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Simultaneous resection and reconstruction of the nose using frontal flap

65-year-old female reported with a lesion in the tip of nose. Biopsy revealed basal cell carcinoma. Resection and reconstruction was planned under general anaesthesia. After general medical evaluation the lesion was resected under general anaesthesia and the defect as seen in at the tip of the nose.

Flap design and technique

The flap was about 3 inches from brow to hairline. If the forehead is narrow it can be set at an oblique line to get good length. The vertical dimension of the flap should be sufficient of length to reach the nasal tip without tension. The size of the outline is slightly exaggerated to increase the area to allow tissue shrinkage. Before the skin incisions are made a mock transfer is made using a piece of gauze with the inferior portion fixed at the point of rotation, the gauze is turned to the nasal defect to test the extent of arc of rotation. The base of the flap should be no longer than 1–1.5cm in width and no wider to allow free rotation of the flap without strangulation. After marking the flap outline, blunt dissection is done to elevate the flap. Care should be done while elevating the flap in a subgaleal plane to avoid injury to the vascular pedicle. Once the flap is elevated, it is rotated to the defect. The modification was done after final contouring is done after rotation. The flap is placed over the defect and then the nostrils are marked out and the flap is trimmed to get the exact shape of the ala and collumella. Once the the flap is trimmed, key sutures are placed an one end and the final shaping of the flap is done. The final shaping is done in this manner to get the

Fig. 1 The lesion-basal cell carcinoma, **Fig. 2** Outline of the flap, **Fig. 3** Flap rotated and placed in position, **Fig. 4** Second stage pedicle

actual contour. The flap is then sutured to the defect in a two layer fashion.

Donor site closure

Most of the donor site area can be primarily closed especially in old patients as the skin is loose and can be undermined easily and advanced. A triangular defect will remain in the superior area which is skin grafted.

The flap's pedicle is divided after 3 weeks. The pedicle is sharply divided and excess tissue is removed and the edges are sutured to the defect. Care is taken not to use any excess tissue to achieve good cosmetic result.

Postoperative period was uneventful and sutures were removed after 7 days. Forehead flaps can create an excellent cosmetic result when used to repair certain nasal wounds. Adherence to principles of patient selection, wound selection, and technique can ensure a successful outcome. The advantages of this flap are 1) Easy adaptability and technique, 2) Provides good shape and structure and thickness of the recipient site especially the ala and collumella, 3) Good colour and texture.

The flap in our opinion is indicated in reconstructing defects involving the ala and collumella or the nasal tip defects. Its ideal for reconstructing large areas of defect of the nose. We have found that the flap is best suited in elderly patients as the donor site can be closed primarily without much tension because of the skin laxicity.

Though the advantages are many, it is not quite indicated in reconstructing small defects or defects not involving the alae or nasal tips as it bulky and local rotation flaps from cheek provide a better cosmetic result in such cases. The main disadvantage of this flap is that it requires a two stage operation but in our opinion the advantages overweigh this fact.

Though today the technique has received few modifications but the basic principles laid down by Sushruta still remains true. Today, the world acknowledges India as the place of origin of Rhinoplasty and the contemporary use of the 'Indian flap' for nasal reconstruction testifies to its practicality and success for more than 2500 years.

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