A spear flap surgical revision

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The case

A 55-year-old male presented with a recurrent infiltrative basal cell carcinoma of the right nasal ala. (Figure 1A) Previous incomplete excision was repaired with second intention healing resulting in a contracted ala with columellar deviation and nostril asymmetry (Figure 1B). Complete tumor excision was achieved after three Mohs surgery stages, resulting in a full-thickness defect involving the entire nasal ala and partially the sidewall (Figure 2A).

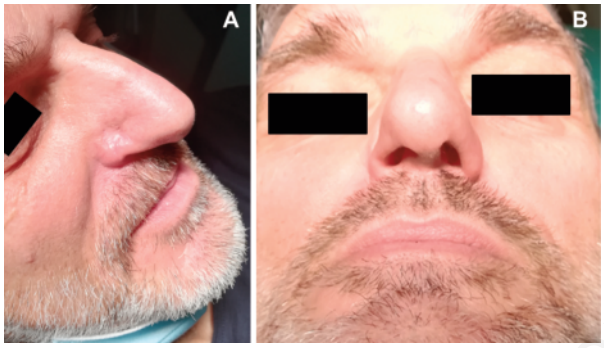

Figure 1. Basal cell carcinoma on the right nasal ala (**A**) with columellar deviation and nostril asymmetry (**B**).

Our choice

A Spear flap was performed. After local anesthesia, the flap was incised starting from the lateral edge of the defect along and laterally to the nasolabial fold. (Figure 2B). It was elevated including subcutaneous tissue, turned over and thinned (Figure 3A). The proximal part was sutured to the mucosal aspect of the defect. The cheek wound margin was undermined and advanced towards the nose in order to both close the secondary defect and reduce the primary (Figure 3B). The distal part of the flap was folded on the proximal and sutured. A triangular skin excess was removed from the sidewall. In order to prevent an unaesthetic lateral displacement of the nasal ala, the lateral aspect of the folded flap was rotated both medially and inferiorly (Figure 4, yellow circle).[1] After two months, despite this precaution, an unnatural lateral alar base insertion occurred. In addition, a vertical discrepancy was observed with a cephalic alar malposition (Figure 5). A surgical revision through an alar rotation flap was designed. A full-thickness skin incision was performed in the alar crease extending to the alar base. After flap undermining, the nasal ala was rotated caudally (Figure 6A). This solution is similar to the Seesaw technique, but in our case, no incisions in the alar-tip junction were made.[2] Finally, a Z-plasty allowed the alar base to move medially (Figure 6B).

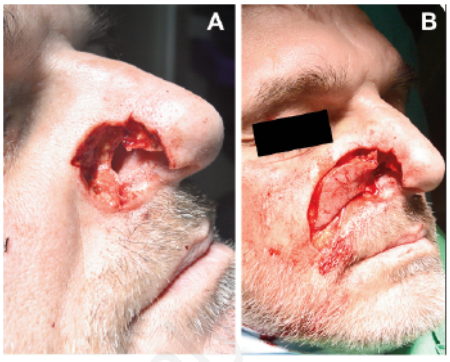

Figure 2. Complete tumor excision (**A**). Spear flap (**B**).

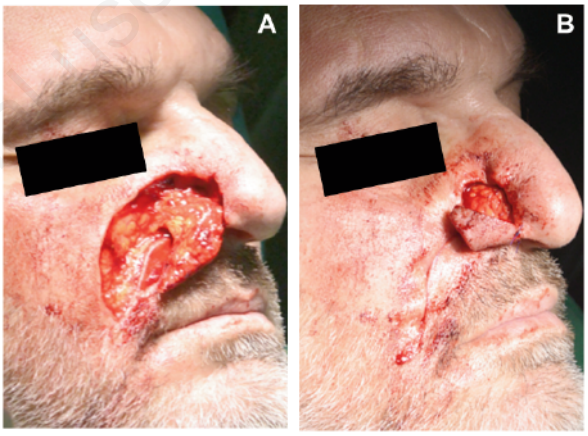

Figure 3. A) Flap elevated including subcutaneous tissue, turned over and thinned; **B**) cheek wound margin undermined.

