ultrasound-guided vacuum-assisted breast biopsy for minimal invasive complete duct excision with a minimally invasive surgical incision from May 2019 to May 2020.

To increase the accuracy of the diagnosis and preoperative localization, this study combined

# Results

A total of 20 participants were included in the novel minimal invasive complete duct excision underwent preoperative breast duct contrast-enhanced

# Conclusion

Complete removal of the duct was observed in all patients. The initial results have been promising.

these modalities has certain limitations. Therefore, a more precise preoperative examination to identify the scope of the mammary duct is highly desirable.

the advantages of ultrasound and galactography to investigate the value of breast duct contrast-enhanced ultrasound using microbubble-based contrast agents for PND. The novel operative treatment is ultrasound-guided vacuum-assisted breast biopsy for duct excision provides a minimally invasive surgical incision and an inconspicuous scar.

ultrasound (CEUS) and Mammotome-assisted minimally invasive resection were enrolled.

# Dr. M. M. Begani, Dr. Dheera J V Mulchandani Abhishek Day Care Health Services Pvt Ltd, India

#### **Aims and Objectives**

To use minimal access techniques and laser surgery for the treatment of Pilonidal Sinus patients in ambulatory surgery. We aim to highlight the safe

#### Results

Patients of pilonidal sinus were given the option of minimal access techniques and laser treatment for pilonidal sinus after ensuring they had no complications or abscess formation. They underwent surgery at our day care centre under local anaesthesia

#### Conclusion

We have always been at the forefront of introducing newer techniques and using newer agents for quicker recovery and better return to day-to-day activity and productivity to promote day care surgery. Keeping this in mind, we offered minimal access laser surgical procedures for patients with pilonidal sinus in our ambulatory setting. We conclude that laser treatment offers better patient compatibility, less postoperative use of this novel technique in patients who have a pilonidal sinus without any complications or abscess formation.

and mild sedation. All patients were sent home the same day and did not require overnight admission or monitoring. All patients were seen at follow up the next day and reported high satisfaction of surgical outcomes as well as post operative care.

pain, shorter operative time, requires less sedation and can be done in pure local anaesthesia in a cooperative patient and must find a place in the vast basket of surgical procedures currently available for pilonidal sinus treatment. Careful patient selection will lead to similar or less recurrences as the worldwide data for the gold standard surgery options.

# Outpatient cholecystectomy implementation, not always an easy path

## Emma Sánchez Sáez, Enric Sebastián Valverde, Laura Hernández Giménez, Rolando Orbeal, Leonardo Silvio Estaba

Jordi Comajuncosas Camp Parc Sanitari Sant Joan de Déu Sant Boi

#### Introduction

Outpatient cholecystectomy (OC) started in the 1990s a few years after laparoscopic cholecystectomy started. The Substitution Index is variable (30-90%) depending on the inclusion and exclusion criteria.

OC is a challenge for the surgery team always trying to maintain the assistential quality and to minimise the related complications. To accomplish that, a teamwork effort is required. The use of minimally

# **Material and Methods**

A retrospective analysis of all patients who underwent a scheduled cholecystectomy between 2014 and 2022 (after the implementation of outpatient cholecystectomy protocol).

Demographic data, accomplishment of exclusion

#### Results

Analysing all scheduled cholecystectomies during 2014-2022 period, the index of ambulatorization has not been improved over the years. We found that the reason why the protocol is not working out as it was planned is because it looks like the physicians (surgeons and anaesthetists) don't follow the inclusion criteria to propose ambulatory surgery in

# Conclusion

A constant revision of our data and the protocols are the key to assure the correct implementation and actualization of them.

A review of the OC protocol is developed in 2022 with an actualization of the inclusion criteria

invasive surgery and less side-effect anaesthetic techniques, in addition to the post-operative nurse care, are the key to accomplish the standards of quality in the OC.

In our hospital outpatient cholecystectomy began its trajectory in 2014. Nowadays, 8 years after the implementation of the protocol, this is not fully established with an ambutalization index of 4%.

and inclusion criteria, cause of not suspected hospitalisation, re-hospitalization, ambularization index per year, substitution index per year have been analysed to try to determine why the protocol is not fully instaurated.

scheduled cholecystectomies. Probably the inclusion criteria are too rigorous, and this reduces the number of patients to be proposed as ambulatory surgery. Both of these could be still caused by the fear of the potential grave complication of cholecystectomy surgery.

following recent bibliography recommendations, diffusion of the new protocol and training of the surgery team has been done with the aim to fully implement the new outpatient cholecystectomy protocol in the next years in our hospital.

#### David Bunting, David Sanders, Maciej Pawlak, Anjum Arain, John Findlay, Abidemi Adesuyi

Royal Devon University Healthcare NHS Foundation Trust

# Introduction

The optimal management of common bile duct stones (CBDS) in patients requiring cholecystectomy is debated. The traditional approach involves cholecystectomy (usually laparoscopic), combined with pre/post-operative endoscopic retrograde cholangiopancreatography (ERCP), known as a 2-stage approach. With the development of newer surgical techniques, a 1-stage approach has been developed utilising cholecystectomy (usually laparoscopic) combined with operative bile duct exploration (BDE). Evidence to date has failed to demonstrate superiority of one approach over the

# **Materials and Methods**

A cohort study was conducted from a database of 427 consecutive patients undergoing cholecystectomy between December 2016 and April 2020. We identified all patients treated for CBDS by a 1-stage technique (Group 1) or 2-stage technique (Group 2) as defined above. Data were recorded on

#### Results

77 patients were identified with CBDS. 38 patients underwent the 2-stage approach (27 pre-op ERCP, 11 post-op ERCP) and 7 underwent the 1-stage approach. 32 patients with small stones seen on intraoperative ultrasound scanning were managed without proceeding with operative BDE or ERCP.

Median TLOS was 4 days in group 1 and 2.5 days in

# Conclusion

Using an ambulatory pathway, the two-stage treatment of bile duct stones utilising ERCP can result in reduced hospital stays compared with the other with regards to efficacy, technical success or safety. Some reports suggest the 1-stage technique may be associated with a shorter hospital length of stay (LOS) of 4.9 days compared to 6.5 days. However, with the development of ambulatory pathways, the 2-stage technique may offer shorter LOS since operative BDE often necessitates the use of post-operative drains and overnight stay. We aimed to investigate whether ambulatory pathways can reduce LOS in patients with CBDS requiring cholecystectomy.

demographics, LOS, re-admissions, complications and conversion to open rate. Variables were compared between the groups. LOS was recorded both as total hospital length of stay (TLOS) and length of stay following date of first procedure (PLOS).

group 2 (p=0.041, Mann-Whitney U). Mean PLOS was 5.14 days in group 1 and 3.03 days in group 2 (p=0.061, T-Test).

