



Nasolabial flap As A Reconstructive Option for the Management of Submucous Fibrosis- A Clinical Study

KEYWORDS

Oral submucous fibrosis, Nasolabial flap, Interincisal mouth opening

Dr. Pradeep Gupta

Dr. Nirmal Kumar Gupta

Dr. Mathura Prasad Agarwal

ABSTRACT *BACKGROUND: Oral submucous fibrosis is a peculiar ,progressive , incidious, irreversible chronic debilitating disease associated with restricted mouth opening, blanching and stiffness of mucosa, burning sensation in mouth and hypomobility of soft palate and tongue with loss of gustatory sensation.*

OBJECTIVE: Surgery remain the main stay in severe cases and aims at release of fibrotic band and resurfacing the raw area with different options. Successful use of inferiorly based nasolabial flap in the management of oral submucous fibrosis is projected.

METHOD: A TOTAL OF 12 histologically proven cases of oral sub mucous fibrosis having a mouth opening less than 20 mm were surgically treated and covering the defect with inferiorly based nasolabial flap.

RESULT: Result were assessed by comparing the preoperatively and postoperatively maximum mouth opening . All the flap healed with out evidence of infection, dehiscence or necrosis.

CONCLUSION: The inferiorly based nasolabial flap provide reliable coverage of the defect of the buccal mucosa and improve mouth opening.

INTRODUCTION:

Oral submucous fibrosis is a peculiar ,progress, incidious, irreversible, chronic, crippling disease of oral cavity characterized by blanching and stiffness of oral mucosa, which cause progressive limitation of mouth opening and intolerance to hot and spicy food. It is more prevalent in Indian subcontinent (Paissat, 1981, Gupta & Sharma 1988)[1,2]. In 1952 Schwartz first coined the term *atrophica idiopathica of the mucosa oris* to describe an oral fibrotic disease [3]. Joshi subsequently term the condition as oral submucous fibrosis in 1953. At any stage of the disease the overlying epithelium may become the site of non specific ulceration, show dysplastic changes and undergo malignant transformation hence it is regarded as premalignant condition. [Paissat 1981, Gupta and Sharma 1988][1,2]. Oral submucous fibrosis can occur at any age but commonly occur at 20-40 years age [4, 5]. Oral submucous fibrosis remain to occur both in male and female, there have been conflicting reports in sex affiliation. Medical treatment is indicated at an early stage of the disease but mostly patient present with moderate to severe form of disease [Lee et al 2006][6]. Surgical treatment is indicated at this late and irreversible stage. Medical treatment is conservative and is applied where surgery is contraindicated. It is only a palliative measure. Surgical treatment involve simple excision of fibrotic bands and reconstruction. Reconstruction can be done by split thickness skin graft, buccal pad of fat, nasolabial flap or radial artery free forearm flap [7, 10]. The nasolabial flap typically classified as an axial pattern flap based on angular artery. It can be based superiorly or inferiorly. Inferiorly based nasolabial flap is a reliable ,economical option for the management of oral sub mucous fibrosis [Borrie et al 2009][8]

MATERIAL AND METHOD:

The present study was carried out at SMS medical college and hospital Jaipur, Rajasthan. A total of 12 patient of oral submucous fibrosis were admitted in our hospital. All patient signed an informed consent form before surgery. All the patient had advanced oral sub mucous fibrosis with

interincisal distance not more than 20 mm. Patient's age, sex, etiology, history of gutkha/tobacco chewing and pre-operative mouth opening were documented. All the cases were histologically proven. Patient were followed regularly for six months and maximum interincisal distance was measured. Exclusion criteria were patients having oral submucous fibrosis extending into pharynx, soft palate, oesophagus or paratubal muscle, malignant change in submucous fibrosis on biopsy.

SURGICAL TECHNIQUE:

After nasal intubation surgery was performed under general anaesthesia. The incision was placed in the buccal mucosa transversely from behind the oral commissure to extending posteriorly depending upon the location of the fibrotic band. We checked the interincisal distance to be 35 mm after releasing the band. Nasolabial flap from the tip of the nasolabial fold to corner of mouth were marked and bilaterally raised in the plane of the superficial musculoaponeurotic system. Transposition of the flap was done intraorally near the commissure of the mouth through the transbuccal tunnel, deepithelization was done at the inferior base of the flap in a triangular fashion. The extra oral defect was closed in layers after undermining skin in subcutaneous plane to prevent tension across the suture line. Physiotherapy was started from the 5th post operative day and patients were instructed to continue the physiotherapy themselves for up to 6 month to prevent relapse, Patients were followed up to at regular interval.

