Interesting Case Series

Dorsal Nasal Flap

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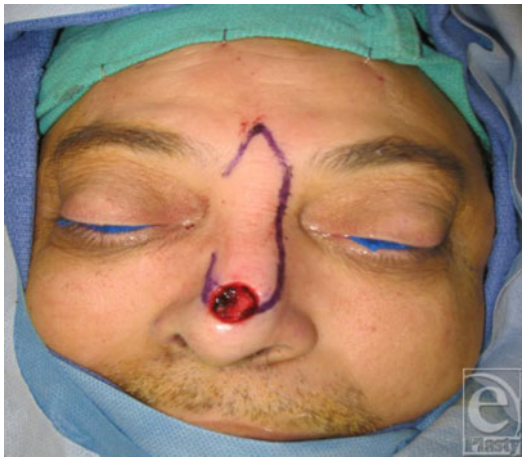

Figure 1. Defect after tumor excsion preoperative markings of nasal flap.

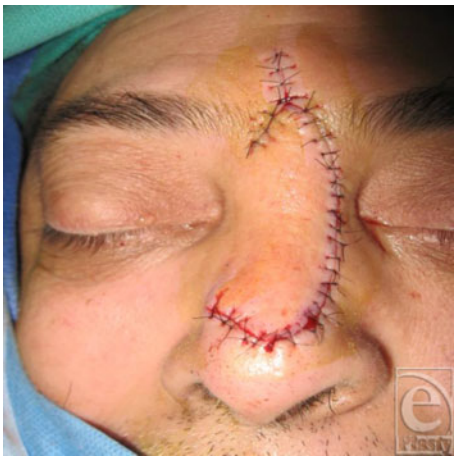

Figure 2. Immediate postoperative view.

DESCRIPTION

A 52-year-old South Asian man, presents with a basal cell carcinoma at the tip of his nose. He reports the lesion began bleeding 2 months ago upon washing his face. Biopsy confirmed the malignancy.

NEXT

QUESTIONS

1. **What are the 9 aesthetic subunits of the nose?**
2. **What are the some possible reconstructive options for this defect?**
3. **What is the dorsal nasal flap and what are its basic advantages and disadvantages?**

DISCUSSION

Nasal reconstruction after excision of a neoplasm is a challenging pursuit due to its complex 3-dimensional structure; the different components of skin, bone, cartilage, and mucosal lining; and the variations in skin thickness and color of the nose. It is critical to consider aesthetic subunits of the nose when planning the reconstruction, as the optimal technique will allow for scar placement at the borders of subunits and will have one type of skin in a subunit. The 9 aesthetic subunits of the nose are as follows: columella, tip, and dorsum and the 3-paired subunits of the lateral sidewalls, alar bases, and soft tissue triangles (Fig 4). Repair of the nasal tip and lower third of the nose is particularly difficult, and different treatment options including full-thickness skin grafts, local flaps, and distal flaps are all fraught with their own complications and are affected by individual patient facial characteristics.

Possible reconstructive options for the tip defects are full-thickness skin grafts, single-lobe (banner) transposition flaps, bilobe flap, nasolabial flap, dorsal nasal flap, or forehead flap.

The dorsal nasal flap is a local rotational flap that comprises dorsal nasal skin from the glabella and upper two thirds of the nose and is used for a single-stage repair of defects of the tip less than 2 cm in diameter and 5 mm or more from the alar rim. First published by Reiger in 1967 as a flap based on a random-pattern vascular pedicle, it was later modified by Marchac in 1970 into an axial pedicle flap based on perforators from the angular artery. This flap has been refined further by Riggs, Green, and Angeles. The technical details of dorsal nasal flap are as follows: pedicle is based at the medial canthal area ipsilateral to the wound, the dorsal skin of the nose is undermined, and the flap is elevated in the subcutaneous plane; meticulous hemostasis is ensured for the rich blood supply and broad anastomotic network; the glabellar donor site is closed in a V-Y manner as the flap is rotated and inset into the defect. Advantages of the dorsal nasal flap include the following: single stage procedure, adherence to the principle of replacing like-tissue with like-tissue, and superior aesthetic outcome of color and texture match with minimal scar. Disadvantages primarily involve restrictions of flap utilization because of patient-dependent nasal features, restriction in the defect size, and the requirement of elevating an extensive area of nasal tissue.

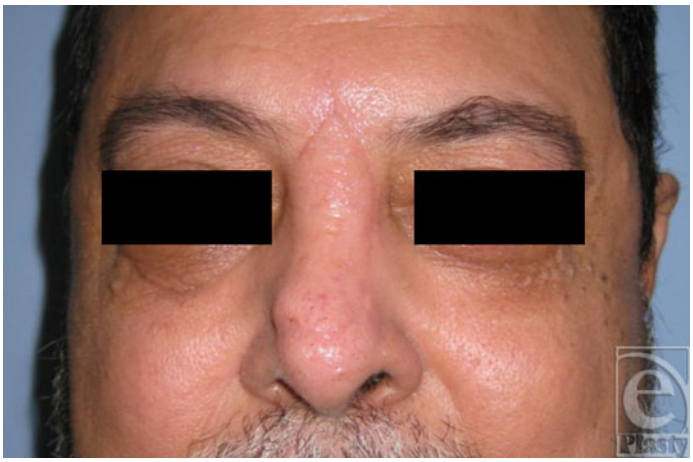

Figure 3. Postoperative view in 2 months.

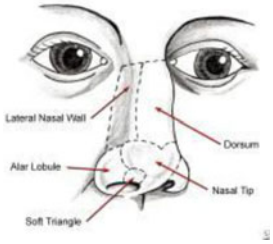

Figure 4. Aesthetic sub-units of the nose. From Fata.[4]

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