Median PLOS was 4 days in group 1 and 1 day in group 2 (p=0.0091, Mann-Whitney U). Mean PLOS was 4.14 days in group 1 and 2.05 days in group 2 (p=0.037, T-test).

one-stage approach utilising operative bile duct exploration.

# Dr. M. M. Begani, Dr. Dheeraj V Mulchandani Abhishek Day Care Health Services Pvt Ltd, India

#### **Aims and Objectives**

To analyse the data for 50 morbidly obese patients that underwent surgery at our day care centre over the past 5 years and to highlight the possibility of

#### Results

We analysed the data of 50 patients who were morbidly obese with BMI over 30 and an average weight of above 100 kg. These patients underwent surgery at our day care centre and their procedures ranged from minor to major surgery, from pure local anaesthesia to TIVA and regional anaesthesia.

#### Conclusion

Cases that previously needed general anaesthesia or spinal anaesthesia are now being done under local anaesthesia with monitored anaesthesia care i.e., administration of sedation only if required and titrating it to individual needs. We have extended this benefit to our morbidly obese patients as well who would otherwise not qualify for day care surgery according to the ASA guidelines. We also have been introducing newer techniques and using newer agents performing safe day care surgery on obese patients in ambulatory surgery.

All patients were sent home the same day and did not require overnight admission or monitoring. All patients were seen at follow up the next day and reported high satisfaction of surgical outcomes as well as post operative care.

for quicker recovery and better return to day-to-day activity and productivity. In doing so, we were able to successfully and safely perform a variety of surgical procedures in an ambulatory setting in all such patients with a BMI 30 or more. We thereby conclude that it may be feasible to perform such procedures at a day care centre and the older restrictions based on weight of a patient may no longer hold true.

# The benefit of pre-emptive peri-incisional local anaesthesia in day-case open hernia repair

#### Seshu Kumar Bylapudi, Sadhasivam Ramasamy, Mr Kyi toe Northampton General Hospital, Milton Keynes University Hospital

#### Introduction

Inguinal hernia repair (IHR) is one of the common operations performed in the United Kingdom. The novel technique of intra-operative local anaesthesia (LA) has improved outcomes in patient recovery and has reduced length of stay (LOS). The aim of this

# Method

In this prospective observational study, 70 consecutive cases of open IHR performed under general anaesthetic (GA) in adult males as a day case, were reviewed. Of these, 35 underwent IHR under GA + peri-incisional LA solution (an equal mixture of 0.5% bupivacaine and 1% lignocaine with 1:200,000 adrenaline) (Group A) and 35 underwent

#### Results

The median age of Group A was 57.1 years and 59.7 years in Group B. All patients underwent a Lichenstein IHR technique. No patients in Group A had a pain score >3 at 2-hour postoperative review (0: no pain at all – 10: worst pain possible), compared to 4 patients in Group B (11%). On postoperative day 1, only one patient

#### Conclusion

Patients undergoing day-case IHR under GA with peri-incisional pre-emptive LA solution infiltration, have superior postoperative pain control compared study was to compare the post-operative pain, LOS and overall satisfaction in patients where LA was injected peri-incisional intra-operatively, versus patients who had LA infiltrated at the end of the procedure.

IHR under GA with LA injected at the end of the procedure (Group B). The patients' pain scores were assessed post-operatively at 2 hours and the following day via the telephone. A validated patient questionnaire was used to determine the patients' satisfaction level post-operatively.

had a pain score of >4 in Group A, compared to 14 patients in Group B (40%); this result was statistically significant (p-value 0.042). 6 patients (14.2%) in Group B failed day-case discharge criteria. All patients in Group A were discharged as day cases. No patients in either group were dissatisfied with their care.

to those where LA is infiltrated at the end of the operation. Furthermore, these patients are unlikely to fail discharge criteria for planned day-case surgery.

# The Future of Surgery: Freestanding, "Bedless" Facilities

#### Brian Oosterhoff Clinique CIC, Switzerland

#### Introduction

Globally, the recent pandemic has put most acute hospitals under unanticipated pressure. The inherent delays in surgery will have real impacts on patient health outcomes. This can be prevented by taking the ambulatory surgery out of the hospital. For healthcare professionals, Ambulatory Surgery

# Methods

In Switzerland, the ASC model is progressing. This presentation will focus on two different settings. The first public project has a 12 years' experience which will be highlighted. While in-hospital ambulatory surgery suffered from poor quality and bad costcoverage, a local hospital set up an ASC with 3 ORs to perform now more than 5000 increasingly invasive surgical procedures in a wide range of surgical

#### Results

The freestanding, single level design facilitates setting up specific clinical pathways maximising the quality and thereby improving cost-effectiveness.

The compact and open architectural design of the recovery room and the operating theater provides a safe and reassuring overview while preserving patient

#### Conclusions

Ambulatory surgery is about innovation of care, it's not about improving hospitals. Hospitals will always be needed for complex and unpredictable situations and critically ill patients. Most of our surgical patients do not need a hospital and should not be exposed to the inherent risks. Centres (ASCs) are designed to do exactly what is needed, without being disturbed by unnecessary interferences. For patients, ASCs provide a reassuring environment for a safe return home, the same working day.

specialties, without beds. Its success served as a blueprint of a private project, with 4 ORs, which started operating in February 2022.

We assessed the relevance of the freestanding option by using the SWOT tool and put some of our practical results in perspective with other studies, OECD data and IAAS recommendations.

#### privacy.

The "bedless" concept helps optimise patient circulation, increase the safety, and turns out to be a real space saver.

The ASC helped the hospital facing the pandemic, while taking over most elective patients.

For an ASC, architecture is an important key factor as it enables the blossoming of an adjusted culture to make it as simple and safe as possible.

# Analgesic effect of an altered insufflation gas mixture in laparoscopic gynaecological surgery: a double-blind randomized controlled trial

#### Joke Ruette, Jasper Verguts, Angelique Ceulemans, Ina Callebaut, Michiel Brands, Björn Stessel, Jessa Ziekenhuis

#### Introduction

Pain after major gynaecological laparoscopic surgery remains an important burden. The use of an altered insufflation gas mixture, consisting of 86%  $CO_2$ , 10%  $N_2O$  and 4%  $O_2$ , during laparoscopic surgery has been linked to reduced postoperative pain levels in previous pilot studies. Hence, the primary aim was

# **Materials and Methods**

In this prospective, mono-centre, randomised, double-blinded superiority trial, a total of 74 patients were randomised, between April 4th 2019 and February 10th 2022. Patients underwent elective gynaecological laparoscopic surgery for hysterectomy, endometriosis removal, myomectomy or colpopexy, and were randomised to receive either the standard gas (n=37) or the altered gas mixture (n=37). All patients were postoperatively treated with IV paracetamol 15 mg/kg four times a day, ketorolac 0.5 mg/kg three times a day and

