

Breast reduction as a day case

Allan M. Kalus*, Grant Brace, Peter R. Roessler

Plastic and Aesthetic Surgery Centre, 20 The Avenue, Windsor, Victoria 3181, Australia

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Abstract

The feasibility of performing breast reduction surgery on an ambulatory basis was evaluated in a prospective study. Of 64 patients presenting for breast reduction surgery, 50 were selected as suitable for day surgery (78%). Of these patients, all were able to be discharged on the day of surgery. The study has shown that it is safe and appropriate to perform breast reduction on an ambulatory basis. Patient recovery is rapid and the complication rate is equivalent to that of other types of breast surgery.

Keywords: Ambulatory surgery; Breast reduction

1. Introduction

Reduction mammoplasty represents one of the clearest examples of the interface between reconstructive and aesthetic breast surgery and is well established as the treatment of choice for symptomatic mammary hypertrophy and/or ptosis (Fig. 1). Patients with mammary hypertrophy commonly present with neckache, backache and shoulder pain due to their excessive breast weight. In addition, many complain of difficulty in buying appropriate clothing, an inability to participate in certain sporting activities, poor posture, submammary intertrigo and often profound self-consciousness.

In 1985, the Royal College of Surgeons of England published a report encouraging day surgery as being cost effective. The report estimated that one third of all general surgical and urological procedures could be carried out on a day case basis. In 1987, the Royal Australasian College of Surgeons published guidelines for the conduct of day surgery [1]. The College listed a

number of advantages of day surgery. In addition to the obvious economic advantages, there were significant other advantages, especially for patients and their relatives. These included:

- (1) A considerable reduction in the risk of cross infection when compared with patients who remained in hospital.
- (2) A reduction in the risk of thromboembolism associated with early ambulation.
- (3) Less anxiety for the patient where an overnight stay in hospital is avoided.
- (4) A quicker return to normal activities with less time off work.
- (5) Less stress for relatives of patients and savings in time, travel and sometimes accommodation required to visit an in-patient in hospital.

With regard to the suitability of patients for day surgery, the College published guidelines as follows:

- (1) An assessment that post-operative pain can be controlled by oral medication after discharge.
- (2) An assessment that the post-operative course is predictable.
- (3) A willingness on the part of the patient to be treated as a day case.

