References

1. Martin DJ, Vernon DR, Toouli J. Surgical versus endoscopic treatment of bile duct stones. *Cochrane Database Syst Rev* 2006(2):CD003327.
2. Tinoco R, Tinoco A, El-Kadre L, Peres L, Sueth D, Tinoco R *et al.* Laparoscopic common bile duct exploration. *Ann Surg* 2008; **247**: 674–9.
3. Williams EJ, Green J, Beckingham I, Parks R, Martin D, Lombard M. Guidelines on the management of common bile duct stones (CBDS). *Gut* 2008; **57**: 1004–21.

The dermatotraction technique for closure of breast wounds following flap necrosis

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BACKGROUND

Dermatotraction techniques for delayed primary closure of fasciotomy wounds have only been reported in the last two decades.¹ Flap necrosis following breast reconstruction leaves patients with very large wounds which need skin grafting for closure and can be technically demanding. We describe a technique for closure of such wounds using Foley catheter dermatotraction.

TECHNIQUE

Following breast reconstruction, flap necrosis is a recognised complication (Fig. 1). Removal of the dead and necrotic tissues leaves patients with a large wound which requires skin grafting. A 12-Ch Foley catheter is used to provide traction to the wound edges to allow successful subsequent closure of the defect. The

Figure 1 Necrotic TRAM flap resulting in an extensive wound.

Figure 2 Application of dermatotraction technique in breast wound.

Figure 3 Successful breast wound closure following dermatotraction.

technique involves fixing the catheter in a 'zig-zag' arrangement between the wound edges (Fig. 2). The catheter is secured to the skin approximately 1 cm from the wound margin using clips, before being manually tightened and secured. The wound is cleaned daily and the catheter loops are tightened at 48-h intervals until primary closure can be achieved using interrupted mattress sutures (Fig. 3). We applied this technique successfully to close a large breast wound measuring 20 × 12 cm following TRAM flap necrosis.

DISCUSSION

In its application to breast surgery, this technique provided all the benefits previously shown in the closure of fasciotomy wounds; it is cost-effective, provides good cosmetic results without the need for skin grafting. The procedure does not require additional equipment or training. Furthermore, this technique allows daily inspection of the wound and toilet if needed. Possible limitations include larger defects and the risk of pressure-related necrosis to the tissues.

Reference

1. Sandiford N, Hotouras A, Rao S. The dermatotraction technique for closure of fasciotomy wounds. *Internet J Orthop Surg* 2007; **5**: 2.