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THE GRACILIS MUSCLE FLAP AND MUSCULOCUTANEOUS FLAP IN THE REPAIR OF PERINEAL AND ISCHIAL DEFECTS

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Muscle flaps and musculocutaneous flaps, in recent years, have revolutionised much of plastic surgery. Only certain muscles have a suitable blood supply, however, and one of the first to be recognised was the gracilis muscle. Pickrell *et al.* (1952) described the successful use of its transposition to correct anal incontinence and later (1956) urinary incontinence. Orticochea (1972) described how to reconstruct a penis with the gracilis and its overlying skin. Pers and Medgyesi (1973) reported a number of uses including repair of a vesico vaginal fistula. Bartholdson and Hulten (1975) transposed the gracilis muscle into 4 cases of large perineal sinuses following proctocolectomy, similar to that described in Case 1. The following 3 cases illustrate how versatile is the gracilis flap with or without its overlying skin. The main blood supply coming through the obturator foramen allows most of the muscle to be transplanted and it can solve some otherwise intractable problems.

Case 1. A 19-year-old recently married woman had a total proctocolectomy for granulomatous disease of the colon. In addition to her colostomy she was left with a large persistently discharging sinus in the perineum (Figs. 1 and 2). When seen by me she was 21, the sinus had persisted for 2 years, sexual intercourse was impossible, and the foul smell and discomfort had made life almost unbearable.

At the first operation the lining of the sinus was completely excised taking care to preserve the thin posterior vaginal wall. The cavity was then packed for 48 hours to be certain there

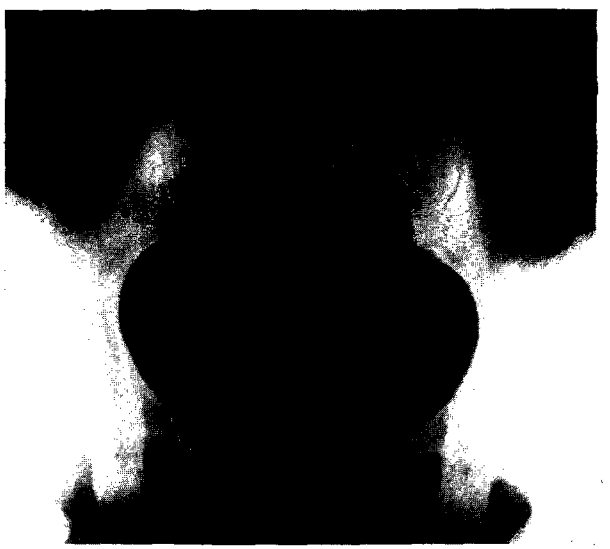

FIG. 1. Case 1. Sinogram demonstrating extent of perineal sinus.

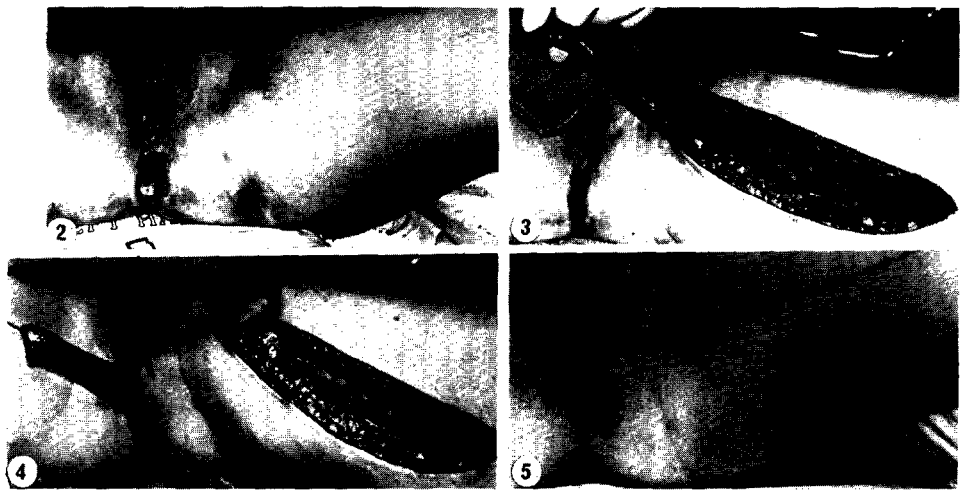

FIG. 2. Case 1. Perineal defect following excision of sinus.

FIG. 3. Case 1. Gracilis muscle freed, attached only on the proximal vascular pedicle.

FIG. 4. Case 1. Gracilis tunneled subcutaneously to the perineum.

FIG. 5. Case 1. Two months' postoperatively. The perineum and donor area remain soundly healed.

was no remaining chronic inflammatory tissue. At the second operation the left gracilis muscle was dissected and mobilised on its dominant proximal vascular pedicle (Fig. 3). It was tunneled subcutaneously (Fig. 4) and fed into the presacral area to fill the dead space and provide a posterior cushion to the vagina. The perineal area and the donor area were closed directly and healing occurred *per primam*. Two months later healing remained sound (Fig. 5), she was enjoying sexual intercourse and leading a normal active life.

Case 2. This 28-year-old paraplegic had multiple bed sores (Fig. 6). One of the deepest was over the left ischium and was closed with a gracilis musculocutaneous flap (Fig. 7).