* Corresponding author. Tel.: +61 9521 1777; fax: +61 0521 3837

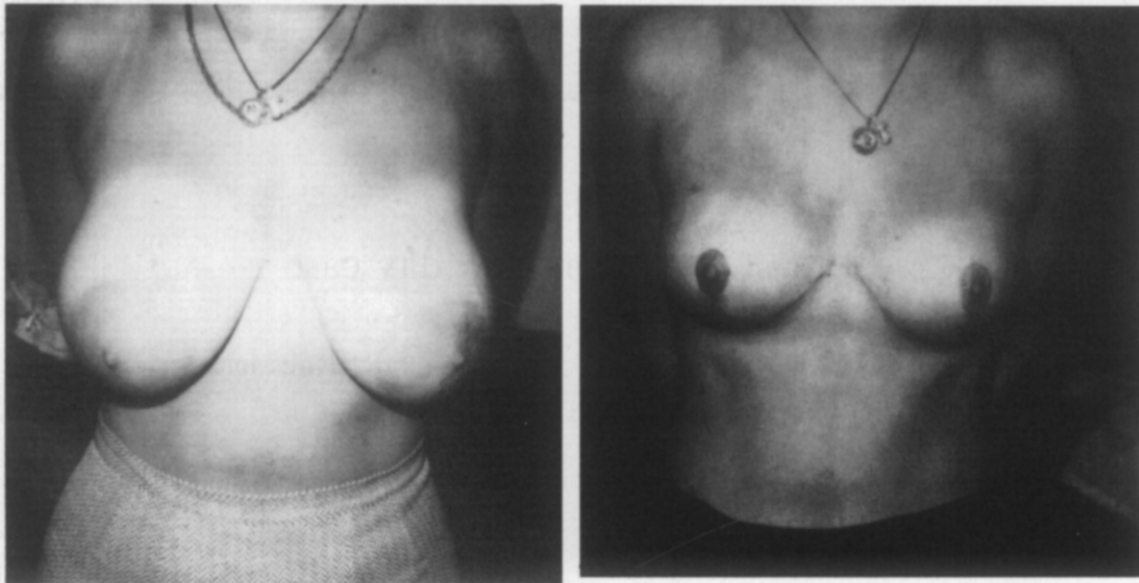


Fig. 1. Pre- and post-operative photographs of a patient undergoing breast reduction.

- (4) The provision of transport and a suitable escort for the patient and the availability of a suitable person at home to support the patient.
- (5) There should be no language difficulty for the communication of instructions.

A further requirement is that a telephone should be available at home. Furthermore, the patient should live close enough to a medical facility in order to obtain emergency care if required. For practical purposes, it is desirable that travelling time from the facility to home is not greater than about 1 h.

With regard to the suitability of procedures for day surgery, Rudkin et al. [2] stated that the only constraint is that the procedure should entail an uncomplicated recovery. The essential requirements are that the procedure be performed with minimal physiological disturbance, minimal risk of haemorrhage and adequately controlled post-operative pain. Day surgery need not be limited to 'minor surgery'. This was clearly shown in a study by Saltzstein et al. [3] who performed open cholecystectomy as a day case on 44 of 64 eligible patients. He stated that "if incisional comfort can be controlled, the time for recovery and length of post-operative hospitalisation should be the same for open cholecystectomy as for laparoscopic cholecystectomy".

Breast reduction is considered major surgery by most standards. In the past it was not unknown for patients to languish in hospital for up to 2 weeks. Admitted the day before for assessment and cross matching of blood, their surgery was often accompanied by significant blood loss and considerable pain. The result was often a profound physiological disturbance and morbidity. Nipple and skin flap necrosis occurred with disturbing

frequency and often necessitated revision surgery. Such scenarios are now unusual and indeed the length of hospital stay for patients undergoing reduction mammoplasty has decreased significantly. This has been due to a number of significant technical advances in breast surgery which have occurred over the last decade.

The use of the central segment technique of breast reduction [4] (in which the nipple is transposed on a central segment of breast tissue rather than on a thin dermal flap) solved overnight the problems of nipple blood supply and viability.

The use of breast infiltration with local anaesthetic and a vasoconstrictor has significantly reduced patients' metabolic stress and blood loss. Significant changes in anaesthesia have also occurred in recent years, particularly in respect of attitude towards day surgery and anaesthetic agents. The availability of propofol and isoflurane has dramatically reduced patients' recovery time and their sense of well-being following surgery. The use of ketorolac has allowed the virtual elimination of narcotics both for pre-operative medication and post-operatively, with a significant reduction in the incidence of post-operative nausea and vomiting.

The availability of these technical advances led us to investigate the feasibility of performing reduction mammoplasty as a day case.

2. Method

The study was undertaken at The Plastic and Aesthetic Surgery Centre — a registered free-standing day

surgery centre owned and operated by the senior author. Patients were selected from those presenting with symptomatic mammary hypertrophy and/or ptosis. Patients were generally excluded from the study for the following reasons:

- (1) Advanced age
- (2) Ill health
- (3) Patients living in a remote area
- (4) Patients who were anxious about the thought of day surgery
- (5) Patients with social reasons for admission to hospital such as those living alone and unable to provide a chaperone or those with a young family and inadequate home help. Patients were given the option of treatment as a day case or as an in-patient. It was also explained that, in the event that the medical staff considered the patient unsuitable for discharge following surgery, then transfer to hospital would be arranged.

