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Haematoma as a late complication after breast reconstruction with implant

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SUMMARY. We report a patient who, 3½ years after mastectomy and breast reconstruction using a Becker implant, developed haematoma around the implant. We believe this is the first description of late haematoma formation in association with tissue expander (Becker implant), the differential diagnosis of which includes infection, recurrent cancer and implant rupture. © 2003 The British Association of Plastic Surgeons. Published by Elsevier Science Ltd. All rights reserved.

Keywords: chronic haematoma, breast implant.

Introduction

Women who have had breast implantation frequently experience local complications that require additional surgical procedures. The most frequent complication is capsular contracture followed by implant rupture, haematoma and wound infection.¹ However, late spontaneous haematoma formation is rare after breast augmentation or reconstruction with an implant. We report a case of late haematoma formation in a patient who underwent breast reconstruction with Becker implant.

Case report

A 54 year old woman presented with a complaint of reddish blue discoloration of skin of left breast associated with swelling

and discomfort in January 2003. She had undergone a left modified radical mastectomy for cancer and immediate placement of a tissue expander (300cc Becker) in a subpectoral pocket in 1997. She underwent capsulotomy and replacement of the tissue expander with a new Becker's prostheses in 1999. Steroids were not placed within the pocket. The patient denied a history of trauma to the chest. She did not take aspirin or nonsteroidal anti-inflammatory agents and did not have a coagulopathy.

Physical examination revealed a swollen, firm, minimally tender left breast mound with reddish blue discoloration of skin of the medial half of the breast. The discoloured skin was necrotic in two areas and had few sinuses discharging blood stained fluid (Fig. 1). Clinical considerations included infection, recurrent cancer, haematoma or implant rupture. Ultrasound scan revealed a large haematoma surrounding the implant. The implant appeared intact.

She was taken to the operating room with a plan of exploration and evacuation of haematoma under general anaesthetic.



Figure 1—Swelling, tenderness, reddish blue discoloration of the skin of the left breast developing 3½ years after reconstruction with a Becker implant.



Figure 2—(A) Intraoperative photograph demonstrating evacuation of a large haematoma; (B) intact Becker implant and a large amount of surrounding clots.

Upon entering the capsule a large haematoma was encountered around the tissue expander which had tracked up into the subcutaneous tissue and was discharging via the sinuses. In addition to the old soft clot around the prostheses there was a thick organised fibrinous clot attached to walls of the capsule (Fig. 2A). Subcutaneous tissue revealed fat necrosis and a biopsy was taken. There was no evidence of infection, active bleeding or gross recurrent disease. Discharging sites were excised with a disk of overlying skin. An open capsulotomy was performed and a part of the wall was sent for histological examination. Clots and debris were evacuated. The implant was removed and found to be intact (Fig. 2B). The cavity was washed with saline and packed with proflavine gauze. Intraoperative cultures were all negative for growth. Histopathology revealed inflamed granulation tissue with evidence of previous haemorrhage and dense fibrosis. There was no evidence of malignancy or foreign body.

Discussion

Breast implantation may lead to either immediate or late complications. Haematomas have been noted as a complication of breast implants early in the postoperative period but no data is available regarding late haematoma. There are isolated reports of late haematoma presenting at 5 months to 16 years after implantation. It is less common in women who received implants for breast augmentation^{2–5} as compared to women who received implants after mastectomy for cancer or for cancer

prophylaxis.^{6–10} This could be secondary to the lower complication rate in women who receive implants for cosmetic reasons.¹ This case is notable because of its unusual presentation and as this is the first case of late haematoma reported in association with tissue expander (Becker implant).

Without an antecedent history of trauma or bleeding diathesis the cause of these haematomas is not clear. Labadie and Glover¹¹ proposed the role of inflammation and an increased capillary permeability in the pathogenesis of chronic expanding haematomas. They concluded that a critical volume of clot is needed in order for enlargement to occur. After this, breakdown products of erythrocytes, haemoglobin, leukocytes, and other solid blood elements induce the formation of a neomembrane surrounding the haematoma, which in turn, leads to the progressive growth of the haematoma. Late haematomas have almost always been described in association with silicon gel prostheses.^{2,5–8,10} An unusually intense foreign body inflammation secondary to leakage of silicon microparticles could have caused the chronic expanding haematomas in these cases.

Bleeding secondary to capsular microfractures⁸ may be the possible aetiology in this case. Rigidity of the capsule may prevent retraction of damaged vessels leading to continued bleeding.

Late haematomas have been reported in association with anticoagulant therapy with warfarin (in spite of INR being well controlled)¹⁰ and erosion of medium sized

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