

Bilateral Inferiorly Based Nasolabial Flaps for the Management of “Oral Submucous Fibrosis”: A Case Report

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Abstract

Oral Submucous fibrosis [OSMF] is the premalignant condition in which patient suffers from limited mouth opening and fibrous bands over buccal mucosa. Various medical and surgical modalities are being suggested in the literature for the management of OSMF. The present article reports one case of group III OSMF [as per classification by Khanna JN and Andrade NN (1995)] which was successfully managed in the department of “Oral & Maxillofacial Surgery” of M.A.Rangoonwala college of dental sciences and research centre, Pune. The surgical modality implemented was “bilateral release of fibrous bands [fibrotomy], coronoidectomy” and reconstruction at recipient site was done with bilateral nasolabial flaps.

Keywords: Inferiorly based nasolabial Flap, Oral Submucous Fibrosis [OSMF], Release of fibrous bands, Coronoidectomy, Management of OSMF.

Case Report

A 33 years old male reported to the department of “Oral & Maxillofacial Surgery” of M.A.Rangoonwala college of dental sciences and research centre, Pune with the chief complaint of limited mouth opening [18mm] which gradually increased in severity over a period of 1 year. Patient was tobacco chewer since 10 years. On clinical examination, we diagnosed the condition as “Group III OSMF” OSMF (as per classification by Khanna JN and Andrade NN (1995)) and we planned to treat this condition by bilateral fibrotomy, bilateral coronoidectomy and reconstruction was planned with bilateral nasolabial flaps. All preoperative investigations was performed and after getting physician consent, the surgery was planned under general anaesthesia.

General anaesthesia was administered by nasotracheal intubation using fiberoptic bronchoscope.

Pre-operative inter-incisal distance recorded was 18 mm. Local anaesthesia with adrenaline (1:2,00,000) was administered at the surgical site. Bilateral release of fibrous bands was performed with the help of cautery. Extraction of third molars in all quadrants was done to increase the mouth opening. Bilateral coronoidectomy was performed.

After this bilateral inferiorly based nasolabial flaps were marked as shown in the figure. Flaps were marked 3mm lateral to the nasolabial crease. The bases of flaps were lateral to the oral commissure and apex was lateral to the ala of nose. These flaps were raised and

tunnelled towards the recipient site for reconstruction. Closure was performed both intra-orally as well as extra-orally.

Postoperative Interincisal distance achieved was 35 mm. This patient was advised to follow physiotherapy mouth opening exercises.



Fig. 1: Intra-operative Passive mouth opening: - 18mm



Fig. 2: Intra-operative active mouth Opening achieved: 22 mm



Fig. 3: Markings of bilateral NLFs



Fig. 4: Recipient site after fibrotomy



Fig. 5: Placement of left side NLF over Recipient site



Fig. 6: After closure of Donor site

Discussion

Oral submucous fibrosis, abbreviated as “OSMF” predominantly affects people of south-east asia and has more prevalence in the Indian subcontinent. OSMF is an established pre-cancerous condition.^(1,3)

Oral submucous fibrosis is recognized by the limitation of mouth – opening as well as intolerance to spicy food which is the sequelae of blanching and stiffness of oral mucosa. It proceeds gradually, disabling and crippling disease. It is of chronic nature & has uncertain cause. It is a peculiar, scarring disease and causes ulceration, pain and loss of gustatory sensation.⁽¹⁾ The term “oral submucous fibrosis” was

coined by Joshi from India in 1953 for this premalignant condition.⁽³⁾

Various conservative treatments for the management of oral submucous fibrosis have been proposed such as vitamins, iron supplements as well as the intralesional injections of hyaluronidase, placental extracts and steroids.

Various conservative treatments for the management of oral submucous fibrosis have been proposed such as vitamins, iron supplements as well as the intra-lesional injections of hyaluronidase, placental extracts and steroids. Some options are being proposed by different authors for the surgical reconstruction of recipient site such as “island palatal flap” based on greater palatine artery, bilateral tongue flaps, buccal fat pads, radial forearm free flaps and nasolabial flaps.

Nasolabial flap is used for the reconstruction of nasal, labial and intra-oral defects. Nasolabial flap is an arterialized local flap. The blood supply of the nasolabial flap is by branches of facial artery.

Nasolabial flap is very economical as it does not require any allograft material. It is a reliable reconstructive modality in case of small to moderate sized defects in oro-facial region. Inferiorly based NLF is a reliable option for the management of advanced OSMF.

Various complications are associated with the use of nasolabial flap for the management of oral submucous fibrosis such as intra-oral hair growth, flattening of flap, loss of naso-labial crease, extra-oral scar, ectropion, dog ear formation at donor site, post-operative infection.⁽³⁾

The aim of present article is to report a successful management of Grade III OSMF patient by using bilateral inferiorly based nasolabial flaps in which interincisal distance was increased from 18 mm to 35 mm.

References

1. Mohit Agarwal, D.K. Gupta, Anjali Dave Tiwari. Extended Nasolabial Flaps in the Management of Oral Submucous Fibrosis. *J Maxillofac Oral Surg.* (July-Sept 2011)10(3):216–219.
2. R.M. Borle, P.V. Nimonkar, R. Rajan. Extended nasolabial flaps in the management of oral submucous fibrosis. *British Journal of Oral and Maxillofacial Surgery.* 47(2009)382-385.
3. Amin Rahpeyma, Saeedeh Khajehahmadi. The place of nasolabial flap in orofacial reconstruction: A review. *Annals of Medicine and Surgery* 12(2016)79-87.
4. Roshni Abida, Muhamed Sajid Ayyallil. Heterogeneity of Nasolabial Flap – Role in Prevention of Morbidity Associated with Reconstruction of Orofacial Defects. *Journal of Clinical and Diagnostic Research.* 2015 Sep. Vol-9(9):ZD10–ZD11.
5. R. Balakrishnan, Vijay Ebenezer, B. Saravana Kumar, Muthumani. Surgical Management of OSMF with Coronoidectomy and Buccal Fat Pad Replacement – A Case Report. *Biosciences Biotechnology Research Asia,* August 2014, Vol11(2)883-886.

6. Sachin Thakur, Deeti S Hada, Kunal Gupta, Gagandeep Randhawa. Nasolabial Flap in Oral Submucous Fibrosis: A Case Series. *Int J Prev Clin Dent Res* 2016;3(3):228-231.
7. Rajesh Kshirsagar, Ajay Mohite, Suman Gupta, Amod Patankar, Vikrant Sane, Pratik Raut. Complications in the use of bilateral inferiorly based nasolabial flaps for advanced oral submucous fibrosis. *Journal Maxillofac Oral Surg.* 9(1):22-26.
8. Dr. Pradeep Gupta, Dr. Nirmal Kumar Gupta, Dr. Mathura Prasad Agarwal. Nasolabial Flap As A Reconstructive Option for the Management of Submucous Fibrosis – A Clinical Study. *Indian Journal of Applied Research.* Volume 5, Issue 10, October 2015, ISS –2249-555X.
9. Rakesh Kshirsagar, Ankita Chugh (Modi), Anuroop Rai. Bilateral inferiorly based nasolabial flaps for the management of advanced oral submucous fibrosis. *Journal Maxillofac Oral Surg.* 9 (1):22-26.
10. Balaji SM. Versatility of nasolabial flaps for the management of severe trismus in oral submucous fibrosis. *Indian Journal of Dental Research.* 2016;27: 492-7.