

The Surgical Management Of Oral Submucous Fibrosis Using Modified Nasolabial Flap - A Novel Technique

Dr David P Tauro
Professor & Head
Dr Shiva Bharani
Professor



Dr. Vijaykumar J. Girhe
Post Graduate Student



Dept. of Cranio-Maxillofacial Plastic and Reconstructive Surgery, CODS, Davangere.

Introduction

Oral submucous fibrosis (OSMF) is commonly seen in the Indian subcontinent. The prevalence ranges from 0.2-0.5% with a higher prevalence in southern India¹. A variety of medical and surgical treatment modalities with adjunctive physiotherapy have been attempted in the past with varying degrees of success, but none of them have proved to be with a definitive outcome. This paper describes the surgical management of advanced cases of OSMF treated by release of fibrous bands and reconstruction using a modified nasolabial flap.

Case report

- A 35 year old male reported to the Department of Craniomaxillofacial Plastic and Reconstructive Surgery, College of Dental Sciences, Davangere, Karnataka, with a chief complaint of pain and burning of the buccal mucosa and difficulty in opening the mouth for the last six months. Detailed clinical history revealed that the pain was insidious in onset burning type, moderate in intensity and aggravated upon eating spicy food, for which he consulted an ENT surgeon who performed a biopsy. The surgeon prescribed him medication, but there seemed to be no improvement in his symptoms. His mouth-opening gradually decreased with time, for which he reported to our unit for further management. The patient gives a history of tobacco chewing (approximately 50 gms of tobacco/day) for the last 3 years and alcohol consumption for the last 2 years. The patient was hospitalized 2 months ago for a temporoparietal bleed that was managed conservatively. His past dental history, drug history and family history were unremarkable. An audible click was heard in the right TMJ, with deviation toward the right side. Mouth opening was 15mm (Fig. 1) and the oral mucosa appeared blanched, with rigidity of the faucial pillars and uvula. Fibrous bands were palpable in the buccal mucosa bilaterally. Generalized marginal gingivitis was also an incidental finding.

History, clinical examination and biopsy supported the diagnosis of oral submucous fibrosis. All routine investigations were within normal limits. The orthopantomogram did not show any bony pathology. A surgical line of treatment was planned and under general anesthesia, the fibrotic bands were released with a surgical diathermy and a mouth opening of 45mm was achieved on the operating table. The defect thus created was reconstructed using a unique modification of a nasolabial flap based on a central pedicle (Fig.2). The flap was raised as shown in the picture (Fig. 2) tunneled into the oral cavity, inset into the defect and sutured in place Post-operative recovery was uneventful and patient was discharged on the 10th Post operative day with a strict advice for jaw physiotherapy. At one year follow-up, the patient showed an excellent mouth opening of 42mm.

Discussion:

Diverse treatment modalities have been tried in the management of OSMF without predictable outcomes (Table I)¹²⁴⁵.

<i>Conservative and Medical Management</i>	<i>Surgical management</i>	
1).Discontinue habits 2) Multivitamins supplements 3)Shortwave diathermy (physiotherapy) 4)Topical triamcinalone acetone 5)levamisole 6)Intralesional injection of - Hydrocortisone - Hyaluronidase - Triamcinilone acetone - Placenterex - Blufelomedial hydrochloride	<i>Excision of fibrous bands and defect closure with</i> - Partial thickness skin flap - Buccal pad of fat - Palatal flap - Temporalis flap - Tongue flap - Nasolabial flap - Modified Nasolabial flap	CO2 LASER cutting of fibrous band & healing by secondary intention stated to cause less fibrosis during healing

Since OSMF is a generalized condition that eventually affects the entire aero-digestive tract, the rationale for using any intraoral flap is not justifiable since it would only mean transferring pathologic mucosa from one location to the other. Since the nasolabial tissues are extraneous and histologically different to the oral cavity the possibility of involvement of these tissues by invasion of the adjacent pathologic mucosa remains a remote possibility.

All the above mentioned flaps have their own limitations. Yadranko Ducic used a superiorly based nasolabial flap in 1830 for reconstruction of ala of the nose.⁶ The inferiorly-based nasolabial flap was given by Esser in 1917 to repair palatal fistulae. Wallace and Rose reported modifications of the basic flap, allowing for single-stage transfer.⁶

This is a novel modification from the conventional nasolabial flap where the pedicle is centrally based thus making it a single stage procedure. Moreover, this flap addresses two important areas of the oral cavity, the commissure and the pterygomandibular raphe which facilitate and enhance the mouth opening. This is a technique that has been used in 110 cases successfully with gratifying results.

Bibliography

1. Cox SC, Walker DM. Oral submucous fibrosis: A review. Aust Dent J. 1996; 41(5): 294-299.
2. Pindborg JJ, Sirsat SM. Oral submucous fibrosis. Oral Surg Oral Med Oral Pathol. 1966 Dec; 2 (6): 764-79.
3. Pindborg JJ, Mehta FS, Gupta PC, Daftary DK. Prevalence of oral submucous fibrosis among 50, 915 Indian villagers. Brit J Cancer. 1968; 22: 646- 654.
4. Borle RM, Borle SR. Management of oral submucous fibrosis: A conservative approach. J Oral Maxillofac Surg. 1991; 49: 788-791.
5. Sharma JK, Gupta AK, Mukhija RD, Nigam P. Clinical experience with the use of peripheral vasodilator in oral disorders. Int J Oral Maxillofac Surg. 1987; 16: 695-699.
- 6 Yadranko Ducic. Nasolabial flap reconstruction of oral cavity defects: A report of 18 cases. J Oral Maxillofac Surg. 2000; 58: 1104-1108



Fig. 1



Fig. 2



Fig. 3



Fig. 4

CODS Cricket Team Participated in RGUHS Zonal