RESULT:

Healing was excellent without evidence of infection, dehiscence or necrosis. Adequate mouth opening was achieved and maintained with minimum intraorally as well as extraorally scarring.

DISCUSSION:

A mucosal graft is the best treatment for oral submucous fibrosis as it is an ideal graft to cover the oral mucosa but its limited by the quantity of oral mucosal available

for grafting. Skin graft is unsuitable due to reduce elasticity and atrophy in elderly and it has a high failure rates as fibrotic area have less vascular supply[kakkar et, al,1985][9]. The use of palatal flap based on greater palatine artery as recommended by Khanna et al has the limitation that they fail to reach posteriorly[lee,2007][6]. Buccal fat pad may also be used to cover the defect but the anterior reach of the flap is often inadequate and can not be used for larger defects[paissat. 1981][1].Tongue flap are bulky and when used bilaterally cause disarticulation, dysphagia and increased chance of aspiration. However the use of bipaddled radial forearm flap is time consuming and require two microsurgeries. We used inferiorly based nasolabial flap for the reconstruction of mucosal defect after excision of fibrous band. The technique is easy to master and defect as large as 6 to 7 cm can be closed. The availability of the tissue in abundance help to cover large defect with out tension.

TABLE NO 1:

NOS.	AGE	SEX	PRE-OPERATIVE INTERINCISAL MOUTH OPENING	POST- OPERATIVE (6 MONTHS) INTERINCISAL MOUTH OPENING
1.	22	M	19.2mm	35.4mm
2.	34	M	18mm	36mm
3.	36	F	17.4mm	35.4mm
4.	28	M	20mm	37mm
5.	31	M	17.8mm	37.5mm
6.	42	F	19.8mm	35.4mm
7.	21	M	16.2mm	34.2mm
8.	45	M	15mm	37.6mm
9.	27	M	8mm	34.2mm
10.	22	M	19mm	33.7mm
11.	34	M	16.5mm	34.9mm
12.	30	M	19.8mm	35.7mm

CONCLUSION:

There are various surgical treatment modalities for severe case. Excision and Nasolabial flaps coverage is a good alternative technique. The postoperative external scar are hidden in the nasolabial fold. The flap healed without necrosis or infection and there was no relapse and it was aesthetically acceptable.





REFERENCE

- Paissat DK: Oral submucous fibrosis. *International Journal of Oral Surgery*, 1981;10(5):307-312. 2. Gupta D, Sharma SC: Oral submucous fibrosis- a new treatment regimen. *Journal of Oral & Maxillofacial Surgery*, 1988; 46(10): 830-833. 3. Angadi PV, Rekha K. Oral submucous fibrosis: a clinicopathologic review of 205 cases in Indians. *Oral and Maxillofacial Surgery*2011;15(1):15-9. 4. Rajendran R, Sugathan C, Remani P, Ankathil R, Vijayakumar T. Cell mediated and humoral immune responses in oral submucous fibrosis. *Cancer*1986;58(12):2628-31. 5. Rajendran R. Oral submucous fibrosis: etiology, pathogenesis, and future research. *Bulletin of the World Health Organization*1994;72(6):985-96. 6. Lee JT, Cheng LF, Wang CH, Hsu H, Chen PR, Lin CM, Chien SH: A double skin paddle radial forearm flap for reconstruction of oral submucous fibrosis. *Tzu Chinese Medical Journal* 2006;18(5):362-368. 7. Canniff JP, Harvey W, Harris M: Oral submucous fibrosis: its pathogenesis and management. *British Dental Journal*, 1986 ;160(12):429-434. 8. Borle RM, Nimmonkar PV, Rajan R: Extended nasolabial flaps in the management of oral submucous fibrosis. *The British journal of Oral & Maxillofacial Surgery*, 2009;47(5) :382-385. 9. Kakar PK, Puri RK, Venkatachalam VP: Oral submucous fibrosis-treatment with hyalase. *Journal of Laryngology & Otology* , 1985; 99(1):57-59. 10 Lee JT, Cheng LF, Chen PR, Wang CH, Hsu H, Chien SH, Wei FC: Bipaddled radial forearm flap for the reconstruction of bilateral buccal defects in oral submucous fibrosis. *International Journal of Oral & Maxillofacial Surgery* , 2007;36(7):615-619.