#### **Results and Conclusion**

In total, 73 patients were included in the ITT analysis because one patient in the experimental gas group was converted to open surgery. Baseline characteristics are presented in Table 1. No significant differences were found between the control and experimental group regarding postoperative pain at 4 and 8 hours postoperatively, as well as on POD1 and POD7 (Figure 2). The mean total amount of IV piritramide during the first 24 hours after surgery was not significantly different between groups (control group: 18.0(16.0) mg vs experimental group: 19.0(24.0) mg, p=0.62)). to demonstrate reduced postoperative pain intensity after gynaecological laparoscopic surgery, following peritoneal conditioning with this altered insufflation gas mixture compared to the standard insufflation gas (i.e 100% CO2).

patient-controlled intravenous anaesthesia (PCIA) with piritramide. Postoperative pain was measured 4 and 8 hours postoperatively, and on postoperative days (POD) 1 and 7 by an 11-point Numeric Rating Scale with 0 indicating no pain, and 10 indicating worst pain imaginable. Outcomes were analysed on an intention-to-treat (ITT) basis. Group differences were analysed with an independent Student's t-test or Mann-Whitney U test, depending on the nature of the data. A p-value <0.05 is considered statistically significant.

In conclusion, an alternative insufflation gas mixture consisting of 86% CO2, 10% N2O and 4%  $O_2$  during gynaecological laparoscopic surgery does not appear to reduce postoperative pain as compared to the standard insufflation gas of 100% CO<sub>2</sub>. However further research is needed.

Analgesic efficacy of pectoralis plane blocks for ambulatory breast tumor surgery: a retrospective study: Virtual Presentation

Mariana Machado, Patrícia Martins Lima, Diana Sousa, Emília Carneiro Centro Hospitalar Universitário São João, Porto, Portugal

## Introduction

Ambulatory surgery (AS) for breast tumour surgery (BTS) is increasing steadily, due to greater efficiency and patient satisfaction.

Anaesthesia management has a relevant role in the success of AS, enabling safe return home, maintaining good physical condition, and early resuming of daily activities. Effective analgesia is crucial since pain is one of the main reasons for hospital stay after AS.

Pectoralis plane block (PECSB) is an ultrasoundguided regional anaesthesia technique, used for anterior chest wall analgesia.

# **Materials and Methods**

After obtaining ethics committee approval, we performed a retrospective study using electronic medical records to search women who underwent ambulatory BTS, from March to December 2021. Exclusion criteria: other nerve blocks performance; incomplete data; chronic pain history. Women were distributed by anaesthesia technique (PECSB+BGA vs BGA). We collected demographic and clinical data, pain scores measured by Numeric Rate Scale (NRS)

#### Results

We analysed 146 women, distributed in 2 groups: BGA+PECSB (n=48) vs BGA (n=98). Demographic and clinical data between groups were comparable.

The BGA+PECSB group presented a significantly

#### Conclusion

Our findings suggest that PECSB performance in ambulatory BTS plays a relevant role in pain control: PECSB is associated with lower postoperative pain at discharge and 30-day postoperative. Some studies prove the effectiveness of PECSB in pain control for elective BTS and the effect of regional anaesthesia in the reduction of postoperative persistent pain.

This led us to conduct a retrospective study of the effect PECSB added to balanced general anaesthesia (BGA) in the improvement of pain, evaluated at postanesthetic care unit (PACU) discharge and at 30-day postoperative. A secondary aim was the evaluation of perioperative opioid consumption.

at PACU discharge, and 30day postoperative and perioperative opioid consumption.

IBM SPSS software was used to perform statistics. Normality was assessed with the Shapiro–Wilk test. Independent sample t-tests were used to compare normal distribution data. Data for categorical variables or non-normally distributed variables were analysed by Mann-Whitney U tests. The level of significance was  $p \le 0.05$ .

lower NRS at PACU discharge and at 30-days postoperative. This group also had a reduction in perioperative opioid consumption.

This technique can contribute to the success of ambulatory BTS and possibly in the reduction of postoperative persistent pain.

# Anaesthetic management of empty nose syndrome at an ambulatory surgery centre

## Kelly Lebak, MD, Adrienne Gomez, MD MetroHealth Medical Centre, Cleveland, Ohio, USA

#### Introduction

Empty nose syndrome (ENS) is a disorder characterised by nasal drying, shortness of breath, and the feeling of suffocation despite the characteristic CT findings of wide-open nasal passages and the absence of nasal tissue. The pathogenesis of empty nose syndrome is unclear; however, it is a complication of turbinate excision surgery. It is an emerging diagnosis as ENT physicians have been recognizing and accepting it more; up to 20% of patients who have had inferior turbinate surgery may have ENS. The pathogenesis of this condition may include changes in the anatomical structure of the turbinates leading to alterations in neurosensory mechanisms and neuropsychological involvement. The diagnosis is clinical, and patients are often plagued with debilitating anxiety, depression, and in extreme cases, suicidal ideations.

#### Case

We present the case of a 23-year-old Saudi Arabian male with a past medical history of obstructive sleep apnea, three prior nasal surgeries including turbinate reductions, and empty nose syndrome. He was scheduled for repair by ENT using acellular dermal sheets to create pseudo-inferior turbinates. The patient underwent general anaesthesia, was

#### Discussion

Patients with ENS can be very challenging. A multidisciplinary approach is required to care for these patients successfully in an ambulatory surgery centre.

Treatment is generally conservative with the main goal of moisturization of the nasal passages and treating any comorbid psychiatric conditions. The surgical treatment goal is to rebuild the nasal cavity to reestablish normal airflow. Patients are often on a myriad of medications preoperatively which can make the administration of anaesthesia challenging in an outpatient surgical centre. Anaesthetic goals are complete immobilisation to help prevent orbital wall and skull base penetration. Additionally, meticulous blood pressure control is essential to aid in endoscopic visualisation which can be difficult due to surgical stimulation. The avoidance of coughing, bucking, and anything placed in the nose during emergence is desired. In the PACU, close monitoring for any vision changes, aspiration of blood, and CSF leaks are important.

maintained on sevoflurane and a remifentanil infusion, and was extubated uneventfully. However, due to social issues, the patient was admitted to the hospital for overnight care. He was reevaluated by ENT on post-op day one and was discharged from the hospital.

# Half-effective dosage of remimazolam for combined remifentanil used in painless gastroscope and Clinical Validation: Virtual Presentation

#### Meiyu Liu, Jin Chen, Hong Ma

Ambulatory surgery centre of department of Anesthesiology, Affiliated Hospital of Yangzhou University

#### Objective

To determine the ED50 and ED95 of remazolam

combined with remifentanil in painless gastroscopy.

