

Reconstructive Options of Thenasolabial Flap: A Case Series of Soft Tissue Cover of the Face using the Nasolabial Flap

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Aim: To illustrate that despite the introduction of microvascular free flaps, the pedicle nasolabial flap is still very useful for the cover of facial defects.

Abstract: *This is a case series showing some of the uses of the nasolabial flap. We have operated on four Patients. The flap was used in two cases to cover defects on the nose, one defect was covered on the glabella area while another defect was covered on the lower eyelid. This flap may be used to cover a defect directly with or without prefabrication or a delay procedure^{3,6}. The latter may be needed before coverage of more distant defects. All the patients in this case series were satisfied with the result of surgery. **Introduction:** In most societies the face is uncovered all the time. Therefore, facial lesions are very distressing to patients. Although some of these lesions may be masked by the use of camouflage or make-up, many of the lesions require surgery. Operations on the face require considerations such as colour and texture match in addition to concealing of the scars as much as possible. The nasolabial flap being taken from the face has colour and texture match with any other part of the face; while the scar is partially concealed by the nasolabial skin crease. The good blood supply of the head and neck region considerably reduce incidents of flap loss from ischaemia and besides, an initial delay procedure will further enhance flap survival⁶. In some cases prefabrication in form of providing a lining or skeletal framework may be necessary³. In one of our index patients prefabrication in form of split thickness skin graft was done to provide palpebral conjunctiva for the lower eyelid. In another patient we had to incorporate delay procedure to reduce the incidence of flap loss due to ischaemia and twopatient had flap defatting to enhance the contour of the nose.*

Keywords: nasolabial flap, delay procedure, facial defects.

1. Case One

This is the case of a 24-year-old undergraduate student and albino who presented with multiple ulcers on the right lower eyelid, forehead and left forearm all of about two years duration.

On examination his general conditions were satisfactory. He had extensive solar keratosis distributed mainly over sun exposed areas such as the face, neck and the forearms. He had an ulcer on the medial half of the right lower eyelid which measures about 0.5cm by 0.5cm, there was a 6cm by 5cm ulcer on the forehead and another one on the left

forearm with dimensions of 7cm and 5cm. These are the widest dimensions of the ulcers. All the ulcers had sloping edges and nodular granulated tissue but histology result was basal cell carcinoma.

The eyelid ulcer was excised; a nasolabial flap was raised, prelaminated by split thickness skin grafting and used to cover the eyelid defect. The flap was divided and inset on the 14th postoperative day and defatted on the 10th day after flap division and inset to give the eyelid a satisfactory contour. The grafted flap surface formed the palpebral conjunctiva.



Pre-operative picture

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Post-operative picture

2. Case 2

The second case is a 32-year-old house wife and primary school teacher who had a domestic misunderstanding with her husband. The latter attempted to reach out and grab his wife but she escaped closing the door behind her and injuring her husband on the right thumb. Her husband pursued, overtook her and bit off his wife's nose.

On examination she was stable but had lost her nasal tip, 2/3 of the alar nasi bilaterally and 2/3 of the columella. Human bite wounds are not clean and therefore the wound was dressed for one week before reconstruction. A nasolabial flap was raised, delayed for ten days, used to cover the nasal defect, flap division and inset was done in 14 days after covering the defect and finally defatting was done after division and inset to give the nose a good contour.



Pre-operative picture



Post-operative picture

3. Case 3

The patient is a 27-year –old male company driver who was travelling in a saloon car from Lagos to Calabar towns in Nigeria. He knocked down a pedestrian and stopped, came out of the car to help the victim but a crowd gathered and he was assaulted with many objects including the use of a machete to cut off his nose. He lost the nasal tip, part of the

right alar nasi and 2/3 of the columella. He had nasal reconstruction using the nasolabial flap in 3 stages namely, delay procedure, raising the flap to cover the defect and flap division and inset. He refused to have flap defatting and contouring because he was satisfied with the result of a 3 stage repair.



Pre-operative picture



Post-operative picture

4. Case 4

This is the case of a 45-year-old female trader who had a road traffic accident with a wound on the forehead and severe pain in the neck.

On examination she was acutely ill but fully conscious. She had a cervical collar placed by the orthopaedic surgeons and there was an avulsion wound on the glabella area that measured 6cm by 4cm in the widest dimension with exposed, fractured bone that measures 3cm by 2cm and a laceration that extends from the wound upwards and laterally to the hairline. The left eyebrow was displaced

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upwards by about 2cm making the features of the face to be distorted. She had reconstruction in three stages namely

delay procedure, raising the flap to cover the wound, flap division and inset.



Pre-Operative picture



Post-operative picture

5. Discussion

Reconstructive surgery of the face is demanding because the face is not covered in most races and religions. Hence the result of surgery is open for assessment by everybody. The demand for a good aesthetic result is even more essential for the female patient. In our series two patients are female while two are male. The requirement for colour and texture match is achieved because the flap is taken from the face. The need for concealment of the scar as much as possible is feasible because the scar coincides with the nasolabial skin crease. In the fair skin patients like the albino in our series

the scar is almost completely absent. The good blood supply of the head and neck region has made incidents of flap tip necrosis very rare. In all our patients there was no flap necrosis.

Based on the part of the face to be covered, some modifications are required for raising the flap. In our first patient the flap had to be pre-laminated by split thickness skin grafting. The skin graft formed the palpebral conjunctiva of the lower eyelid. The flap needed defating when it is used to reconstruct the eyelid and part of the nose to give normal contour to these organs. In most of the

patients a delay procedure was necessary to prevent tip necrosis of the flap⁶. In one of our patients when the flap was used to cover a site as distant as the glabellar area the length had to be increased so much that the flap extended to the part of the cheek lateral to the angle of the mouth. From the different defects we have used the flap to cover and other areas covered by other worker it can be seen that the flap is very versatile⁵. In order to enhance the easthetic outcome of this flap some authors have use the laparoscope to raise it and others have used a single stage in the reconstruction while some have used multiple stages as we have done to ensure good results^{2,7,8}. This flap has a few limitations such as inadequate tissue for coverage of a large defect. For instance, it is not enough for use in the reconstruction of the entire nose. Besides, it cannot reach all the parts of the face. Therefore, it cannot be used for ear reconstruction or to cover a defects on the forehead.

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