Correspondence

Reconstruction of ear defects using ear lobule skin reserve

Dear Editor,

Aside from helical rim advancement flaps, the lobule of the ear is underutilized as a flap or graft source in reconstruction of ear defects. The lax, fatty, and pendulous nature of the earlobe, especially in elderly patients, provides a flexible skin reservoir for defect repairs. We herein describe several ways the lobule can be utilized to reconstruct post-Mohs micrographic surgery and post-excision ear defects.

Just as defects on the superior helical rim can be repaired with preauricular or postauricular transposition, modified banner, or bilobed flaps, the excess earlobe skin can be used to repair defects on the lower helical rim as a banner transposition flap (Fig. 1). The flap is elevated at the level of superficial to mid subcutaneous fat. This repair is ideal for narrow lower helical rim defects, with the added benefit of volume restoration. The final product results in a reduced lobule size, but because of earlobe creasing in the relaxed position, the repair can often be executed with resulting symmetry and without compromising the overall aesthetic appearance of the ear (Fig. 1).

The wedge is a straightforward repair for some defects of the helical rim but can lead to anatomic distortion for large defects even with star modification. For larger ear defects at the inferior helical rim where a traditional wedge may be a suboptimal repair, a combination repair can be performed where first a partial wedge reduces the defect size, then the resultant wound is closed with rotation from the lobule.

Rotation flaps from the earlobe can also be useful in repairing earlobe or conchal defects. In patients with loose, large earlobes, the flap can be elevated at the level of mid subcutaneous fat and transposed or rotated to cover the defect on the earlobe or conceal bowl. For large earlobe defects, guiding sutures can be placed to decrease the size of the defect prior to proceeding with the rotation flap (Fig. 2).

Previously, the helical rim advancement flap was the key reconstruction used to take advantage of the loose earlobe in older patients. Herein we describe several examples in which the lobule can be used to repair multiple types of ear defects. In each case, the patient was recognized to have large, lax ear lobules at preoperative assessment. The lobule was reduced in size following the repair without undermining the overall function or aesthetic outcome of the ear.

Puviani et al. recently described a novel variant of the helical advancement flap, the split ear helix advancement technique, for repair of helical defects.[1] The use of the lobule in transposition flaps, ear wedges, and rotation flaps is ideal for defects on the lower half of the ear as its use allows for a cosmetic outcome with less extensive undermining. The transposition flap is ideal for smaller lower helical defects involving or adjacent to the superior edge of the earlobe. For lower helical defects that require an ear wedge resection, we suggest considering the partial wedge resection with rotation flap to decrease the size of the resected wedge. If earlobe defects are large or extend into the conchal bowel, a rotation flap, with or without a preceding guiding suture, can be utilized.

The use of the lobule for ear repairs offers several advantages. The lack of underlying cartilaginous or bony structure in earlobes allows for facile movement of the flap for closures and

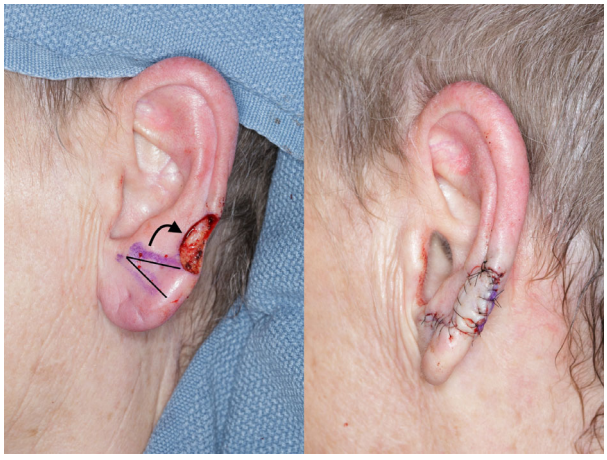

Figure 1 In this lower helical rim defect, a banner transposition flap using the earlobe skin reserve was performed

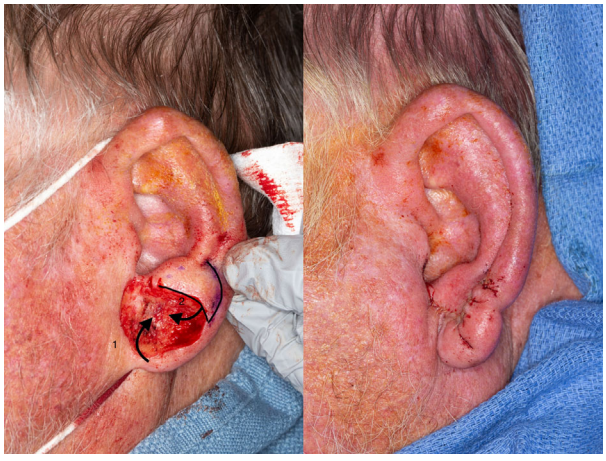

Figure 2 For this large earlobe defect, a guiding suture was placed first to decrease the size of the defect prior to proceeding with a rotation flap

flexible displacement of tissue redundancies. As the posterior earlobe is hardly visible, significant manipulation of the anterior earlobe can be performed without compromising the appearance of the ear. Other positives of using the earlobe include its single step process, forgiving nature for small tissue cones and redundancies, minimal scarring, and preservation of the retroauricular skin for future reconstructions.[2]

Nonetheless, these repair techniques are difficult to implement in patients with smaller, tight earlobes and not ideal when patients have heavy actinic damage at the donor site. Another caveat is that they do decrease the size of the ear lobule; while this has theoretical potential to cause asymmetry, most patients with lax earlobes who undergo reconstruction on one side have a natural crease on the contralateral side that makes asymmetry difficult to appreciate.

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