

divided.^{3,4} The flap artery was anastomosed distally to the serratus branch and inflow into the DIEP flap was successfully re-established. The patient subsequently made an uneventful recovery and was discharged home on day six post operation without further problems. We believe that this is the first reported case in which retrograde flow through the distal serratus branch has been successfully used to salvage a free DIEP flap and would like to recommend this to others as an additional method for flap salvage in similar microsurgical scenarios.

References

1. Garvey PB, Buchel EW, Pockaj BA, et al. DIEP and pedicle TRAM flaps: a comparison of outcomes. *Plast Reconstr Surg* 2006;117:1711–9.
2. Gill PS, Hunt JP, Guerra AB, et al. A 10-year retrospective review of 758 DIEP flaps for breast reconstruction. *Plast Reconstr Surg* 2004;113:1153–60.
3. Mohammed F, Romany S, Bissoon D, et al. Latissimus dorsi muscle flap based on arterial branch to serratus anterior as salvage of a failed bipedicle transverse rectus abdominis muscle flap. A case report. *West Indian Med J* 2003;52:68–70.
4. Shigehara T, Tsukagoshi T, Satoh K, et al. A reversed-flow latissimus dorsi musculocutaneous flap based on the serratus branch in primary shoulder reconstruction. *Plast Reconstr Surg* 1997;99:566–9.

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Comment on 'Reconstruction of orbital floor and maxilla with divided vascularised calvarial bone flap in one session'

We read with interest the article by Bilen et al.,¹ which reports the use of vascularised cranial bone in reconstruction of the orbital floor and maxilla. The hypothesis is that cranial bone segments perform better in midfacial reconstruction when they are kept attached to the parietal pericranium, and raised on a branch of the superficial temporal artery.

The authors used such a flap to reconstruct the maxilla in four patients, with all the inherent limitations of transposing an osseous flap that remains tethered by its pedicle.

We feel that in primary post-tumoral orbitomaxillary reconstruction, working to maintain the fragile adherence of the parietal pericranium hinders the orbital reconstruction more than it benefits the grafts. It is precisely the autonomy of free cranial bone segments and their

subsequent rigid fixation, that permits an accurate reconstruction of the orbitomaxillary framework. A temporalis muscle sling (either single or split) is transposed beneath the bony reconstruction in order to nourish the grafts. This reliably protects the grafts from any ischaemic injury of radiotherapy, and we have seen no loss of bony stock when using this method in over 20 similar cases.

The authors might therefore reconsider the legend of Fig. 5, which praises a result 'without dystopia, enophthalmos and ptosis', but accompanies a photograph which is highly suggestive of hyperglobus, upper lid ptosis and lower lid insufficiency.

Near-anatomical reconstruction of the orbital floor is essential in order to avoid vertical diplopia and impaired lid function. This is not likely when, as the authors report, no osteosynthesis was used to stabilise the flap in the orbit in half of their cases. The conclusion that pedicled cranial bone segments are required in such cases is misleading.

Reference

1. Bilen BT, Kilinc H, Arslan A, et al. Reconstruction of orbital floor and maxilla with divided vascularised calvarial bone flap in one session. *J Plast Reconstr Aesthet Surg* 2006;59:1305–11.

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Antiphospholipid syndrome – a rare cause of free flap thrombosis in perforator flap breast reconstruction

Although arterial thrombosis during free flap surgery can occur commonly as a result of technical issues, hypercoagulable states such as antiphospholipid syndrome must also be considered. We report the case of a 39-year-old lady who underwent bilateral risk-reducing mastectomies and immediate breast reconstruction with bilateral deep inferior epigastric artery perforator (DIEAP) flaps. Her only previously known past medical history was a pulmonary embolus post partum 7 years previously. During surgery a thrombosis of the artery was found on the right flap that could not be resolved despite repeated revision of the anastomosis (Fig. 1). As flushing with urokinase and embolectomy with a Fogarty catheter proved unsuccessful, an implant reconstruction was performed (Fig. 2). The patient also developed a pulmonary embolus postoperatively but recovered well with medical treatment and was discharged home 8 days later. Postoperative tests revealed the presence of lupus anticoagulant, which is one of the

