

A MYOCUTANEOUS ISLAND FLAP IN THE TREATMENT OF A CHRONIC RADIONECHROTIC ULCER OF THE ABDOMINAL WALL

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The use of myocutaneous flaps in primary reconstruction of abdominal wall defects has been described by Mathes and Bostwick (1977). Ulcers following irradiation have an indurated, avascular base, are extremely painful and are notorious for their chronicity. This short communication describes the treatment of an extensive ulcer of the abdominal wall using an island flap based on the lower half of the rectus abdominis of the contralateral side.

CASE REPORT

A man aged 49 with a seminoma of the testis developed metastases in the para-aortic lymph nodes for which he was given 4,000 rads using a Cobalt 60 unit. A severe radiation reaction was produced over the right lower abdomen, which progressed to ulceration, despite the use of antibiotics and local application of cortico-steroid preparations.

On admission there was a 3×2 cm ulcer over the right infra-umbilical region surrounded by a 4 cm indurated pigmented patch of skin. The floor of the ulcer was covered with slough and showed very little sign of healing (Fig. 1).

Wide excision of the ulcer down to the external oblique aponeurosis and the rectus sheath produced a defect measuring 12.5×9.5 cm. A similar area of skin was marked on the left para-umbilical region overlying the contralateral rectus abdominis. The muscle with the overlying skin was raised (Fig. 2), taking care to preserve the inferior epigastric artery. The overlying skin was cut in the pattern of an island and the compound myocutaneous flap was rotated into the defect (Fig. 3). The muscle was anchored to the surrounding tissue by a few

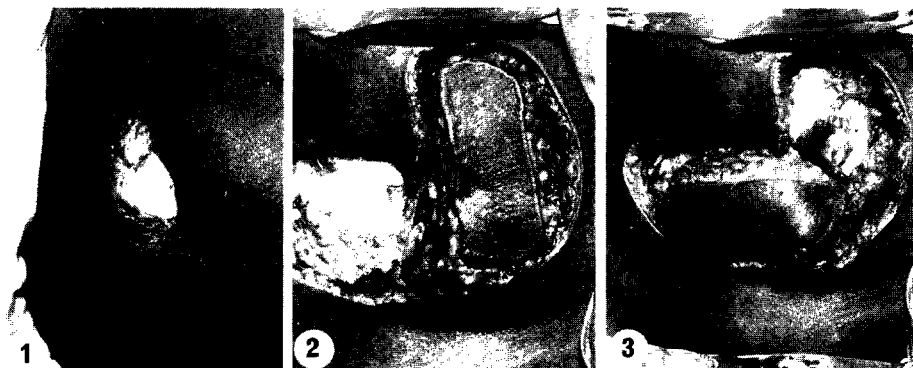


FIG. 1. Chronic ulcer with slough over the right abdominal wall prior to radical excision.

FIG. 2. The excised defect measured 12.5×9.5 cm. The myocutaneous flap has been raised on the left side of midline.

FIG. 3. The flap now transferred into the excisional defect. The donor site was closed by primary suture.



FIG. 4. Ten days after operation.

interrupted stitches of 1/0 chromic catgut and the skin was closed with fine cotton thread. The donor site was closed by primary suture.

The postoperative course was uneventful (Fig. 4).

DISCUSSION

The rectus abdominis muscle has an abundant blood supply from the superior and the inferior epigastric arteries which ramify freely in the substance of the muscle (McCraw and Dibbell, 1977). The inferior epigastric artery enters the posterior rectus sheath at the level of the arcuate line and runs deep to the muscle, giving numerous branches to supply the muscle and the overlying skin (Fig. 5). The overlying skin receives an excellent blood supply from the muscle (McCraw and Dibbell, 1977; McCraw *et al.*, 1977) which also provides bulk to fill deep excisional defects. The deeper the primary excision, the more useful is the muscle bulk and blood supply, particularly in the management of extensive radionecrotic lesions where the blood supply to the adjacent tissues has been seriously compromised.

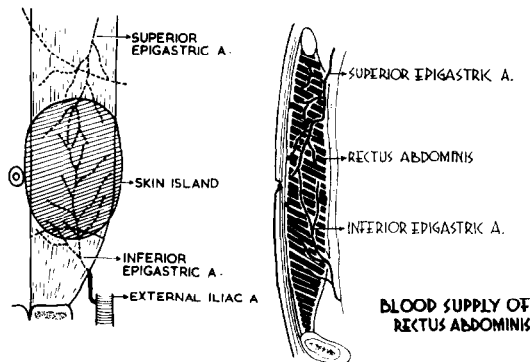


FIG. 5. Diagrammatic representation of the anatomical basis of the rectus abdominis myocutaneous flap.

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