Random-pattern skin flaps: part 4 - transposition flaps

BY CHRISTOPHER THOMPSON AND MILES BANNISTER

In the final part of our series on local skin flaps in ENT, the authors describe the usefulness of the transposition-type flap and highlight some examples.

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Rotational advancement flap

Useful for defects in areas with a larger surface area or looser skin e.g. temples, upper neck, cheeks. It is essential to elevate the flap completely to its base to allow sufficient transposition. Fine puncturing though the skin of flaps with a larger surface area using a 16-Gauge (white) needle prevents seroma formation or haematoma accumulation in the potential space formed underneath (Figures 1-5).

Figure 1. Excision of smaller skin triangles increase the angle of transposition of the rotational advancement flap, though usually not beyond 90º to the lesion.

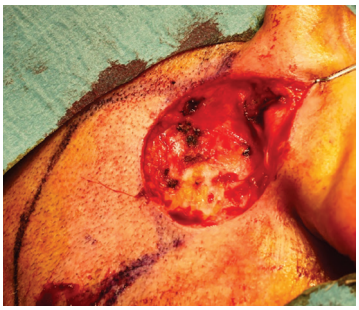

Figure 2. Limited haemostasis maintains a healthy blood supply to random-pattern flaps.

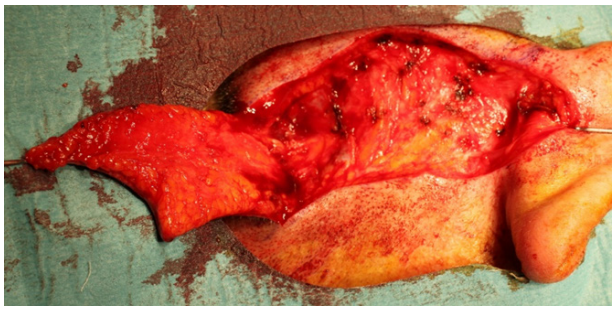

Figure 3. Flap length is proportional to the angle of transposition required to cover the defect.

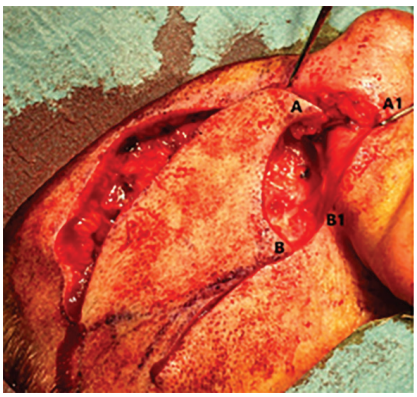

Figure 4. Design of the flap to defects' contours facilitates wound apposition and healing.

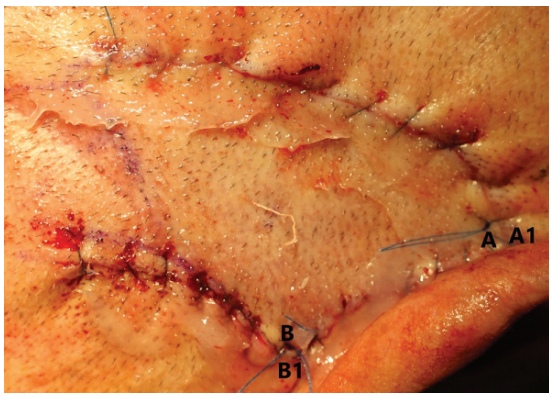

Figure 5. Completed rotational advancement flap. Shaving prevents disruption to dissection and hair inclusion within the wound.

> "Fine puncturing though the skin of flaps with a larger surface area using a 16-Gauge (white) needle prevents seroma formation or haematoma accumulation in the potential space formed underneath"

Nasolabial flap

Whilst this is principally an axial flap based on the angular branch of the facial artery, it also relies on unnamed perforators. The feeding artery runs within the nasolabial crease and it's robust nature allows the flap to be both superiorly and inferiorly based. It is used to cover defects of the alar and lateral nasal areas as well as the ipsilateral upper lip (Figures 6-10).

Figure 6. The nasolabial flap provides considerable length and traction to cover defects within the central face.

Figure 7. Good marginal clearance and aesthetic reconstruction usually requires excision of the whole alar subunit, exposing the lower lateral cartilage.

Figure 8. Deep dissection of the nasolabial flap ensures preservation and inclusion of the angular artery within the soft tissues.

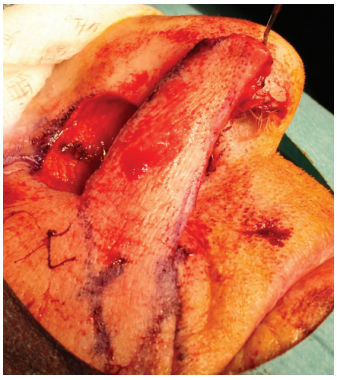

Figure 9. Soft tissue undermining superior to the flap avoids ectropion of the lower eyelid.

Figure 10. Completed nasolabial flap. Short-lived pseudo-epistaxis results following surgery due to the slender wound base.

> "The feeding artery runs within the nasolabial crease and its robust nature allows the flap to be both superiorly and inferiorly based"