

# Nasolabial Flap in Oral Submucous Fibrosis: A Case Study

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**Abstract:** Oral submucous fibrosis is chronic premalignant disease characterized by juxtaepithelial inflammatory reaction and progressive fibrosis. The jaws become rigid to the point that the person is unable to open the mouth. This condition is associated with areca nut or betel quid chewing.

We evaluated use of nasolabial flap after aggressive release of fibrosis. Patient had undergone physiotherapy and 1 year regular followup, achieved interincisal opening of >35 mm.

**Keywords:** Nasolabial flap, oral submucous fibrosis, reduced mouth opening, trismus.

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## I. INTRODUCTION

The nasolabial flap is a local flap in the head and neck region with an axial pattern blood supply provided by the facial artery or by and the infraorbital artery. It is used in a variety of defects such as reconstruction of the lower eyelid and small defects of the nose, lips and oral cavity. In cancer treatment its major role is for reconstruction of the floor of the mouth.<sup>1-3</sup>

Oral submucous fibrosis is a disease mainly associated with the chewing of areca nut and is prevalent in South Asian populations. It causes loss of mouth function as tissues become rigid and mouth opening becomes difficult and it also cause transformation into squamous cell carcinoma. The introduction of chewing tobacco containing areca nut has been associated with a sharp increase in the frequency of oral submucous fibrosis.<sup>4</sup>

## II. CASE REPORT

A male patient age 25 came to oral surgery department Rural Dental College, Loni with the complaint of difficulty in mouth opening. Patient reported history of betel nut chewing since last 10 years. On examination, the patient had interincisal opening of < 20 mm and thick fibrous bands on buccal mucosa bilaterally extending from corner of mouth to retromolar area. All the blood reports were in normal range and viral markers were negative. After checkup for general anesthesia, patient was operated under General anesthesia with nasoendotracheal intubation. The fibrotomy was done from corner of mouth till retomolar area by using electrocautery. Anterior stop cut was given to avoid iatrogenic laceration of corner of mouth. The buccinator muscle was also released bilaterally. Finger dissection was done after release of buccinator muscle, injury to parotid duct was avoided. Interincisal opening was recorded after release of fibrous bands along with extraction of all wisdom teeth. Coronoideotomy was done bilaterally to achieve an interincisal mouth opening of more than 35 mm.

The nasolabial flap was marked ensuring the medial border of the flap is on the nasolabial fold. Flap dimensions were 2cm in width and 6cm in length. The superior border of the flap was made inferior to the medial canthus along the nasofacial junction. The inferior extension of the flap was 0.5cm above the lower border of mandible.



**Figure 1: Pre operative mouth opening**

A 15 no. knife was used to raise the flap above the underlying musculature. As shown in Fig.1, the flap was raised by keeping the pedicle intact at the corner of mouth and inserted in to oral cavity by making a tunnel at corner of mouth to oral cavity.

The inferior edge of the flap was sutured to intraoral defect anteriorly and the superior edge of the flap was sutured to posterior defect intraorally in retromolar area. After a latent period of 5 days the physiotherapy was started with Heister's mouth gag. After discharge patient was asked to do physiotherapy for 6 months by using ice cream sticks.



**Figure 2: Harvesting of Nasiolabial Flap**



**Figure 3: Intraoral Flap healing**



**Figure 4: Post operative mouth healing**

### III. DISCUSSION

OSMF is a progressive and potentially debilitating condition which causes interference with regular inspection of the oral cavity because patient can not open his/her mouth completely and causes difficulty in food intake , speech<sup>7</sup>

There are generally two options to treat OSF: medical and/or surgical.

Other options to treat osmf are palatal island flaps, bilateral tongue flaps<sup>5</sup>, buccal fat pads, bilateral forearm free flaps.<sup>6</sup>

Our choice of flap was a nasolabial flap and depended upon the length of the flap required. We used a centrally based nasolabial flap. Nasolabial flap is a very dependable axial

Pattern flap it has a mobile pedicle and can be safely transposed intraorally.

In this case healing was excellent with minimal extraoral scarring and mouth opening of >35mm achieved.

### IV. CONCLUSION

Nasolabial flaps have many advantages such as reliable blood supply, it is easy to harvest, esthetically satisfactory , and proximity to the defect site. The disadvantages are intraoral hair growth and scarring in some patients which can be managed by de-epithialization.

### REFERENCES

- [1] Wallace AF. Esser's skin flap for closing large palatal fistul0e. Br J Plast Surg 1966; 19: 322-6.
- [2] Gewirtz HS, Eilber FR, Zarem HA. Use of the nasolabial flap for reconstruction of the floor of the mouth. Am J Surg 1978; 136: 508-11.
- [3] Michelet V, Duroux S, Majoufre C, Caix P, Siberchicot F. Analysis of reconstruction procedures for defects of the mouth floor: report of 96 cases. Ann Chir Plast Esthrt 1996; 41:639--43 [In French]
- [4] Nair U, Bartsch H, Nair J. Alert for an epidemic of oral cancer due to use of the betel quid substitutes gutkha and pan masala: a review of agents and causative mechanisms. Mutagenesis 2004; 19(4):251–62.
- [5] Mehrotra D, Pradhan R, Gupta S. Retrospective comparison of surgical treatment modalities in 100 patients with oral submucous fibrosis. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2009;107:e1-10.
- [6] Chao CK, Chang LC, Liu SY, Wang JJ. Histologic examination of pedicled buccal fat pad graft in oral submucous fibrosis. J Oral Maxillofac Surg 2002;60:1131-4
- [7] Chao CK, Chang LC, Liu SY, Wang JJ. Histologic examination of pedicled buccal fat pad graft in oral submucous fibrosis. J Oral Maxillofac Surg 2002;60:1131-4.