

artery in the capsule secondary to steroids in the implant.⁴

Late haematomas usually present with an enlarged, painful or tender breast. However, as demonstrated in this case the haematoma may erode into the surrounding structures presenting with a reddish blue discoloration of the skin associated with discharging sinuses and necrotic skin areas. This may lead the clinician to think of an infective aetiology, recurrent cancer or implant rupture. Ultrasound is useful but may be limited by body habitus or extreme breast tenderness. MRI is more reliable in detecting implant rupture and to evaluate and characterise adjacent fluid collections or soft tissue masses.² Surgical inspection should be the intervention of choice. Prostheses and clots should be removed and biopsies of the capsule must be taken.

Conclusion

Surgeons caring for these patients should be aware of this unusual potential complication as it may mimic infection, recurrent cancer or implant rupture. Prompt diagnosis with evacuation of haematoma and removal of the prostheses is curative.

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Free DIEP flap breast augmentation following excessive reduction

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SUMMARY. A two-stage procedure using bilateral free DIEP flaps to correct excessive bilateral breast reduction is described. The reconstructive challenge was to achieve satisfactory breast projection on a large torso without recourse to prosthetic implants or extensive back scars. The literature on the use of TRAM and latissimus dorsi flaps in subtotal breast reconstruction for various other breast deformities is reviewed. We have not found a similar case to ours in the literature. © 2003 The British Association of Plastic Surgeons. Published by Elsevier Science Ltd. All rights reserved.

Keywords: reduction mammoplasty, DIEP flap, breast reconstruction, breast augmentation.

Introduction

Breast reduction is a common surgical procedure, usually producing satisfactory results and with a low

incidence of secondary surgery.^{1,2} However, Wise-pattern 'anchor-scar' techniques have the potential to produce flat breasts due to insufficient breast-volume preservation and/or insufficient tightening of the skin

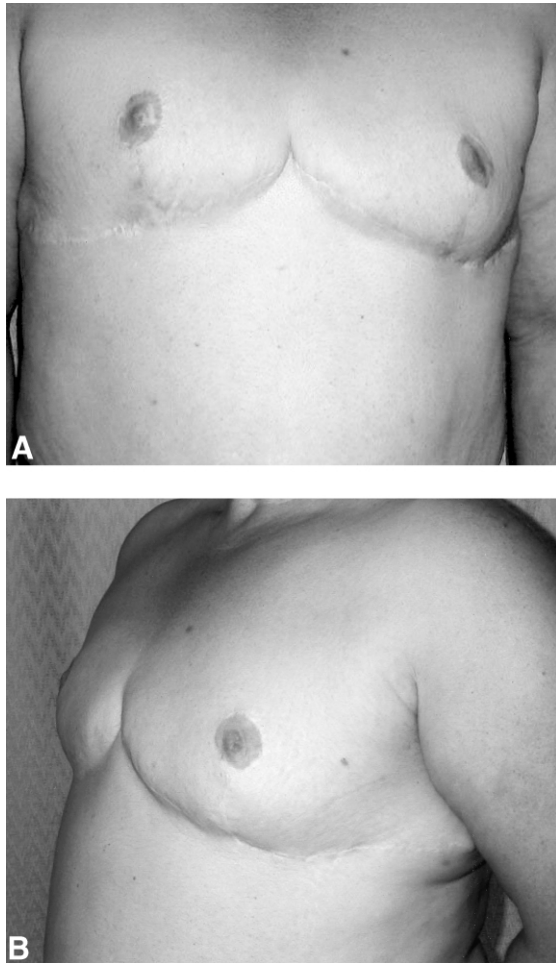


Figure 1—(A) Anterior and (B) oblique preoperative views 4 years after bilateral breast reduction.

envelope. This is particularly so in surgery for massive hypertrophy using the free-nipple-graft technique, where central bulk carried by an inferior pedicle is lacking. We describe the use of de-epithelialised free DIEP flaps for augmentation following excessive bilateral breast reduction. The patient was reluctant to have breast implants or back scars secondary to latissimus dorsi transfer. This surgical problem was effectively solved by bilateral free DIEP flap 'breast augmentation'. To the best of our knowledge, this is the first such use of these flaps reported in the English literature.

Case report

A 47-year-old retired Caucasian nurse was referred by her family physician 4 years after excessive bilateral reduction mammoplasty with free nipple grafting performed in another area. Her main complaint was a lack of breast projection, necessitating the use of padded brassieres.

Examination confirmed very flat breasts with a male chest appearance. This was a significant cause of psychological upset and a poor body image. Scarring was consistent with a standard Wise-pattern type breast reduction, and both free nipple grafts had taken well (Fig. 1).

