Research Article

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To Assess Role of Buccal Pad of Fat in Cases of OSMF: A Clinical Study

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ABSTRACT

Background: Oral submucous fibrosis (OSMF) is a chronic disease with multifactorial etiology. The present study was conducted to assess role of buccal pad of fat in cases of OSMF.

Materials & Methods: The present study was conducted on 46 patients of OSMF of both genders. The surgeries were performed under general anesthesia with fibro-optic nasal intubation. Mouth opening exercises were started postoperatively after 36 hours using Fergusson's mouth gag or wooden spatulas. Mouth opening was assessed pre- operatively, after 1 month, 3 months and 6 months.

Results: Out of 46 patients, males were 30 and females were 16. Mouth opening pre- operatively was 14.2 mm, after 1 month was 25.8 mm, after 3 months was 34.6 mm and 6 months was 42.5 mm. The difference was significant (P< 0.05).

Conclusion: Authors found that the cases of oral submucous fibrosis can be well managed with buccal pad of fat.

Keywords: Buccal fat, OSMF, Mouth gag.

INTRODUCTION

Oral submucous fibrosis (OSMF) is a chronic, resistant disease which may involve the submucosal layer of any part of the oral cavity and may extend up to pharynx and oesophagus.[1] In 1952, Schwartz introduced the term "atrophica idiopathica mucosa oris" to describe an oral fibrosing disease he discovered in 5 Indian women from Kenya. Joshi subsequently termed it as oral submucous fibrosis (OSMF) in 1953. This condition has been referred to, under a number of names such as diffuse oral submucous fibrosis, idiopathica scleroderma of the mouth, idiopathic palatal fibrosis.[2]

The management of oral submucous fibrosis can be dealt with two broad categories: medical and surgical. The medical management includes multiphase injections of hyaluronidase, hydrocortisone, placental extract, triamcinolone plus vitamin, and iron supplements.[3] Intralesional steroids are probably satisfactory only in cases with minimal impairment of mouth opening. The surgical treatment is the method of choice in patients with marked limitation of mouth opening. The following surgical modalities have been used: release of fibrous bands and covering of the raw areas with split thickness skin grafting, bilateral nasolabial flaps, palatal sland flaps, tongue flaps, temporalis myotomy, and coronoidectomy.[4]

The buccal fat pad is a supple and lobulated mass, easily accessible, and mobilized. The buccal fat pad is mainly used to cover defects in the posterior maxilla, the buccal region, the hard palate, the soft palate, and the retromolar and pterygomandibular regions after tumor resections and oroantral communications after tooth extractions.[5] The present study was conducted to assess role of buccal pad of fat in cases of OSMF.

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MATERIALS & METHODS

The present study was conducted in the department of Oral Medicine & Radiology. It comprised of 46 patients of OSMF ob both genders. Study design was approved by the institutional ethical committee and informed consent was taken from all the patients.

Data such as name, age, gender etc. was recorded. The surgeries were performed under general anesthesia with fibro-optic nasal intubation. A small amount of the lesions were excised and sent for biopsy. The buccal fat pad was approached on the posterior superior margin of the created buccal defect (Figure 3), that is, posterior to the zygomatic buttress. After blunt dissection, through the sub mucosa the buccal fat pad was mobilized gently until a significant amount was obtained to cover the defect without tension. All patients received prophylactic antibiotics. All the patients had liquid diet postoperatively for at least 1 week. The patients were instructed to use 10 mL of chlorhexidine mouth rinse at 8 hourly. Mouth opening exercises were started postoperatively after 36 hours using Fergusson's mouth gag or wooden spatulas. Mouth opening was assessed pre-operatively, after 1 month, 3 months and 6 months. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I: Distribution of patients.

Total- 46		
Gender	Males	Females
Number	30	16

Table I shows that out of 46 patients, males were 30 and females were 16.

Graph I Distribution of patients.

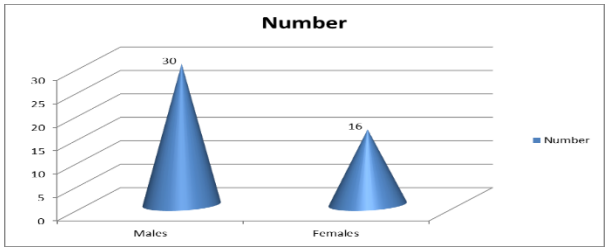
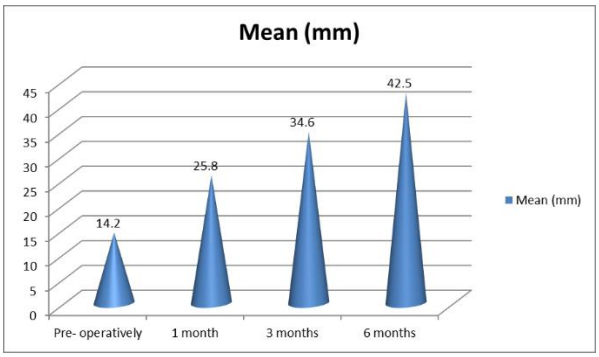


Table 2: Assessment of mouth opening.

