

Reconstruction of an Alar Rim Defect

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Ali Hendi, MD, has indicated no significant interest with commercial supporters.

An 80-year-old woman underwent surgery to treat primary basal cell carcinoma on the right nasal ala. The tumor measured 0.9×0.4 cm and appeared to involve the nasal lining (Figure 1). Tumor-free margins were obtained after the first stage of Mohs micrographic surgery. A 1.3×0.6 -cm defect involving 2 mm of the nasal lining remained (Figure 2). How would you reconstruct this defect?



Figure 1. Basal cell carcinoma on the nasal ala.



Figure 2. Alar rim defect involving the nasal lining.

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Resolution

Defects of the alar rim can be challenging to reconstruct. Distortion of the alar rim leads to asymmetry of the central face and often is unacceptable to the surgeon and patient. The alar rim consists of fibrofatty tissue that varies in thickness among patients. Large alar defects may require recreation of the lining and structural support, that is, a cartilage graft. Smaller defects are best repaired using a full-thickness skin graft,¹ but this procedure may produce suboptimal results (notching of the alar rim). Any distortion of the normal anatomy of the nose is conspicuous because the nose, along with the lips and eyes, is a fixation point in visual perception of the face. Our eyes “consciously ‘see’ the unexpected” and “‘assume’ the expected.”²

The patient’s alar rim was repaired by a full-thickness skin graft in combination with a small-wedge excision of the anterior alar rim to ensure a smooth transition from the edge of the recipient skin to the graft (Figures 3 and 4). The excised wedge measured 0.5×0.3 cm. The defect created by the small-wedge excision was sutured primarily using absorbable running sutures. A full-thickness skin graft, which included the perichondrium, was harvested from the ipsilateral conchal bowl with the aid of a template made from the suture package foil. The graft was sutured onto the remaining defect of the alar rim and nasal lining (Figure 5). A bolster dressing was sutured onto the cutaneous alar rim. The 3-month



Figure 3. Artist depiction of the wedge of skin excised from the anterior alar rim to recreate a normal contour.



Figure 4. Artist depiction of the primary defect and the defect created by the small excision of the anterior alar rim. (Reprinted by permission of Mayo Foundation for Medical Education and Research.)

follow-up photograph (Figure 6) shows that the normal contour of the alar rim was maintained. The symmetry of the ala was also maintained (not photographed).

Conundrum Keys

- Normal facial contours are important in our perception of what is normal and should be maintained in the course of reconstructive surgery.
- Small defects of the alar rim are best repaired with a full-thickness skin graft.
- The conchal bowl is a good donor site for defects of the nasal ala and tip. In most patients, the



Figure 5. Immediate postoperative photograph. The full-thickness skin graft and secondary defect are sutured with absorbable sutures.



Figure 6. Three-month postoperative photograph. Note the normal alar rim contour.

conchal bowl has a high density of sebaceous glands, similar to those of the nasal ala and tip.

- In the reconstruction of small alar defects, a natural contour can be recreated by a small-wedge excision and primary closure.

References

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