The reconstructive options were explained, and the patient

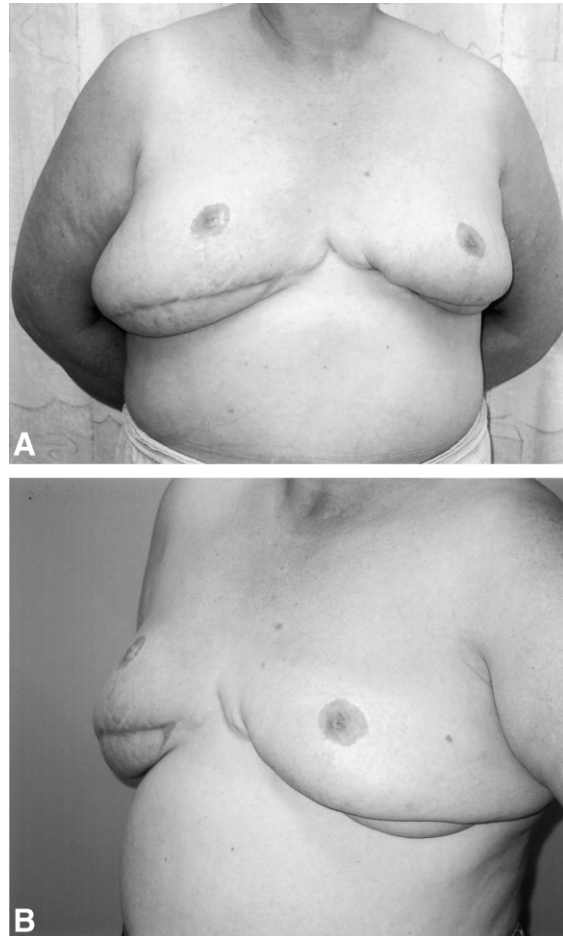


Figure 2—(A) Anterior and (B) oblique early postoperative views after breast augmentation using bilateral free DIEP flaps.

chose to have a free autologous tissue transfer from her ample abdominal panniculus. Reconstruction using two-stage bilateral free DIEP flaps was performed successfully, with the vascular anastomoses being made end-to-end to the thoracodorsal vessels in each axilla. In the first stage, monitoring skin paddles were inset as crescents immediately above the inframammary folds, with the remainder of the flap being de-epithelialised and used to augment the breast remnant in the pre-pectoral plane. The patient made an uneventful recovery, and both flaps survived completely, without any complications. The early postoperative results are shown in Figure 2. The second stage was performed 11 months later to 'tidy-up' and inset the flaps fully and contour the axillary folds. The patient is now satisfied with her body image and, at her most recent follow-up 15 months following the DIEP flaps, there has been no loss of breast volume or projection (Fig. 3).

Discussion

Breast reconstruction with autologous tissue alone has many attractions for patients and plastic surgeons alike. A satisfactory breast mound can sometimes be created without an implant by using an 'extended' pedicled latissimus dorsi flap,³⁻⁵ but this option is best reserved for small-to-medium-sized breasts and for subtotal breast reconstruction, as in quadrantectomy defects.

Breast augmentation using pedicled de-epithelialised

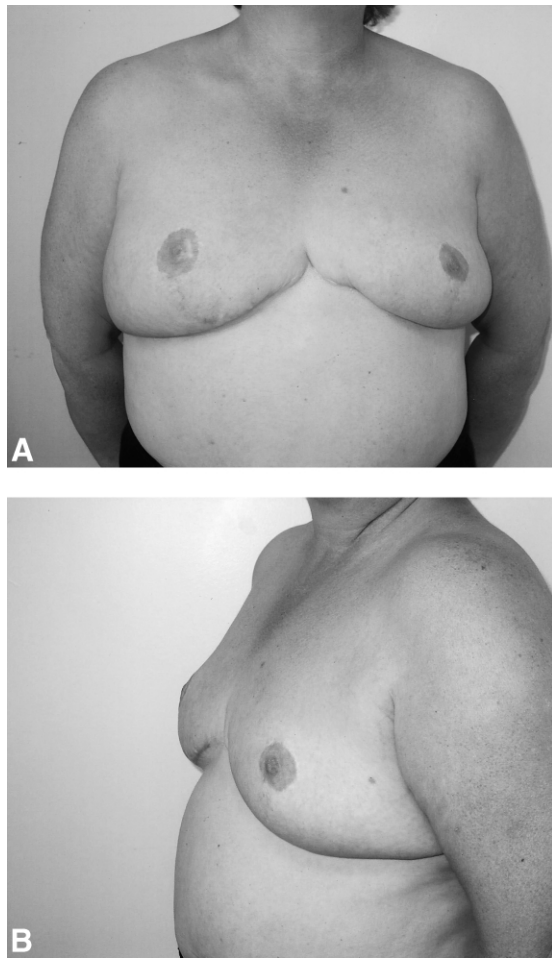


Figure 3—(A) Anterior and (B) oblique final result after inset and axillary recontouring.

latissimus dorsi flaps alone was proposed by Hollos as an alternative to using implants,⁶ but issues relating to scarring remain. Other authors have described the use of TRAM flaps after implant removal or capsulectomy^{7,8} or for deformities resulting from silicone injection.⁹ Recently, the use of perforator flaps for breast-implant failure was described.¹⁰ We have not found a reported use of DIEP flaps for reversal of excessive breast reduction.

In this case, the aim of bilateral near-total breast reconstruction (without the need for nipple-areola reconstruction) was achieved, respecting the patient's wishes, and use of DIEP flaps minimised abdominal donor-site morbidity.

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