Mouth opening	Mean (mm)	P value
Pre-operatively	14.2	0.01
1 month	25.8	
3 months	34.6	
6 months	42.5	

Table II, graph II shows that mouth opening pre-operatively was 14.2 mm, after 1 month was 25.8 mm, after 3 months was 34.6 mm and 6 months was 42.5 mm. The difference was significant (P< 0.05).

Graph II: Assessment of mouth opening.



DISCUSSION

Worldwide, estimates of oral submucous fibrosis indicate that 2.5 million people are affected, with a higher incidence in the Indian subcontinent. The highest incidence is found in South India, with an overall prevalence rate of 2.5% in various states of the country. Clinical signs and symptoms include excessive salivation, limited mouth opening, burning sensation, absent gustatory sensation, etc. which subsequently results to difficulty in chewing and swallowing. It has also been reported with an increased risk of malignancy and hence it is considered as one of pre-malignant condition.[6] The buccal pad of fat was first described in 1977 by Egyedi for the closure of oroantral communications after oncological resections. There is rich vascular supply to buccal pad of fat through an abundant network of vascular anastomoses through the small branches of facial, internal maxillary and superficial temporal artery and veins helps in accelerated wound healing as compared to other surgical modalities used for treatment of OSMF.[7] The present study was conducted to assess role of buccal pad of fat in cases of OSMF.

In present study, out of 46 patients, males were 30 and females were 16. The mouth opening pre-operatively was 14.2 mm, after 1 month was 25.8 mm, after 3 months was 34.6 mm and 6 months was 42.5 mm. Saravanan et al[8] evaluated the use of buccal fat pad as an interpositioning material in surgical management of oral sub mucous fibrosis. A series of 8 cases with proven oral sub mucous fibrosis, with mouth opening less than 20 mm, involving the buccal mucosa were treated surgically with buccal fat pad was used as an interpositioning material to cover the raw areas in the oral cavity after incision and release of fibrous bands. In 8 patients, the range of pre operative mouth opening was 3–18 mm (mean 14 mm). As the result of the successful surgical procedure, the size of the intra operative mouth opening was ranged from 25–38 mm (mean 33.25 mm). The patients were discharged 5–7 days after the operation. The range of the mouth opening at this time was 25–36 mm (mean 30.63 mm). The results were evaluated using student's t test and found to be statistically significant. The pedicled grafts took up uneventful.

We found that mouth opening pre- operatively was 14.2 mm, after 1 month was 25.8 mm, after 3 months was 34.6 mm and 6 months was 42.5 mm. Borle et al[9] reported that skin graft was used to cover the defect after excision of fibrotic bands caused contracture during healing. The incidence of shrinkage, contracture, and rejection of the graft was found to be very high.

The rich vascularity of the pedicled graft ensures its vitality and resistance to infections compared to a free graft. Early return to function with normal eating can be commenced within 5 to 7 days with rapid and predictable wound healing expected confidently. Yeh[10] reported elimination of symptoms such as painful ulceration, burning sensation and intolerance to spicy foods. Early, vigorous and sustained physiotherapy is of paramount importance in the outcome of treatment. The resilience of the graft encourages immediate commencement of mouth opening exercises.

CONCLUSION

Authors found that the cases of oral submucous fibrosis can be well managed with buccal pad of fat.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

REFERENCES

1. Shevale V, Kalra R, Shringarpure M. Management of Oral Sub-Mucous Fibrosis: A Review. Indian Journal of Dental Sciences.2012; 4 (2); 107-114.

2. Cox SC, Walker DM. Oral submucous fibrosis: a review. Aust Dent J. 1996; 41(5):294-299.

3. Gupta SC. "Mist" an aetiological factor in oral submucosal fi brosis. Indian J Otolaryngology 1978;30(1):5-6.

4. Egyedi P. Utilization of buccal fat pad for closure of oroantral communication. J MaxillofacSurg.1977;5:241-243.

5. Stuzin JM, Wagstrom L, Kawamto HK, Baker TJ, Wolfe SA. The anatomy and clinical applications of buccal fat pad. PlastReconstrSurg. 1990;85(1):29-37.

6. Martin C R, Naval L, Costas A, Goizueta C, Rodriguez F, Monje F et al. Use of the buccal pad graft to rapair intraoral defects: Review of 30 cases. British J of Maxillofac surg. 1997;35:81-84. 7. Kumar KA, Brahmaji Rao J. Versatality of pedicled buccal fat pad in surgical management of oral submucous fi brosis – A study in 20 cases. IJDA. 2009;1(1); 5.

8. Saravanan K, Narayanan V. The use of buccal fat pad in the treatment of oral submucous fibrosis: a newer method. International journal of dentistry. 2012;2012.

9. Borle RM, Borle SR. Management of oral submucous fibrosis: A conservative approach. J Oral MaxillofacSurg. 1991;49:788-91.

10. Yeh. Application of the buccal fat pad to the surgical treatment of oral submucous fibrosis. International Journal of Oral and Maxillofacial Surgery 1996; 25 (2): 130–133.