Reconstruction of Nasal Tip Defect

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NOSE is aesthetically one of the most important components of face, and being the prominent projecting part of the face, it is exposed to injury. Loss of nasal tip, which besides the tip includes adjoining alae, nasal bridge and the columella produces great disfigurement and calls for reconstruction to restore the tip. Nasal tip loss may be the result of (i) bites by animals or humans, (ii) traumatic amputation by sharp edged weapons, (iii) accidental falls, and (iv) surgical extirpations for malignancy.

Many methods have been used to reconstruct the nasal tip such as the use of Nasolabial skin flaps, arm tube pedicled flaps and mid line forehead flaps. The latter is the most acceptable method because, it provides a good colour and texture match, is easy to transfer and convenient to the patient, involves minimal stages and leaves an acceptable linear mid line forehead scar. However because of the necessity to directly suture the forehead defect, the width of flap available is limited and so is the available length of flap in patients with low hair line.

Attempts have been made to circumvent these handicaps by extending the mid line forehead flap across the hair and transfering the hair bearing portion to the tip initially to be replaced subsequently by free skin grafts (Richardson 1972). This method is not popular as the skin graft over the nasal tip is not acceptable as it does not give a good colour and texture match and is liable to contract. Dhawan (1974) obtained additional length by using a rather oblique forehead flap off the mid line and based on a single supratrochlear artery. However it has the disadvantage of leaving an oblique scar in the middle of the forehead which leaves much to be desired.

We have modified the design of the mid line forehead flap for the reconstruction of nasal tip defects and have taken advantage of the fact that hair lines most often dip in the center of the forehead, so that where as available height in the centre is reduced, increased length becomes available a little to the side of it.

Design of Flap

The suggested flap is an angulated one in the mid line of forehead and is

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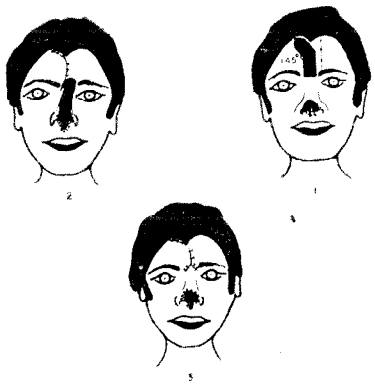

Fig. 1—Illustrating the design of flap and stages in the reconstruction of nasal tip defects.

Figs. 2-4—Illustrating loss of nasal tip and bridge reconstructed by angular mid line forehead flap.

Figs. 5-7—Illustrating loss of nasal tip adjoining ala and collumella, reconstructed.

based on two supra-trochlear arteries. Its width varies from 2 cm to 2.5 cm depending on skin loss to be restored. It is better not to exceed this limit especially in old patients with inelastic skin. The flap extends upwards from the root of the nose for 2/3rd of the height of forehead and then deviates to one or the other side making an angle of 145° to 160°. The flap ends at the hair line. The distal end of the flap is tapered to facilitate suture and the tapering can also be done within the hair line. The flap is elevated in the plane of loose areolar tissue upto the eyebrows. The distal end of flap however requires to be thinned so as not to transfer too much bulk of the tissue. Additional length can be added to the flap by extending it downwards over the root of nose by giving epidermo-dermal incisions on either side followed by blunt dissection to avoid severence of supratrochbear vessels. The resulting raw area after transfer of flap is closed by direct approximation of skin edges after wide undermining on either side, and multiple vertical cuts in the galea. It give a vertical mid line scar in the lower part and an oblique scar in the upper part running along the hair line (Figure 1).

The results of reconstruction following use of this flap have been very satisfactory (Figure 2-6).

Discussion

Nasal tip reconstruction requires careful planning and meticulous technique to get a cosmetically acceptable result i.e. nasal tip with a normal contour and a matching skin colour and texture. Where as mid line forehead flaps have limitations to their use in narrow forehead the design of angular mid line forehead flap has proved extremely useful and effective. It has extended the use of forehead flaps even in cases where losses extended to columella because additional length becomes available by angulating the distal third of fhe flap.

Summary

Our experience with nasal tip reconstructions using angular mid line forehead flap is presented. This flap has been shown to be better because it provides additional length.

REFERENCES

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