The results of using vascularized triceps tendon for extensor tendon reconstruction have been disappointing in the two cases where it was used with the split-flap modification. The poor tendon excursion is almost certainly due to severe scarring in these cases and is a reflection of the severity of the injuries sustained. The triceps tendon has been found to be more appropriate for reconstruction of larger tendons such as the Achilles or tibialis anterior.

The search continues for the ideal thin flap; fascial flaps offer the prospect of good results[6] but require split-skin grafting with the attendant risks of delayed healing. The lateral arm fascial flap has not been used in our series for upper limb defects, but it has proved effective in resurfacing the foot and the forehead.

Reconstruction of small defects can sometimes be a more challenging problem than large defects, especially when there is a loss of composite tissue. The ability of the lateral arm flap to provide a vascularized small area of skin can be used for awkward digital and small hand defects, as in cases 7 and 14.

We believe the main advantage of the lateral arm flap is its versatility. Upper limb defects may require reconstruction with varying amounts of skin, bone, tendon, and nerve, and the ability to include vascularized segments of these tissues provides an opportunity for a one-stage surgical solution. An acceptable donor site and the preservation of the vascular supply to the injured hand are added advantages of the lateral arm flap. Our experience in 20 patients has confirmed this free flap as our first choice in upper limb reconstruction.

REFERENCES

1. Song R. One stage reconstructions. Clin Plast Surg 1982;9:1.
2. Katsaros J, Schusterman M, Beppu M, Banis JC, Acland RD. The lateral arm flap: anatomy and clinical applications. Ann Plast Surg 1984;12(6):489-500.
3. Rivet D, Buffet M, Martin D, et al. The lateral arm flap: an anatomic study. J Reconstr Microsurg 1987;3(2):121-32.
4. Cormack GC, Lanberty BGH. Fasciocutaneous vessels in the upper arm: application to the design of new fasciocutaneous flaps. Plast Reconstr Surg 1984;74(2):244-9.
5. Jones BM, O'Brien B. Acute ischaemia of the hand resulting from elevation of a radial forearm flap. Br J Plast Surg 1985;38:396.
6. Upton J, Rogers C, Durham-Smith G, Swartz W. Clinical applications of free tempoparietal flaps in hand reconstruction. J HAND SURG 1986;11A:475-83.

Revascularization of a finger with a thenar mini-free flap

A devascularized index finger with a soft tissue defect on its palmar side was managed by using a small free flap raised at the level of the metacarpophalangeal joint of the thumb. The radial digital artery was included in the flap and used to revascularize the index finger, and a palmar vein was used to drain the flap. This resulted in minimal donor side morbidity. (J HAND SURG 1991;16A:604-6.)

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Case report

The left hand of a 38-year-old right-handed woman was crushed between a steel roller and a wall. She sustained a fracture of the middle phalanx and a circumferential laceration over the palmar aspect of the index finger at the same level, leaving a dorsoradial bridge of tissue approximately 9 mm wide. The digit was devascularized and had no sensibility. In addition there was a laceration over the palmar aspect of the proximal phalanx of the long finger with a comminuted fracture and a laceration of its radial digital artery.

Exploration was done under regional block. Both digital