# Methods

Sixty-two patients were selected to receive painless gastroscopy, of which 22 were applied modified upand-down method(male:female=1:1). According to this method, they were slowly injected  $0.5\mu g/kg$ of remifentanil in advance, then 0.20mg/kgof remimazolam, and gastroscopy was performed after the eyelash reflex disappeared. The standard for a positive response in patients undergoing gastroscopy: coughing, swallowing, frowning, and physical movement affecting the operation

#### Results

The ED50 of remimazolam was 0.19 mg/kg and 95% CI was 0.111 to 0.275 mg/kg, the ED95 was 0.30 mg/kg and the 95% CI was 0.243 to 1.169

#### Conclusion

The ED50 and ED95 of remimazolam combined with remifertanil for painless gastroscopy respectively

during the examination. The next patient would be increased 0.05mg/kg of remimazolam if there is a positive standard., otherwise it would be decreased 0.05mg/kg. And the study was terminated when seven crossing points occurred. Probit regression analysis method was used to calculate the ED50, ED95 and 95%CI of remimazolam combined with remifentanil in painless gastroscopy. The ED95 dose was subsequently validated.

mg/kg. The success rate of remazolam at 0.3mg/kg was 95%, among which the success rates of men and women are 100% and 90% respectively

are 0.19mg/kg and 0.30mg/kg. The success rate is higher for men, but there is no statistical difference.

# James H. Philip MEE, MD, FASA Brigham and Women's Hospital, Harvard Medical School

#### Introduction

Inhalation agents provide safe and effective anaesthesia during ambulatory surgery, but these agents are perfluorocarbons that carry with them the ability to contaminate the atmosphere.

During anaesthesia induction the anaesthesia care provider tries to get the patient anaesthetised as quickly and safely as possible.

Computer simulations have the potential to allow clinical situations to be simulated and results can be used to guide therapy in real patients. The Gas Man® simulation has been shown to be accurate in mimicking real patients and real anaesthesia machines.

# **Methods And Materials**

The Gas Man<sup>®</sup> computer simulation was used to identify and optimise the relationship among fresh gas flow, vaporizer setting, and quick achievement of the desired anaesthetic state of 1.3 MAC in the brain. In an effort to reduce the total amount of

#### Results

The Figure and Table both show the following. As FGF choice goes higher, the VRG reaches 1.3 MAC earlier. Above FGF = 3 L/min, the time to reach 1.0 L/min

#### Conclusion

During the early phase of inhalation anaesthesia in adults of normal size, a fresh gas below 3 L/min slows induction greatly and a FGF above 3 L/min fails to speed induction significantly. A fresh gas flow Anaesthesia machines allow automatic or manual adjustment of flow and concentration of anaesthetising gas delivered to the breathing circuit, inspired by the patient, and carried to tissues via the blood. Once the anaesthetic level in blood reaches the level desired, the brain takes 2-3 minutes to reach that same level. Alternatively, and commonly, blood level of anaesthetic is brought to a higher level than desired in the brain to achieve the desired brain level more quickly. The goal of this study was to identify and optimise the relationship among fresh gas flow, vaporizer setting, and quick achievement of an anaesthetic state of 1.3 MAC in the VRG (vessel-rich tissue group, or brain).

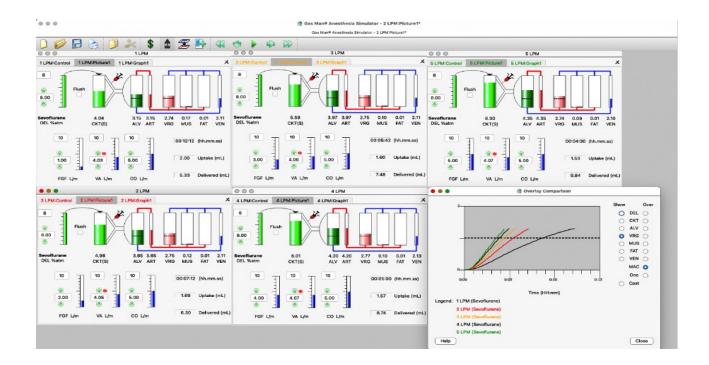
vapour used, the highest possible vaporizer setting (8%) was used, and several different carrier gas flows were simulated (1,2,3,4,5 L/min). All anaesthetic administrations were administered to a 70 kg simulated patient.

MAC (dotted line in figure) and to reach 1.3 MAC (the upper end of the five lines) fails to decrease significantly.

of 3.0 L/min during anaesthesia induction is best for patients, surgeons, and the planet.

**Table.** With delivered conc = 8% and Flow adjusted from 1 to 5 L/min, Time for VRG to reach 1.3 MAC (2.75%) and quantity delivered from the vaporizer are shown.

DEL Flow		Time	Insp		Ехр	VRG	Upt	Del	Upt	Del
%	L/m	hh.mm.ss	PP %		PP %	PP %	L	L	\$	\$
8	I	00:12:12	4.0372	3.149	2.739	0.366	0.976	5	\$0.60	\$1.60
8	2	00:07:12	4.9823	3.646	2.754	0.309	1.152	2	\$0.5 I	\$1.89
8	3	00:05:42	5.5855	3.967	2.753	0.292	1.368	3	\$0.48	\$2.24
8	4	00:05:00	6.0067	4.203	2.773	0.287	1.600	0	\$0.47	\$2.62
8	5	00:04:30	6.2966	4.35 I	2.742	0.279	1.800	0	\$0.46	\$2.95



# Interactive gaming as a non-pharmacological stress reducing intervention in paediatric anaesthesia

#### Niels Bogaerts , Valerie Bosteels , Els Bral, Bernard Schockaert, Catherine Vandewaeter, Pieterjan Durnez AZ Delta Roeselare

#### Introduction

Up to 50% of paediatric patients undergoing periprocedural anaesthesia express anxiety. Reducing this stress by nonpharmacological interventions may improve the patient's outcome. Although research is limited, it is reasonable to attain anxiolysis.

# **Materials and Methods**

We conducted a single centre, non-randomized and open label intervention by providing anxious and non- anxious children (including patients with mental disabilities) an interactive tablet game in which they train to inhale and exhale by blowing away clouds and obstacles. The game is explained and started in the pre anaesthesia care unit and continues during transfer to the operating room.

#### Results

More than 200 paediatric patients, and counting, received this nonpharmacological intervention to reduce anxiety. There were no side effects noted and although surprisingly effective, we maintained an intention to treat and aborted the intervention when resistance or the absence of interest was noted.

#### Conclusion

Playing a game on a tablet to reduce perioperative anxiety is a safe and feasible option. Our study is limited by non-objective and solely subjective feedback, upcoming investigations may use the Yale preoperative Anxiety Scale, the State-Trait Anxiety

#### **Conflicts of Interest**

Delta Valley is developed by HoWest University in conjunction with the department of anaesthesia.

After installing perioperative monitoring, induction by inhalational agents is guided by the game. During this critical phase, presence by a family member is maintained. The game is available in Dutch, French, English, German and Turkish. Although this perioperative anxiety was not objectively measured, narrative feedback was asked.

#### Narrative feedback by patients, caregivers and family was positive, until now we did not receive any negative reaction.