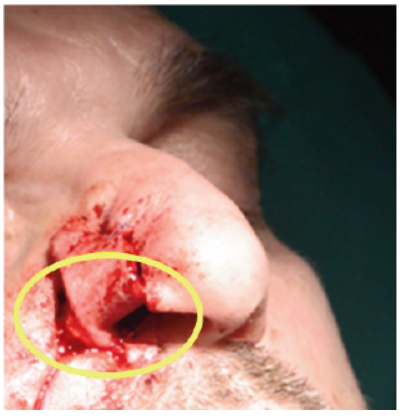

Figure 4. Rotated lateral aspect of the folded flap.

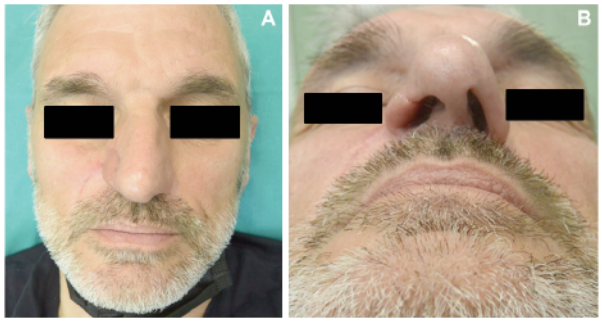

Figure 5. Result after 2 months: frontal view (A) and bottom-up view (B).

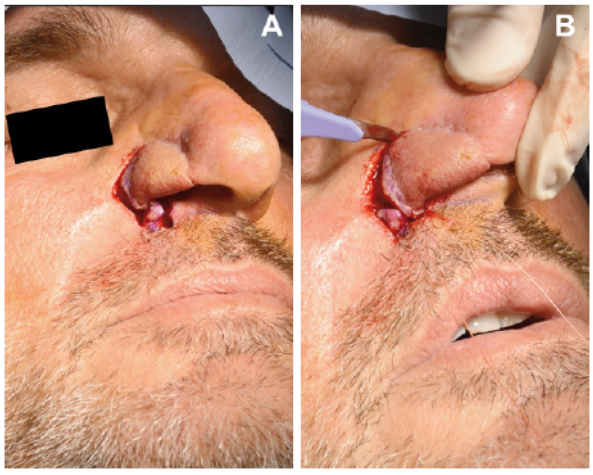

Figure 6. Caudally rotation of nasal area (A). Medially movement of alar base with X-plasty (B).

The outcome

Sutures were removed after 7 days (Figure 7). Corrections were maintained after two years of follow-up. Columella deviation was reduced compared to before surgery (Figure 8).

Figure 7. Result after 7 days.

Figure 8. Result after 2 years: bottom-up view (A) and frontal view (B).

Comment

The turnover nasolabial flap was first described by Spear *et al.* in 1987 as a single-stage procedure for reconstructing large full-thickness defects of the nasal ala involving the alar rim.[3] This rapid solution often requires some postoperative revisions.

In order to achieve satisfactory results, surgeons must keep in mind the potential pitfalls.[1] Besides the lateral displacement, the risk of a vertical malposition of the nasal ala should be considered, especially when the defect involves the sidewall. In these cases, the cheek can be advanced to the nose in order to completely close the sidewall defect before Spear flap folding.[4] When vertical discrepancy still occurs, the Seesaw technique represents an effective surgical revision.

References

1. Cook JL. Reconstruction of a full-thickness alar wound with a single operative procedure. Dermatol Surg 2003;29:956-62.
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3. Spear SL, Kroll SS, Romm S. A new twist to the nasolabial flap for reconstruction of lateral alar defects. Plast Reconstr Surg 1987;79:915-20.
4. Goldman GD. One-stage reconstruction following complete alar loss. Dermatol Surg 2006;32:418-22.