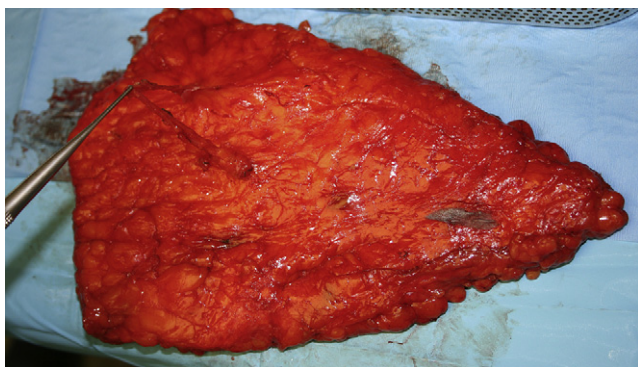


Figure 1 Thrombus formation in the deep inferior epigastric artery despite attempts to wash through with heparinised saline and urokinase. The pedicle is shown after attempted embolectomy with a Fogarty catheter.



Figure 2 The patient on the first postoperative day showing a viable DIEAP flap on the left side and an implant breast reconstruction on the right.

immunoglobulins responsible for antiphospholipid syndrome. This is found in only 1% of the population and can often be detected in patients with deep venous thrombosis.¹ Exhaustive tests may also reveal the presence of antibodies to plasma proteins such as cardiolipin, protein beta (2) glycoprotein or prothrombin. Although hypercoagulable conditions are rare,² any unusual family history or previous pregnancy-related complications should be an indication for detailed preoperative clotting studies.

References

1. Levine JS, Ware Branch D, Rauch J. The Antiphospholipid syndrome. *N Engl J Med* 2002;**346**:752–63.
2. Hoijer P, Olsson E. Elevated coagulation factor VIII, postoperative thrombosis and flap failure in late breast reconstruction with a free TRAM flap: a case report. *J Plast Reconstr Aesthet Surg* 2006;**59**:102–4.

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Dorsal approach to excision of a deep palmar tumour^{*}

Two cases of deeply placed benign palmar tumour are described, one of a glomus tumour and one of an osteoid osteoma. They demonstrate the difficulty in both making a diagnosis, and performing definitive surgery. A good outcome was finally achieved in both patients after their tumours were excised via a dorsal approach.

Case 1

A 60-year-old man presented with a 25-year history of left hand pain. The pain began with exquisite tenderness over the dorsal branch of the ulnar nerve but became episodic, lasting 3–5 seconds. It was worse at night, and he found it much more comfortable to sleep on the right than the left side. He had some neck stiffness but denied any cervical spine injury, and said that physiotherapy to his neck occasionally made his arm pain worse.

In the past, he had undergone two negative surgical explorations of the dorsal branch of the ulnar nerve, and the pain continued.

Examination was unhelpful, and radiographs of the c-spine and thoracic outlet showed only degenerative arthritis: therefore, he was referred for neck physiotherapy. As his symptoms improved he was discharged but, 3 years later, he returned with worsening, very severe left arm and hand pain, lasting 30 min and occurring at least once a month. He was having difficulty in sleeping and physiotherapy was no longer helpful.

On further examination Hildreth's test was positive (occluding the circulation with a blood pressure cuff produced a marked reduction in the pain and tenderness). An MRI scan of the hand confirmed the presence of a benign vascular lesion compatible with the diagnosis of glomus tumour, 3.4 × 1.4 × 1.1 cm in size, immediately adjacent to the ring finger metacarpal, within the interosseous muscle compartment (Fig. 1a, b). Surgical excision was planned.

In view of its position, the tumour was excised using a dorsal, transosseous approach, under axillary block and tourniquet control. A double osteotomy was performed on the ring finger metacarpal, which was then retracted with intact periosteum, and the tumour was revealed on the volar aspect of the shaft together with a large, dorsal vascular pedicle (Fig. 2a, b). The tumour was easily

^{*} This work has been previously presented at the BAPS Winter Scientific Meeting, Royal College of Surgeons, 2nd December, 2004.