This strategy did not result in any delay, nor did it compromise efficiency, on the contrary.

Inventory and the Faces Pain Rating Scale. Further research in a prospective randomised clinical trial, measuring perioperative anxiety, pain and its indirect effects, are needed.

A visual presentation of the project can be consulted: <u>https://youtu.be/RtB\_Oid3suc</u>

# Metamizole combined with standard pain treatment at home after ambulatory arthroscopic shoulder surgery: a double-blind randomised controlled superiority trial

#### Jul Vanherf, Jill Lindekens, Jean-Paul Ory, Stefan Evers, Jeroen Herbots, Björn Stessel, Jessa Ziekenhuis

#### Introduction

There is growing evidence that the analgesic effect of metamizole is mediated at least partly by central mechanisms, including the endocannabinoid/ endovanilloid system. Consequently, metamizole may have additive or even synergistic analgesic effects with paracetamol and NSAID's. This study aimed to

#### **Materials and Methods**

In this double-blind, randomised controlled, superiority trial, 110 patients undergoing elective ambulatory arthroscopic shoulder surgery were randomised to receive either MIP (n=100) or IP (n=100) orally for four days between December 2019 and November 2021. Patients in the MIPgroup were instructed to take metamizole 1gr orally three times a day. All patients were treated with paracetamol 1gr orally four times a day and ibuprofen

#### **Results and Conclusion**

In total, 106 patients were included in the final analysis because two patients of both the experimental group and control group were lost to follow-up. Baseline and perioperative characteristics of all included patients are presented in Table 1. For the primary outcome, superiority of MIP to reduce postoperative pain at movement on POD 1 was not confirmed (mean difference NRS (95%CI): -0.08 (-1.00, 0.84)). For pain at movement and at rest, no significant differences were found between groups at the PACU nor at POD 1-4 and 7 (Figure 1). assess if triple therapy with metamizole, ibuprofen and paracetamol (MIP) is superior to a combination of ibuprofen and paracetamol (IP) in treating pain at home after ambulatory arthroscopic shoulder surgery.

600mg orally three times a day during the entire study period. Pain intensity at movement and at rest, measured with an 11-point Numeric Rating Scale (NRS) with 0 indicating no pain, and 10 indicating worst pain imaginable, were recorded at the PACU and at postoperative day (POD) 1 to 4 and 7. Group differences were analysed with a Student t-test or Mann Whitney U test. A p-value <0.05 is considered statistically significant.

In conclusion, triple oral treatment with metamizole, paracetamol and ibuprofen is clinically not superior to oral paracetamol and ibuprofen in multimodal pain treatment at home after ambulatory surgery. Therefore, we cannot confirm the hypothesis that metamizole has additive or even synergistic analgesic effects combined with paracetamol and NSAIDs.

# Angelina Rodriguez Caballero Hospital Marques de Valdecilla

#### Introduction

Major outpatient surgery has increased due to reduction of nosocomial infection risk and cost effectiveness. COVID-19 pandemic has enhanced it. Ambulatory craniectomies hasn 't been accepted

#### **Material and Methods**

A modified multidisciplinary Toronto's protocol was implemented. The inclusion criteria (supratentorial lesion, less than 3 cm, surgery of less than 4 hours in duration, absence of severe cardio-respiratory comorbidities, suitable caregiver, residence less than 30 minutes from the hospital) and exclusion criteria (inpatient, seizures, cognitive deterioration, preference) were established as well before discharge. All patients were evaluated by a multidisciplinary team (neurosurgery, anaesthesia, and Hospital at Home (HaH), prior to surgery. Patients came before 8 am, on the day of surgery,

#### Results

14 craniectomies were performed following the protocol described. 8 males and 7 females, average age 59 years. The diagnoses were 6 Glioma, 5 Meningiomas, and 3 Metastasis. Mean of surgical time 3h 25 min, mean PACU time 3h 20min and

#### Conclusions

There is little experience in the ambulatorization of craniectomy, being our service a pioneer in Spain. The involvement of a trained multidisciplinary team was crucial for the development of the protocol. Patient education, information, and strict selection based on serious postoperative neurologic complications. Since 1996, The Toronto group has reported a high successful rate for outpatient craniectomies.

to the Day Surgery Unit (DSU). The craniectomies were performed under general anaesthesia. An intravenous catheter, standard noninvasive monitors, BIS monitor, and continuous noninvasive monitoring with ClearSingh-Edwads monitor were applied. The scalp was infiltrated with 0.25% Levobupivacaine, and PONV was prevented. All patients were transferred extubated to the PACU for 3 hours and to the DSU 4 more hours. A CT-scan was scheduled 6 hours postoperatively. Without complications, with instructions the patient is discharged, being in charge of HaH for the following 3 days.

DSU 5h 50min. 86% were discharged home. 1 patient spent the night because of PONV, 1 patient stay in hospital 3 days due to minimal hematoma in control CT. 95% of the patients completed protocol with HaH. No patient required readmission.

are essential to program success. New continuous noninvasive monitors give confidence during craniectomy. HaH is helpful in following up with discharged patients.

#### Thomas Maly, Koenraad Grisar, Bart Falter, Johan Orye, Emile Henquet, Jan Jacobs

Jessa Hospital, Hasselt, Belgium

#### Introduction

In ambulatory surgery, the analgesic ladder is often quickly climbed, with association of paracetamol and NSAID (ibuprofen) being standard treatment. Association of opioid analgesics is often unwanted by patients due to the impairing effects on daily activities. Other patients exert contraindications for NSAIDs, which poses a major challenge in pain management.

A recent (2013) Dutch anesthesiology guideline propagates the use of metamizole (dipyrone) in these patient groups. Metamizole (dipyrone) is a

# **Materials and Methods**

A systematic search of Medline, Embase and Web of Science databases was performed. A review of literature was performed, with qualitative assessment of the data. The following question was

#### Results

We identified 249 records. After removal of 22 duplicates, 227 unique records were screened, of which 205 were excluded based on title and abstract. Of the remaining articles (n=22), five more were deemed ineligible. In total, 17 articles were included in the qualitative synthesis.

The risk profile of metamizole concerning

# Conclusion

The postoperative oral use of metamizole in ambulatory surgery is safe and effective, as it provides

nonsteroidal compound with analgesic, antipyretic, and spasmolytic properties. It is characterised by a better gastrointestinal and renal tolerance compared to acidic NSAIDs. Metamizole was historically discouraged because of the risk for agranulocytosis, though recent literature demonstrated this risk as very limited.

Perioperative (IV/IM) use of metamizole has been reviewed in literature, though no systematic reviews are available discussing the postoperative oral use of metamizole in ambulatory setting.

posed, in accordance with PRISMA guidelines: "Is postoperative oral use of metamizole effective and safe for the relief of acute pain after ambulatory surgery?"

hepatotoxicity, nephrotoxicity, bleeding, and cardiovascular adverse effects is favourable compared to other non-opioid analgesics. Recent studies found single-dose and short treatments to be safe and noninferior to other NSAIDs. The spasmolytic properties are an added value to using the drug in ambulatory oral surgery. Further research is needed.

good analgesia with a generally favourable side effect profile.

