The Median Forehead and Nasolabial flap as a single stage nasal reconstruction: A case report

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INTRODUCTION

The nose is a composite structure composed of the nasal skeleton, an internal lining of mucosa, and an external layer of skin. The external topography of the nose is a graceful blend of convexities, curves, and depressions that reflect the underlying shape of the nasal skeleton. The history of nasal reconstruction mirrors the history of plastic surgery. Antia and Daver as well as Mazzola and Marcus focused their historical research on the forehead flap technique for total nasal reconstruction.1,2

Nasal reconstruction was apparently born in Asia, most likely in India, around 3000 BC. In India, the nose was considered to be the organ of respect and reputation, nasal mutilation or amputation was therefore often used to humiliate social offenders.3 The evolution of nasal reconstruction procedures followed three basic lines: the Indian method of a midline forehead flap; the French (Dieffenbach) method of a Lateral Cheek Flap, and the Italian method of a brachial flap. However, in 1925, Blain reviewed the various techniques available for restoration of the nose and concluded that forehead flaps worked best for major defects.4 The nose consists of three major parts: the nasal skeleton which is the supporting structure, the nasal lining which consists of a thin layer of vascular mucosa, and the skin which proceeds inferiorly from the glabellas’. Nasal defects that may require reconstruction can either be due to extirpation of skin cancer, posttraumatic defects, or a congenital nasal deformity.

The nose is the most common site of skin cancer involvement and is the most common site of recurrence after treatment. Nasal reconstruction after excision of malignant tumor of nose is a real challenge to surgeon. We present our experience with a near total nasal reconstruction as a single stage procedure in an old lady who underwent extensive nasal resection for carcinoma of nose.

CASE REPORT:

Figure 1: Squamous cell carcinoma of Nose

ABSTRACT

We present here the case of a patient with a carcinoma nose who had a near-total nasal reconstruction as a single-stage procedure. 85 year old female patient presented to us with recurrent swelling of external nose since 6 months. We did oncologic resection of carcinoma nose and reconstructed with paramedian forehead flap and nasolabial flap after ascertaining negative frozen report. Alar defect and lateral side wall reconstructed with superiorly based nasolabial flap. The result of nasal reconstruction using the median forehead flap and nasolabial flap was quite good. Patient was satisfied with flap colour match and shape of nasal tip and functional results. She had no complaints of nasal obstruction or nasal discharge after wound healing. If the principles concerning cover, support, and lining are adhered to, excellent functional and aesthetic results can be achieved as we have obtained in our patient.

Key words: Lateral forehead flap, nasal reconstruction, single stage

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85 year old female patient presented to us with recurrent swelling of external nose since 6 months. Patient associated co morbidities are hypertension and ischemic heart disease. On examination bulky lesion involving whole of external nose and vestibule. There is no palpable neck node. Biopsy reported squamous cell carcinomas. CT scan reported 46*37*39mm heterogeneously enhancing lesion involving external nose, extending up to vestibule, lesion abut inferior turbinate and involve b/l alar cartilage. After taking medical and anaesthesia fitness, we did oncologic resection of carcinoma nose and reconstructed with paramedian forehead flap and nasolabial flap after ascertaining negative frozen report. Alar defect and lateral side wall reconstructed with superiorly based nasolabial flap.

Figure 2: Operated site after resection of tumor

Figure 3: Superiorly based left Nasolabial flap reconstruction and marked site of paramedian forehead flap

Figure 4: Final picture of reconstructed nose

The result of nasal reconstruction using the median forehead flap and nasolabial flap was quite good. Patient was satisfied with flap colour match and shape of nasal tip and functional results. She had no complaints of nasal obstruction or nasal discharge after wound healing. Final histopathological report: Moderately differentiated squamous cell carcinoma, 6*4*2cm, skin involved, infiltrate muscle, cartilage free, and margin free, base of resection free.

Figure 5: Postoperative picture

DISCUSSION
The nose is arguably the most prominent aspect of face. It occupies a prominent place in the centre of the face, making it a structure of obvious aesthetic significance. Its reconstruction involves alteration and aesthetic details that cannot be easily hidden with clothing or apparel. In reality, recreating the nose is impossible. What nature has fabricated in a mother's womb is not reproducible, thus, the reconstructive surgeon's task can only be to fashion bits and pieces of expendable tissue into a facsimile of cover, lining, and support to give the visual impression of a normal nose. Nasal reconstruction after oncologic resection should not only be focused on aesthetic but also on optimal nasal function. Immediate reconstruction decreases morbidity time, prevents the danger of secondary hemorrhage and minimizes the chances of wound infection. We used a superiorly based, nasolabial flap to line the nasal floor and the nasal septum. Gillies introduced bilateral nasolabial flaps turned inward to line the nasal vestibule and columella. We used a paramedian forehead flap as our skin cover and nasal tip reconstruction. This flap is the premier flap in nasal reconstruction and provides
excellent colour and thickness match as shown in our patient. It is an axial flap based on supraorbital and supratrochlear vessels. It is the most useful flap that can be used for the tip, the lobule as well as subtotal and total nasal reconstruction. We were able to close forehead defect primarily becoz of lax skin.

CONCLUSION
In case of nasal reconstruction after extensive oncological resection there is great need for reliable tissue transfer. The forehead flap is the best donor site for repairing nasal defects because of its size, superior vascularity, skin colour, texture and thickness that matches exactly with the skin of nose. We did simple, quick and satisfactory nasal reconstruction in this old high risk patient.

REFERENCES