Online Case Report

Reconstruction in the axilla with a pedicled pectoralis minor muscle flap

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Covering large defects in the axillary fossa can be challenging because of its complex shape. A variety of local skin, fasciocutaneous and musculocutaneous flaps have been described, with a number of inherent advantages and disadvantages. The use of the pectoralis minor muscle as a pedicled transposition flap has been described for immediate reconstruction of the breast,¹ anterior shoulder reconstruction² and the treatment of bronchopleural fistula.^{3,4} We now describe the use of a pedicled pectoralis minor muscle flap for soft tissue coverage of the axillary contents after wide excision of the axilla. This has not been previously described.

Patient report

A 56-year-old Caucasian male was admitted for palliative

resection of a large deposit of metastatic melanoma in the right axilla causing local pain and restriction of arm movement (Fig.1).

At surgery, the tumour mass was noted to have invaded the third part of the axillary vein, the lateral border of the

Figure 1 Large right axillary mass, demonstrated on CT scan (right).

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Figure 2 Axillary defect after resection of tumour mass.

Figure 3 Pectoralis minor muscle flap transposed to cover neurovascular (NV) bundle.

scapula and muscle attachments. The tumour was resected *en-bloc*, with the overlying skin producing a large axillary defect (Fig. 2). The pedicled pectoralis minor muscle flap was elevated and used to cover the axillary structures (Fig. 3). The transposed muscle was resurfaced with a meshed split-skin graft, and a negative-pressure (VAC) dressing was applied. Physiotherapy to the shoulder was commenced on the same day. His post-operative course was uneventful and the wound had healed by 4 weeks. The patient was able to return to his gardening activities soon after recovery, with significant improvement in the pain in his shoulder and axilla.

Discussion

The pedicled pectoralis minor muscle flap was easily raised and transposed to cover the vital structures in the axilla with minimal functional loss. Alternative methods for achieving soft tissue cover such as a pedicled parascapular flap, pedicled latissimus dorsi flap or pedicled pectoralis major muscle would have been

feasible in this case but the donor site morbidity would have been significant compared with a pectoralis minor transfer. The short hospital stay and rapid return to normal activities was important in this palliative case. Early mobilisation helped to preserve shoulder function.

The use of a pedicled pectoralis minor muscle flap and skin graft provides another alternative to the options already described for soft tissue reconstruction in this difficult region.

References

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