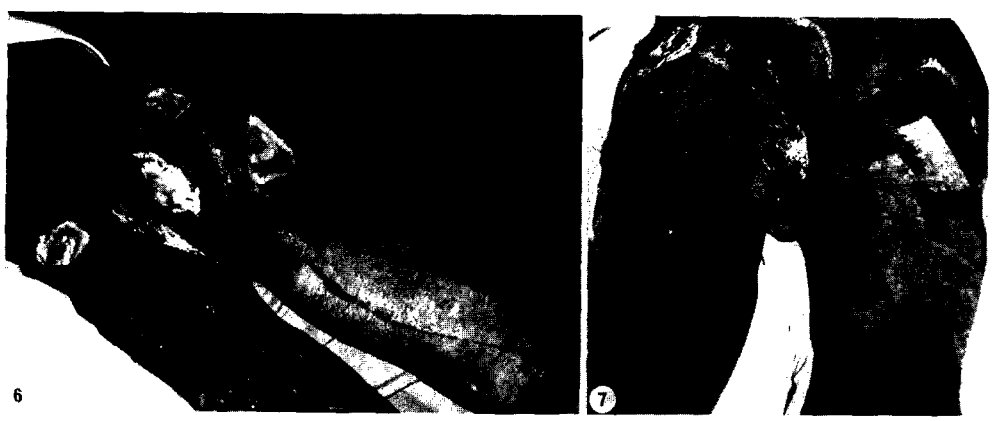

FIG. 6. Case 2. Multiple decubitus ulcers. That over the left ischium was particularly deep.

FIG. 7. Case 2. The ulcers were closed with a variety of flaps. A gracilis musculocutaneous flap was used over the left ischium.

Case 3. This female paraplegic, aged 19, also had a deep ischial sore (Fig. 8) with erosion of the ischium and subluxation of the right hip joint. A right gracilis flap with its overlying skin was mobilised (Fig. 9), the skin bridge to the ischial area was opened and the composite flap sutured into place (Fig. 10).

Conclusion

The gracilis muscle with or without its overlying skin and with its dominant proximal blood supply intact is a highly vascular structure which is of great value in closing chronically infected defects in the perineum and related areas.

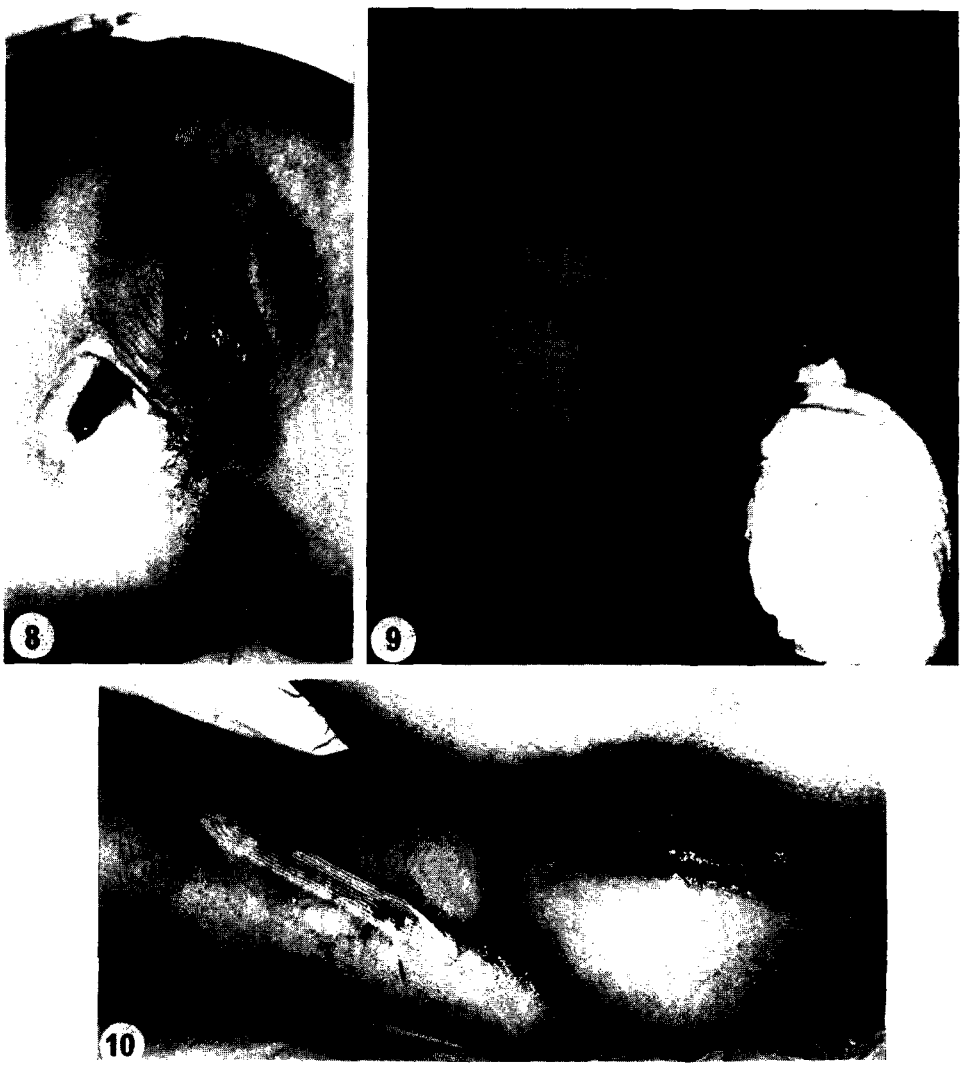

Fig. 8. Case 3. Deep right ischial ulcer.

Fig. 9. Case 3. After resection of the sinus and plan of the musculocutaneous gracilis flap.

Fig. 10. Case 3. Two weeks' postoperatively showing a well healed, well padded, viable flap.

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