#### Dr. Raksha Kundal

Lady Hardinge Medical College New Delhi, India

# Introduction

The trend of ambulatory surgery is undeviatingly moving in many countries all over the globe, and India has an enormous scope of expansion of daycare procedures and surgeries. Practising daycare anaesthesia for ambulatory surgery decreases overall cost, faster turnover of patients and increases safety

# **Material And Methods**

In this prospective observational study, all children >6 months of age undergoing elective day care procedures in the paediatric surgery operation theatre of our tertiary care hospital were enrolled

#### Results

596-ambulatory surgeries were performed from January 2019 to January 2022. The most common surgeries were Inguinal herniotomy (30.50%) and orchidopexy (13.89%). Four hundred and seventy-eight (80.20%) patients received general

#### Conclusion

Ambulatory procedures conducted in our institute had a low rate of 24-hour readmission and no significant complications. considering short-acting agents used for anaesthesia. Newer modalities and inventions in anaesthesia and surgery increase safety and reduce complications. Our objective was to assess the safety and outcome of daycare paediatric surgery patients in terms of readmission rate and complications

in this study. We recorded the type of surgical procedure, type of anaesthesia, postoperative complications, and readmission rate within 24 hours.

anaesthesia along with regional anaesthesia, whereas 118(19.79%) patients received general anaesthesia only. None of the daycare patients received regional anaesthesia as a sole technique. The complication rate was 9.2%, and the readmission rate was only 2.2 %.

# Dr. Garima Agrawal, Dr. Raksha Kundal Lady Hardinge Medical College New Delhi, India

# Introduction

Studies have shown that prematurely born babies presenting for surgical procedures that require general anaesthesia are more prone to have episodes of apnea and cardiorespiratory events in the postoperative period due to their immature physiology and anatomy than their full-term counterparts. These complications are even more frequently observed if the post conceptual age (PCA) at the time of surgery is less than 60 weeks. Therefore, ambulatory anaesthesia does not have wide acceptance in this

# Methods

An infant with premature birth at 30 weeks with birth weight 950 grams and current weight 1125 grams presented for laser treatment for retinopathy of prematurity at PCA of 42 weeks. Detailed preanesthetic examination revealed history of NICU stay for some days after birth where she had received oxygen supplementation via cannula. There was no documented comorbidity, and the child was thriving well.

Premedication with low dose fentanyl just prior to induction of general anaesthesia was administered. Airway was secured with supraglottic airway device

#### Conclusion

Ambulatory procedures may be considered in premature infants with PCA less than 60 weeks ensuring no comorbidity pertaining to the particular age group. However, considering the peculiar situation of COVID 19 pandemic, requests for early discharge from health care facility has risen. Retinopathy of prematurity is a condition that requires intervention in the initial weeks of birth for a favourable outcome. We present a case report of a premature infant presenting for laser treatment of retinal detachment due to ROP performed under general anaesthesia who was successfully discharged home the same day.

and before submitting the child for the procedure, bilateral peribulbar block was performed. Intraoperative period of ninety minutes remained uneventful, and child regained good spontaneous respiration towards the end of the procedure. Recovery from anaesthesia was satisfactory. Vigilant post-operative monitoring was done for 8 hours, and no episodes of apnea, bradycardia, hypoxia or excessive crying were observed. The baby accepted feed and was discharged home the same evening with appropriate instructions to parents.

cardiorespiratory system and utilising multimodal anaesthesia techniques.

Total anaesthesia related time of ultrasoundguided axillary nerve block versus peripheral nerve block: a randomised controlled trial

#### Simon Buelens, Maud Pierson, Hassanin Jalil, Jean-Paul Ory, Jeroen Vandenbrande, Kristof Nijs, Ina Callebaut, Björn Stessel, Jessa Ziekenhuis

#### Introduction

Locoregional anaesthesia has become an increasingly popular alternative for general anaesthesia in ambulatory hand surgery. Both the ultrasound guided (UG) axillary nerve block and the UG distal peripheral nerve block are frequently used anaesthesia techniques for ambulatory hand surgery. The peripheral nerve block targets the median

#### **Materials and Methods**

From January 13th, 2021, to October 7th 2021, a total of 80 patients undergoing elective ambulatory hand surgery were enrolled in this prospective, mono-centre, randomised, observer-blinded superiority trial. Patients were randomised to receive either an UG axillary nerve block (n=40) or an UG peripheral nerve block (n=40). The total anaesthesia related time is defined as the sum of block performance time and block onset time. Block performance time is defined as the time interval between the start of the block procedure and the

#### **Results and Conclusion**

Baseline characteristics are presented in table 1. The total anaesthesia related time of a peripheral nerve block was significantly shorter compared to an axillary nerve block (07:29  $\pm$  03:24 min vs 11:46  $\pm$  04:17 min, p<0.001). No differences in total OR time, tourniquet time, surgical time or patient satisfaction were observed between both groups (table 2). All patients were successfully operated on without need of conversion to general anaesthesia. and ulnar nerve at the lower third of the forearm, combined with subcutaneous infiltration of the distal branches of the radial nerve at the radial side of the wrist. The primary aim of this study was to assess and compare the total anaesthesia related time of both techniques.

end of the block procedure, thus imaging + needling time. Block onset time is defined as the time required to achieve an adequate level of anaesthesia for surgery after placement of the block. Additionally, total operating room (OR) time, tourniquet time, surgical time and patient satisfaction were evaluated. Data were presented as mean  $\pm$  SD, median (IQR) or frequencies (%). Differences between both groups were measured with a Student's T-test or Mann-Whitney U test. A p<0.05 was considered statistically significant.

In conclusion, an UG peripheral nerve block is superior to an UG axillary nerve block in terms of reduced total anaesthesia related time. As a result, adoption of the UG axillary nerve block technique for ambulatory hand surgery may improve OR efficiency.