2.1. Technique

Pre-operative photographs were taken and the patient marked while sitting up in order to determine the future nipple position. After induction of anaesthesia, 100 ml of 0.5% xylocaine with 3 ml of POR8 was used to infiltrate the breast tissue in order to reduce both the metabolic response to surgery and blood loss. Following skin preparation with Savlon and surgical draping, a central segment of breast tissue was dissected and preserved. This segment contained the nipple and underlying breast tissue as an intact unit, thus preserving nipple sensation and future ability to breast feed. A reduction of the remaining breast tissue was then performed, followed by haemostasis by electro-coagulation. Blood loss was generally limited to two-lightly moistened large packs. Wound closure was effected by subcuticular suture with the nipple in its revised position and an inverted T submammary suture line. Scar minimisation techniques were utilised where appropriate. Suction drains were routinely used and all suture lines taped with steristrips. Gauze and cotton wool with an overlying crepe bandage were then used to provide a bulky pressure dressing.

Pain management was of critical importance.

In addition to fentanyl 50–100 μ g, patients were given ketorolac (Toradol) 30–60 mg parenterally prior to induction of anaesthesia. With this combination, patients usually awoke pain free. Oral fluids were administered when requested, usually within 1 h of surgery. An Orudis SR200 tablet was given 3 h following surgery and subsequently any pain controlled with Panadeine or Panadeine Forte. Prior to discharge, patients were able to take oral fluids and were able to

walk with assistance to the bathroom in order to void urine. What little pain there was had been demonstrably relieved by oral analgesics. Patients were given detailed written instructions and a supply of analgesic tablets. Long acting nonsteroidal analgesics together with Panadeine and Panadeine Forte were used to control pain for the first 24–48 h.

A dressing was arranged for the next day, preferably in the surgeon's rooms, but if necessary by a nursing service in the patient's own home.

Drains were usually removed after 2 or 3 days and sutures after 10–14 days.

3. Results

A total of 50 patients underwent breast reduction as a day case. This represented 78% of patients undergoing breast reduction in the senior author's practice over the study period. All patients were discharged home on the day of surgery. Patients ranged in age from 16 years to 72 years with a mean age of 30 years (Fig. 2). The weight of tissue removed ranged from 100 g to 3.7 kg, the mean weight removed being 1158 g (Fig. 3).

Four patients underwent unilateral breast reduction to correct breast asymmetry, while three patients underwent additional surgery as a combined procedure. Total time in theatre ranged from 85 min to 130 min, with a mean of 110 min. Because of time taken for anaesthesia, marking, infiltration and dressings, the actual average operating time for a bilateral reduction mammoplasty was 75 min. Time in the facility ranged from 6 h to 10.25 h with a mean of 7.8 h.

3.1. Complications

Three haematomas occurred in the 50 patients. Two patients were admitted to hospital and the haematoma evacuated under general anaesthesia, while the third patient was readmitted to the Day Procedure Centre and the haematoma aspirated under intravenous sedation anaesthesia.

Delayed healing at the T-junction occurred in 3 patients. Two of these required secondary excision under local anaesthetic, usually at 7–14 days post-operatively. There was, therefore, a total of 6 complications from 50 patients, giving a complication rate of 12%.

All 3 patients who had delayed healing and necrosis of the T-junction were active smokers. In fact, this phenomena occurred in 3 of the 8 patients in the series who smoked. This compared with no healing problems in the 42 non-smokers in the series.

Post-operative vomiting occurred in 6 patients but in only 2 of the last 25 patients in the series.

