Oral Submucous Fibrosis

ABSTRACT

The pedicled buccal pad of fat has been widely used for the reconstruction of defect; application of this flap in the treatment of patient suffering from oral submucous fibrosis (OSMF) is reported here. The patient underwent incision of fibrotic bands and coverage of this buccal defect with buccal pad of fat. The surgical technique is described and the results suggest that this is a logical, reliable, and convenient technique for OSMF.

Keywords: Buccal pad of fat, Coronoidectomy, Oral submucous fibrosis.


INTRODUCTION

It is defined as an insidious, chronic disease that affects any part of the oral cavity and sometimes the pharynx. Although occasionally preceded by, or associated with, formation of vesicles, it is always associated with a juxta epithelial inflammatory reaction followed by fibroelastic change of the lamina propria and epithelial atrophy that leads to stiffness of the oral mucosa and causes trismus and an inability to eat. 1 The most commonly involved site is buccal mucosa, followed by palate, retromolar region, faucial pillars and pharynx.

Epidemiological and in vitro experimental studies have shown that chewing areca nut (Areca catechu) is the major etiological factor for oral submucous fibrosis (OSMF). Currently, in India, Pakistan, and Bangladesh, betel quid and gutkha are the most commonly used commercially freeze-dried areca-nut products. Malignant transformation particularly into squamous-cell carcinoma is in the range of 7 to 13%. Generally, younger patients develop clinical features of OSMF within 3.5 years from onset of the habit, while in older patients it takes 6.5 years.

CASE REPORT

A 31-year-old male patient presented to the Department of Oral and Maxillofacial Surgery, MGM Dental College and Hospital Kamothe, with a chief complaint of reduced mouth opening since 2 months. Burning sensation and progressive reduction in mouth opening was seen over last the 6 months. He was a tobacco chewer, five to six times a day since 2 years. Patient was hospitalized for 15 days 2 months back and had undergone internal fixation for facial fractures. On examination, fibrous bands present bilaterally in buccal mucosa extending anteriorly from corner of mouth to posteriorly in the retromolar region, which were tender on palpation. There was no history of deafness or dysphagia. Maximum interincisal opening was 18 mm (Fig. 1).

During the surgical procedure under general anesthesia, all third molars were extracted. Fibrous band was incised with electrocautery knife. Buccal mucosa was made free of fibrosis. Bilateral coronoidectomy (Figs 2 and 3) was performed through the same incision.

![Fig. 1: Preoperative photograph showing maximum mouth opening of 14 mm](image-url)
Buccal fat pad (BFP) was mobilized into the defect (Fig. 4) and the defect was reconstructed. Forty millimeters of mouth opening was achieved intraoperatively (Fig. 5). Patient was kept on ryles tube feeding for 7 postoperative days and was advised active physiotherapy to maintain adequate mouth opening (Fig. 6).

**DISCUSSION**

Oral submucous fibrosis is a precancerous condition. At first, OSMF was thought to be idiopathic, but it was later concluded to be multifactorial in origin, and possible etiological factors include capsaicin in chillies, iron, zinc, and deficiencies in essential vitamins. Now the most common etiologic factor in case of OSMF is considered as areca nut-chewing habit; this case gave a history of tobacco chewing since 2 years. Tobacco chewing is considered to have a synergistic role in etiology of the disease, but here it is reflected as a main etiologic factor. Generally, younger patients develop clinical features of
OSMF within 3.5 years from onset of the habit, while in older patients, it takes 6.5 years. Classical features of OSMF, i.e., blanched buccal mucosa with typical marble like appearance and palpable fibrous bands were present. There was restricted mouth opening with the history of burning sensation on consumption of hot and spicy food substances.

The current protocol for the management of OSMF can be divided into three broad groups: Surgical, physical, and medical treatment. Surgical treatment, used mainly to manage trismus, involves incising and releasing the fibrotic areas, and leads to further scarring and fibrosis. The introduction of remote tissue (pedicled, such as a BFP, nasolabial or platysmal flaps, or free tissue transfer) in an attempt to release fibrosis is one approach, but results are variable.

Release of fibrous bands and reconstruction with BFP was chosen as a surgical technique for this case. Scammon was the first to describe the anatomy of the BFP, followed by Goughran. The BFP as an anatomic element was first mentioned by Heister in 1732 and was described by Bichat in 1802. Stuzin et al reported the anatomic findings after the dissection 12 BFPs in six specimens. The average weight of each fat pad was found to be 9.3 gm, and its average volume was 9.6 ml. The BFP has a constant blood supply through the small branches of the facial artery, the internal maxillary artery, and the superficial temporal artery and vein by an abundant net of vascular anastomoses. On average, the volume is 9.6 cc (8.3–11.9 cc). Defects up to 3 × 5 cm can be closed with a BFP alone without compromising the blood supply. The buccal extension and the main body of the fat pad are in close proximity. The main mass of the BFP occupies the buccal space bound medially by the buccinator muscle and laterally by the masseter muscle, and rests on the periosteum that covers the posterior buccal aspect of the maxilla. The transferred BFP starts to epithelialize in a week and completes its epithelialization within 6 weeks. At that time, the graft is covered with healthy-looking oral mucosa. After extraction of all (maxillary and mandibular) third molars, bilateral coronoidectomy was performed. Fibrous bands were incised using electrocautery and reconstruction of the defect was done by mobilizing corresponding BFP in the defect. The BFP was covered with collagen sheet and paraffin bolus dressing was given over it. Ryles tube was secured in order to avoid the contamination of the graft and it was kept in situ for about 7 days because the BFP starts to epithelize in a week.

CONCLUSION
Buccal fat pad is a simpler reconstructive technique that is effective, reliable, technically easy, has fewer complications with good results, and worth of consideration. The postoperative physiotherapy and patient compliance plays a vital role in this surgery.

REFERENCES