# Three-month Quality of Recovery trajectory after ambulatory arthroscopic shoulder surgery: secondary analysis of a randomised controlled trial

#### Eline Soors, Stefan Evers, Dirk Vrancken, Ine Gruyters, Liesbeth Heremans, Ina Callebout, Björn Stessel, Jessa Ziekenhuis

#### Introduction

Patients undergoing ambulatory arthroscopic shoulder surgery are forced to recover at home without guidance of trained hospital staff and with limited options for postoperative analgesia available. It has been demonstrated that one of the best predictors for short-term (postoperative day (POD)

#### **Materials and Methods**

All adult patients undergoing ambulatory arthroscopic shoulder surgery between December 2nd 2019 and November 9th 2021 were asked to participate. Patients were randomised in a control group and an experimental group. Patients in the experimental group were instructed to take metamizole 1000 mg orally three times a day for four days while patients in the control group received a placebo. All patients were instructed to take ibuprofen 600 mg orally three times a day for four

#### **Results and Conclusion**

In total, 110 patients were included in the study from which 55 were allocated to the control group and 55 to the metamizole group. Baseline characteristics are presented in Table 1. Mean GSR index scores (figure 1A) and mean Simple Shoulder Test scores (figure 1B) of the control group and the metamizole group were not statistically significantly different at baseline, POD7, POD14, POD28 and 3 months postoperatively. Compared to baseline, the functionality of the affected shoulder was significantly improved 3 months after surgery in both the control group and metamizole group (p<0.001). 7) and long-term (POD 28) poor/intermediate Quality of Recovery (QoR) is a high postoperative pain level at POD 4 (1). The aim of this study was to evaluate QoR in patients undergoing ambulatory arthroscopic shoulder surgery while following a multimodal postoperative pain treatment.

days and 1000 mg paracetamol orally four times a day for four days. QoR was measured by the 1-item Global Surgical Recovery (GSR) index, representing a single question about the extent to which patients considered themselves to be recovered from the surgery (0-100%) and by the Simple Shoulder Test, which evaluates the functionality of the shoulder. QoR was assessed at baseline, at POD 7, 14, and 28 and at 3 months.

In conclusion, addition of metamizole to standard pain therapy doesn't seem to improve three-month QoR trajectory after ambulatory arthroscopic shoulder surgery. Surgery doesn't seem to interfere with subjectively perceived QoR (GSR) but positively impacts shoulder functionality 3 months after surgery.

# Miscellaneous

# A case report on Persistent Mullerian Duct Syndrome presenting as obstructed inguinal hernia in an adult male: Virtual Presentation

## Dr Darshan B.M. Dr. Kasa Somasekhar , Dr. Darshan B. M. Vijayanagara Institute of Medical Sciences, Bellary

Persistent Mullerian Duct Syndrome (PMDS) is defined as the presence of müllerian derivatives, uterus, and Fallopian tubes in otherwise normally masculinized 46, XY subjects. It's more common in children with cryptorchidism and is a rare finding during hernia surgery among adults with a risk of malignant degeneration.

Here we present the case of a 34-year-old adult male with a history of irreducible swelling in the right groin since 1 day and with a past surgical history of left sided hernia repair 10 years back.

On examination a tender, irreducible swelling was noted in the right inguinoscrotal region, opposite side and groin area appeared normal with normal male pattern virilisation. A clinical diagnosis of irreducible right inguinal hernia was made, and the patient was taken up for surgery under spinal anaesthesia. Intraoperatively, right sided sliding hernia with an indirect hernia sac was noted with the contents being degenerated uterus, right fallopian tube connecting to the cornua of uterus along with right gonadal tissue at the fimbrial end within the broad ligament.

Consent was taken and hernioplasty was performed after excision of the gonadal tissue along with the fallopian tube. On histopathological examination the gonadal tissue was found to be of testicular origin with fibrosis and degeneration.

The diagnosis of persistent Müllerian duct syndrome was confirmed.

This case report adds on to the current literature on incidence and presentation of PMDS amongst adults and highlights the importance of knowing the pattern of occurrence of this rare condition.

# A Satisfaction Survey of information provided to patients having day surgery at Preoperative Assessment

## Dr Deepshikha Mehra, Dr Parvathi Nair, Dr Madhu Ahuja The Royal Wolverhampton NHS Trust, UK

## Introduction

Patient satisfaction is an essential measure of healthcare quality and is used as an outcome measure in clinical trials. For continuous quality improvement, it is imperative to know the patient's

# **Methods and Materials**

Questionnaires were distributed to patients (adults and parents of paediatric patients) in May 2021. Patients were asked to rate the information

#### Results

94% of the patients found that the information given in the clinic was satisfactory. 63% received the information in verbal and written format. 72% felt that the queries were answered to their satisfaction. 84% were given information on fasting in a way they could understand. 57% were informed of anaesthetic options for their surgery while 44% were given information on post-operative pain management. 46% were given instructions on their medications and 45% were informed about aftercare for the procedure.

# Conclusion

Overall, the patient satisfaction score is high but there is still room for improvement in areas where information regarding anaesthetic options, postoperative pain management and aftercare for the procedure can be tailored to specific procedures. There is a focus on giving out this in the surgical perception and expectations. We carried out an audit to determine satisfaction for patients having day surgery at the Preoperative Assessment (POA) clinic.

given (verbal/written/both) in the clinic. 134 questionnaires were analysed.

Factors like ease of appointment availability and special arrangements made to attend the clinic also contributed to the patient's satisfaction. 95% found it easy to get to the clinic while 42% had to arrange for time off work. 51% spent about 30 to 60 minutes in the POA clinic. 54% would like to receive information/reminders via texts whereas 52% would still prefer communication through letters. 45% would like to attend the POA Clinic on the same day as the surgical outpatient appointment if given an option.

outpatient clinic. The hospital is in the process of reviewing digital POA software that is compatible with the current patient access system as gradually more patients are opting for online communication and reminders via texts which can help reduce Did Not Attend (DNA) rate.

## René van der Voort, Audrey Mommers, Kelly Verdoorn, Xavier Falières, Anika Filius

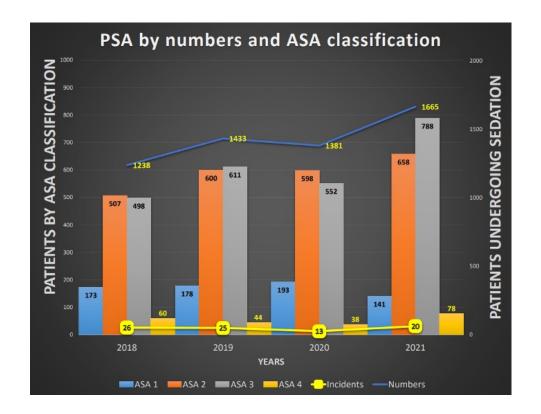
#### Albert Schweitzer Ziekenhuis

Procedural sedation analgesia (PSA) is performed by a sedation practitioner (SP) under indirect supervision of an anaesthesiologist and is becoming more common in ambulatory surgery. Throughout the years sedation has been proven to be a safe and time effective way to perform a large panel of interventions in ASA 1 to 4 patients.

We reviewed the registration data of PSA procedures between 2018 and 2021 in our hospital. Data was collected regarding incidents and ASA classification. Post-PSA patient satisfaction surveys were performed to evaluate patient satisfaction. Preliminary results show an average grade of nine out of ten for satisfaction.

Registration of PSA procedures from 2018-2021 show an increase in the number of procedures throughout the years, without any big increase in incidents. Based on these results we conclude that PSA is a feasible alternative for small procedures that are painful, even in patients with a high ASA classification. In addition, PSA is expected to help to reduce costs of procedures, which previously needed general anaesthesia in our hospital, since no anaesthesiologist is needed on site. That and an always spontaneous breathing patient makes for short changeover times and also recovery times are short.

