The Scalping Flap for Nasal Reconstruction
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ABSTRACT: A 50 years old man reported to the out patient, Department of Plastic surgery services of Civil Hospital Karachi with a traumatic cut nose by a sharp object. Examination revealed complete loss of both alae, tip and vestibule along with some loss of tissue over the root. The large defect was closed with "scalping flap of Converse" This flap is well known for its reliability, robustness, color match and the texture. It causes minimal donor area morbidity.

Key Words: cut nose, nasal reconstruction, scalp, flap.

INTRODUCTION: Total nasal reconstruction has always been a difficult task. Nasal reconstruction require all the three elements of the nose i.e. skin cover, lining and the skeletal support. Skin cover in total nasal reconstruction is always short when midline forehead or nasolabial flaps are used. Scalping flap satisfies requirements for length and in addition, delivers a large area of forehead skin of acceptable colour and texture much needed for nasal reconstruction.

CASE REPORT: A 50 years old man presented to us reporting assault with a sharp knife when his nose and upper mid lip was chopped off. He was initially treated in his village in the upper Sindh. Once the wounds healed he was referred to Civil Hospital Karachi with cut nose deformity.

On examination, there was complete loss of both alae, columella and nasal tip along with nasal bridge. A portion of the nasal septum was present as remnant (Fig. 1). There was adhesion of the mid upper lip with the nasal floor.

Considering the large amount of tissue loss it was decided to reconstruct with a Scalping flap.

OPERATIVE TECHNIQUE: The recipient area was prepared by freshening the margins of the defect. Based on the margins of defect, flaps were raised on all sides of the nose and turn inwards to provide the lining to the Scalping flap.

Template of the defect was designed with an old sterilized X-ray film with gentian violet. Pattern template was transferred to the lateral aspect of the right side of forehead. A rectangular design of the flap was raised to facilitate designing of alae and the vestibule.

Incision was given on all the three sides of the marked forehead flap. Flap was raised with subcutaneous fat leaving behind frontalis muscle, since its preservation provides expressive movements to the skin and leave a more aesthetic donor site contour.

Incision was then extended from the lateral border of the flap to the superior pole of right auricle. Plane of dissection at this level rested between galea and pericranium. The incision was further extended from superior pole of right helix to the superior pole of left helix. Laterally, the temporal fascia was raised with the flap. The dissection was carried caudally to a point above the nasofrontal angle medially and the supraorbital arches laterally. Supraorbital, supratrochlear vessels and supraorbital nerves were preserved. A large flap reaching upto upper lip was raised. Distal part of the flap was folded to form alae, tip, columella and was applied to the defect with 3/0 Polypropylin (Prolene-Ethicon).

Donor area of the forehead was covered by full thickness skin graft, (Fig 2) obtained from supraclavicular region and the scalp area was covered by sofratullae.

Flap was to remain attached for three weeks. It was then divided at the level of forehead and scalp tissue. All the scalp tissue was returned back to scalp. (Fig. 3)

DISCUSSION: Scalping flap is an axial pattern flap which derive, its blood supply from the superficial temporal vessels. It was first described by Converse.

The mainstay in the nasal reconstruction has remained the midline forehead flap and its various modifications, the most popular one is "gull-wing" type.

Fig. 1: Cut nose at the time of presentation.
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Fig. 2: Donor area over right lateral forehead covered by full thickness graft.

Fig. 3: Scalping flap well taken after one week of detachment.

The main disadvantage of midline flap is in persons with narrow foreheads where its insufficient length prevent it to extend to the nasal lobule. Large nasal defects require large amount of midline flap and cause difficulty in closure of the donor site defect. The other option can be temporo-mastoid flap described by Washio. Skin from the post auricular and mastoid area is transferred on to the vascular loop between the superficial temporal vessels and post auricular artery.

Disadvantage of Washio flap being an inadequate tissue for large defect and the transfer of thin non sebaceous skin to the nasal lobule.

Advantages of using Scalping flap over other flaps are multiple.
1. It is a robust and reliable flap.
2. It avoids incisions on the central forehead.
3. It provides larger amount of tissue for total nasal reconstruction.
4. It provides forehead skin of satisfactory colour, texture and thickness.

The result in this case is a well taken flap one week after detachment. Reshaping of the nose is now possible by providing skeletal support with bone grafting in the subsequent stage.

REFERENCES:

Letter to the Editor

Respected Dr. S. H. Zaidi
30th May 1998

I hope you are fine I want to remind you about the forgotten story of my article with the title of "Frontal Sinus Osteoma Excision Utilizing Unilateral Osteoplastic Flap Technique" submitted to you in 1996. It was returned to me for revision/amendments about a year ago (Ref. your letter No. 29/96 dated 20.8.96) I did sent the revised script and a letter to you on 29-4-97 but so far neither I received any reply nor my article has been published in your journal.

Please get it published in your journal if there is any problem which you always have with Peshawarites like us and doctors not known to you in connection with publishing articles then please return my article back along with photographs, so that I can get it published in our local journal.

I hope you will reply as early as possible.

Sincerely yours;

(Dr. ISTERAJ SHAHABI)
Assistant Professor,
Department of E.N.T.,
Khyber Medical College/Hayat Shaheed Teaching Hospital, Peshawar.

Ed's Note: The article in question was published in the Sept. 1997 issue of PJO and was personally delivered to the principal and co-authors some of the remarks in this letter are derogatory if not outright outrageous.