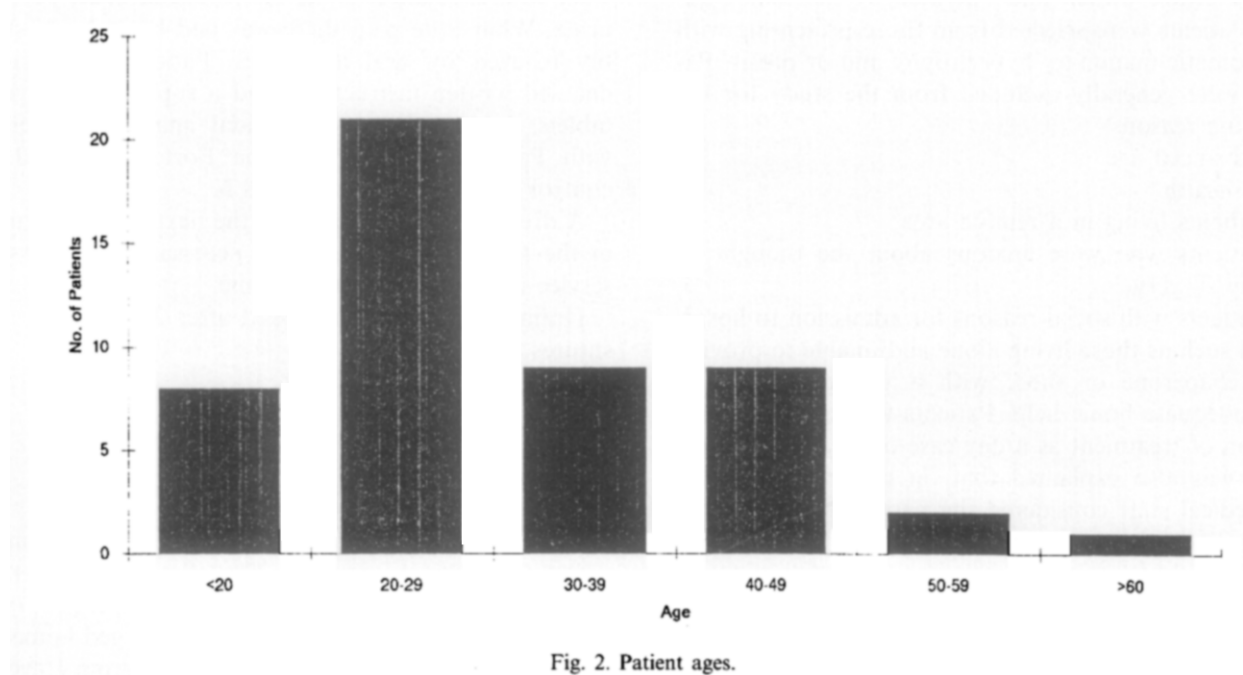


Fig. 2. Patient ages.

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4. Discussion

In conclusion, this study has proved that it is feasible to perform breast reduction as a day case. Furthermore, this study has shown that even patients with gigantomastia, requiring extremely large reductions (up to 3.7 kg in this series), can safely be treated as a day case. Apart from delayed healing at the T-junction (which was found to occur exclusively in smokers), the only other complication was haematoma which developed post-operatively in 3 of our 50 patients. The haematomas were readily recognised by the patients due to the pain and associated swelling and were expediently managed by admission to hospital for evacuation under general anaesthesia or, in the third case, re-admission to the Day Procedure Centre and removal of the haematoma by aspiration. None of the complications affected the final result.

The fact that 78% of patients undergoing breast reduction over the study period were operated on as day patients indicates that day surgery breast reduction is acceptable to an overwhelming majority of patients. Indeed, the commonest reasons for admission to hospital were psychosocial, i.e., anxiety regarding day surgery or patients with inadequate home help. Patients with private health insurance were more motivated to seek hospitalisation than those without private health insurance for whom the ability to save on hospital costs was a great incentive to organise home help. Many insured patients, however, preferred the option of avoiding hospitalisation as they preferred to recover in their home environment with their families.

With a mean age of 30 years, most patients were fit and healthy. Even patients categorised as ASA III could be rendered suitable for day surgery by adequate control of their underlying health problem. Even elderly patients who are otherwise fit (the eldest in our series was 72 years old) can be safely managed as a day case.