Indications for interventions under PSA will only grow in the future. So our question is: should PSA get a more prominent roll and dedicated spaces? Ideally, we would like to optimise the process by centralising PSA procedures in one outpatient clinic within the hospital. This space should be dedicated to providing PSA to patients of different specialisms in an efficient way. Patients do not need to be admitted, this will reduce the demand for beds and slots in the operating theatre.



# Management and Finances of Ambulatory Surgery

# **Design and application of multi-mode postoperative follow-up in gynaecological with medical and nursing integration:** Virtual Presentation

#### Lijuan Xu, Xuedong Du

Chengdu Women's and Children's Central Hospital, School of Medicine University of Electronic Science and Technology of China

#### Aims

To explore the design and application of multimode postoperative follow-up in gynaecological day

#### Methods

1,100 patients admitted to the gynaecological day surgery centre of our hospital from June 2021 to February 2022 were selected as subjects, the medical staff established WeChat groups respectively according to their date of the operation, they answered patients questions every day in the group

#### Results

Through the investigation and analysis of the multimode follow-up of medical and nursing integration, the incidence of postoperative complications was

#### Conclusions

The integrated multi-mode postoperative follow-up model can improve the effectiveness, ensure medical safety and improve patients' satisfaction with the nursing work. surgery centre with medical and nursing integration

within 15 days after operation, and the postoperative recovery questionnaires were sent to the patients through Cloud follow-up platform. To investigate the incidence of postoperative complications, unplanned readmission rate one month after operation and patient satisfaction.

1.09%, the unplanned readmission rate was 0.18%, and patient satisfaction was 100%.

# Kanika Daga, Dikshika Mathur Royal Wolverhampton NHS Trust, UK

#### Introduction

Day case arthroplasty has been growing in popularity in recent years as it can improve patient experience and lower costs of patient care. We describe a pilot

# Methods

Suitable, motivated patients were identified by the surgeon in their initial clinic consultation. The medical inclusion criteria was: BMI <35, ASA I-II, eGFR >60, haemoglobin >120, adequate smoking cessation. The social factors considered included proximity to a hospital and the availability of overnight companion. Those with opioid dependency or cognitive impairment were excluded.

Pre-operative assessment was carried out in the standard nurse-led clinic. Patient education regarding day surgery was done via telephone by the consultant

#### Results

Three patients (aged 33, 65 and 70) have been done under our day case pathway so far. The patients received no premedication and were given an opioidfree spinal. Sedation, if needed, was with propofol infusion and/or midazolam. Tranexamic acid was given at induction and at 6hrs post-operatively.

# Discussion

Current guidelines for day case surgery recommend a day case unit separate to inpatient wards, early pre-operative assessment, and a dedicated nurseled clinic slot for patient education. Such changes were not possible in our hospital due to limited resources. Our early work shows how smaller units project establishing a day case hip arthroplasty pathway within the limitations of a district general hospital.

anaesthetist conducting the list.

Patients remained on the same ward as the inpatients until discharge, which was led by the physiotherapists and nurses. Patients would be sent home with multimodal oral analgesics, antiemetics and laxatives. On discharge, they were given the telephone number for the orthopaedic ward where the nurses could address any concerns, aided by a pre-defined algorithm. Telephone follow-ups were done at 24hrs by the orthopaedic nurses. Review by the surgeon and physiotherapist would be in clinic at 48hrs.

Local infiltration and diclofenac were used for postoperative analgesia.

All patients achieved early mobility with little to no pain. One patient failed same-day discharge because he was unable to pass urine before the cut-off time. None complained of poorly controlled pain or nausea/vomiting post-discharge.

can still fit novel day case pathways into their existing infrastructure. We hope to build on this experience to establish a dedicated service for ambulatory hip arthroplasties.

# Quality management in an Integrated Ambulatory Surgery Unit

#### Ainoa Benavides dos Santos, Lluis Antonio Hidalgo Grau, Daniel Neira Cerón, Evelyn Escobar Cuesta, Ana Rosa Pujol Requena, Pilar Barrufet Barqué *Hospital de Mataró*

#### Introduction

The main goal of Ambulatory Surgery is to achieve an optimal rate of outpatient procedures, always preserving the clinical quality and the safety of the patients. Quality indicators help us for that objective

in an implemented Quality Management System. The aim of our study is to evaluate the quality indicators of our Unit and its evolution.

#### **Materials and Methods**

We consider the period of time between the years 2017-2021. The total number of operated patients in our Integrated Ambulatory Surgery Unit was 30.293. We have obtained the ISO 9001:2015 Certificate in 2017 and that is our Quality Management System.

ISO 9001:2015 certification includes the quality management by processes evaluation. Every process has one or more indicators. We divided the general process in five: selection, admission, operation,

#### Results

We have been increasing our ambulatorization rate. The high-rate changes in the surgical programme could be related to the fact of sharing the operating rooms with admitted patients (Integrated Unit), but we are trying to improve it. Cancellations are related

#### Conclusions

The ISO 9001:2015 Certificate for Quality Management Quality indicators are essential for quality management and safety in our Ambulatory recovery and discharge, and postoperative followup The quality indicators evaluated were as follows (indicator objective between brackets): % of Ambulatorization (> 60%), % of cancellations (<10%), % of reoperations (<0.5%), patients with postoperative pain measured by Visual Analogue Scale under 3% (<5%), early admissions (2%), unplanned postoperative consultations (<5%) and late admissions (<0.5%).

to the preoperative COVID-19 test. We are including in our basket more complex procedures, which could explain the postoperative pain, admissions and unplanned consultations increase over the objective.

Surgery Unit. Corrective actions can be implemented after the evaluation of results.

#### Ambulatory Surgery is the official clinical journal for the International Association for Ambulatory Surgery.

**Ambulatory Surgery** provides a multidisciplinary international forum for all health professionals involved in day care surgery. The editors welcome reviews, articles, case reports, short communications and letters relating to the practice and management of ambulatory surgery.

Topics covered include basic and clinical research, surgery, anaesthesia, nursing, administrative issues, facility development, management, policy issues, reimbursement, perioperative care, patient and procedure selection, discharge criteria, home care. The Journal also publishes book reviews and a calendar of forthcoming events.

#### Submission of articles

All papers should be submitted by email as a Word document to one of the Editors-in-Chief.

Electronic submissions should be accompanied, on a separate page, by a declaration naming the paper and its authors, and that the paper has not published or submitted for consideration for publication elsewhere.

The same declaration signed by all authors must also be posted to the appropriate Editor-in-Chief.

Mark Skues Email: <u>mskues@gmail.com</u>

Madhu Ahuja Email: <u>madhuahuja@nhs.net</u>