Appropriate anaesthetic management is essential if patients are to be discharged on the day of surgery. Utmost attention must be paid to antiemesis, adequate analgesia with optimal use of non-steroidal anti-inflammatory and opioid analgesics, blood pressure manipulation, rapid emergence and recovery and the maintenance of adequate hydration. Recently introduced drugs such as propofol for induction or for total intravenous anaesthesia, and isoflurane, have dramatically reduced patient recovery time and enhanced their sense of wellbeing following surgery. The perioperative use of nonsteroidal anti-inflammatory drugs has greatly assisted in the pain management of these patients and virtually eliminated the need for potent opioid drugs in the post-operative period.

For many doctors, day surgery is a new system of patient management. The requirement that a patient be fit for discharge home within a few hours of surgery demands quality assurance in every aspect of patient care. The requirements that patients be ambulant, pain free and able to tolerate oral fluids demand a careful analysis of each and every aspect of the surgery and the anaesthetic. Surgical and anaesthetic complications must be kept to an absolute minimum in order to satisfy the fundamental requirement of a predictable post-operative course.

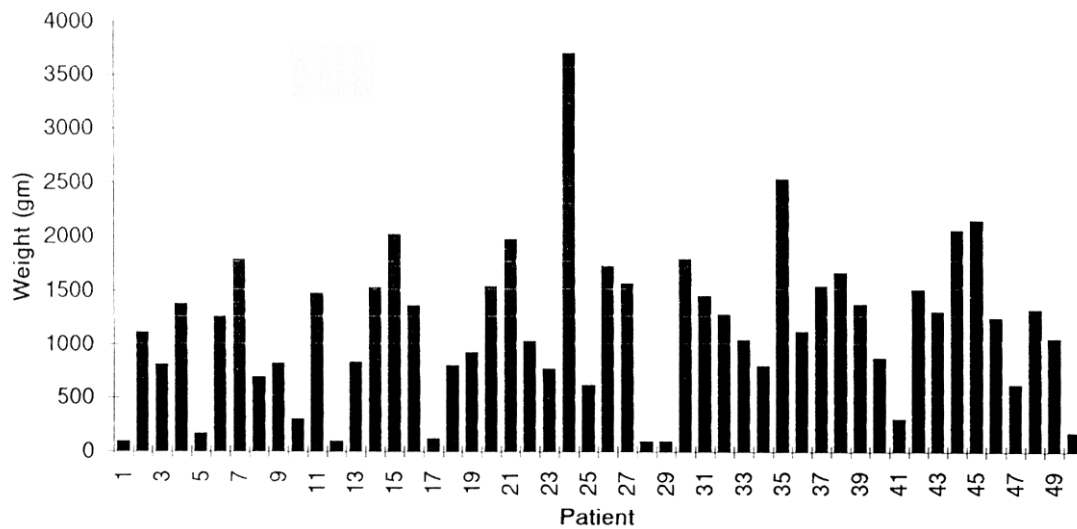


Fig. 3. Weight of breast tissue removed.

The availability of a dedicated day surgery unit with experienced and motivated staff is of critical importance to the development of the techniques required. Just as day surgery is not suitable for every patient, so is day surgery not suitable for every surgeon. Some surgeons may not be prepared for the added responsibility that comes with discharge of a patient on the same day. Unlike the hospital situation where most concerns are likely to be handled by nursing staff and resident medical officers, with day surgery any concern on the part of the patient is likely to result in a telephone call to the surgeon.

Health care currently has quality care and cost effectiveness as its two main objectives. Day surgery meets these requirements. A significant majority of patients prefer this form of treatment as it lessens the psychological stress associated with hospitalisation and enables recovery in the familiar surroundings of their home. The quality assurance essential to the performance of major surgery on an ambulatory basis results in a low complication rate. The availability of breast reduction as a day case has made the operation available to a large number of uninsured patients who would otherwise not be able to afford the cost of hospitalisation. The development of home nursing services and the increased involvement of family doctors

in the aftercare of patients will further extend the applicability of this procedure.

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