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Case Report

Bilateral Nasolabial Flap in Oral Submucous Fibrosis: A Case Report

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Abstract

Oral submucous fibrosis is a chronic debilitating disease associated with restricted mouth opening and poor oral hygiene. The treatment aims at good release of fibrosis and to provide long term results in terms of mouth opening. With the increasingly widespread application of reliable microvascular free tissue transfer techniques for oral cavity reconstruction, the routine need for a variety of local and regional flaps has decreased. Various local grafts have been used to cover the buccal mucosal defects after the fibrotic bands are released in oral submucous fibrosis. Successful use of inferiorly based nasolabial flaps in the management of oral submucous fibrosis is projected. In this article, the focus is on the utility of the pedicled nasolabial flap to achieve this goal. Care was taken for post-operative physiotherapy, and was followed up regularly for one year. Flap healed without evidence of infection, dehiscence, or necrosis. The inferiorly based nasolabial "islanded" flaps provide reliable coverage of defects of the buccal mucosa and improves mouth opening.

Keywords: submucous, microvascular, pedicled nasolabial.

INTRODUCTION

Oral submucous fibrosis is an insidious, chronic, disabling disease of unknown etiology that affects the whole of oral cavity, pharynx and sometimes larynx [1]. Schwartz coined the term "atrophica idiopathica mucosa oris" to describe oral fibrosing disease [2]. Later the term "oral submucous fibrosis" was coined by Joshi [3]. It is characterized by stiffening and blanching of the oral mucosa, which causes progressive limitation of mouth opening and burning sensation on taking hot and spicy food. It is always associated with juxtaepithelial inflammatory reaction followed by fibroelastic changes of the lamina propria with epithelial atrophy leading to stiffness of the oral mucosa [4]. It is an established precancerous condition with increased number of cases in Indian population and is widely common in all age groups and across all the socioeconomic strata in India. Most of the patients report with malignant transformation as a slow growing squamous cell carcinoma which is a serious threat to the patient [5]. Oral submucous fibrosis is characterized by blanching and stiffness of the oral mucosa, which causes progressive limitation of mouth opening and intolerance to hot and spicy food. It is more prevalent in Indian subcontinent and is identified as an important premalignant condition [15, 6]. Surgical treatment is indicated at this late and irreversible stage. The procedure consists of release of fibrous bands followed by resurfacing the raw areas with skin graft, fresh amnion, collagen, or local flaps [16]. Mucosal graft is one of the ideal graft for Oral submucous fibrosis [7]. Various soft tissue local flaps that are used for reconstruction after surgical excision of fibrous bands in Oral submucous fibrosis are buccal fat pad, tongue flaps, and island palatal flaps etc. Out of all the grafts, Nasolabial flap is a versatile, reliable, relapse free and economic option for the patients [8]. The nasolabial flap is typically classified as an axial pattern flap based on angular artery. It can be based superiorly or inferiorly. Surgical descriptions about nasolabial flap began as early as 1830 when Dieffenbach used superiorly based nasolabial flaps to reconstruct nasal alae. In 1864, Von Langenbeck used the nasolabial flap to reconstruct the. Fifty-seven years later, Esser described the use of the inferiorly based nasolabial flap to close palatal fistulae [9]. Inferiorly based nasolabial flap is a reliable, economical option for the management of oral submucous fibrosis [10].

Case Report

A 41 years old male reported with complaint of restricted mouth opening since 3-4 years, and burning sensation in the oral mucosa. Interincisal Mouth opening was nil and graded as OSMF Type 4A – according to Andrade & Khanna Classification (Fig-1). Vertical fibrotic bands appreciated bilaterally on the buccal and labial mucosa.patient was informed about it being a premalingnant condition and the importance of surgry in the treatment of the lesion.

The operation was performed under general anesthesia with nasal intubation. After opening the mouth, the buccal mucosa was incised transversely from just behind the commissure of the oral cavity extending posterior edge of fibrous band upto pterygomandibular raphe. For achieving adequate mouth opening bilateral Coronoidotomy was performed. Nasolabial flaps from the tip of nasolabial fold to corner of mouth were marked & bilaterally raised in the plane of the superficial musculoaponeurotic system (Fig 2, 3 & 4). The flap was transposed intraorally through a small transbuccal tunnel near the commisure of the mouth, with no tension and the caudal base of the inferiorly based nasolabial flap was deepithelized in a triangular fashion (Fig-5). The area of deepithelialization is determined by the required length of the transbuccal tunnel. The extraoral defect was closed primarily in layers after undermining skin in subcutaneous plane to prevent tension across the suture line. Mouth opening was checked & intraoperative interincisal distance was more than 35 mm after release of bands (Fig-6). Physiotherapy was started from the 5th postoperative day. Patient was reviewed on 5th operative day and after 2 month for mouth opening (Fig 7 & 8). Patients were instructed to continue the physiotherapy themselves for up to 6 months to prevent relapse. Patients were followed up at regular intervals.

Fig-1: Pre- operative extra oral view

Fig-2: Nasolabial flap mobilization on the right side

Fig-3: Nasolabial flap marked on the left side

Fig-4: Mobilization of nasolabial flap on left side

Fig-5: Nasolabial flap transposed intraorally through tunneling

Fig-6: Final closure of the donor site

Fig-7: After 5 days post op

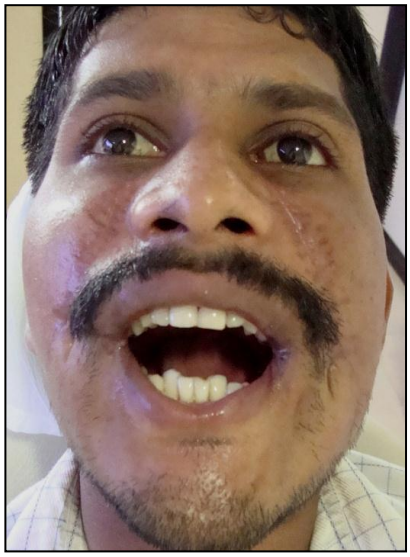

Fig-8: After 2 months follow op

DISCUSSION

Oral submucous fibrosis in most of the cases is an unsatisfactorily treated disease and the treatment is mainly symptomatic because of no clear etiology known [11]. Conservative treatment includes cessation of chewing of areca nut, gutka etc. followed by vitamins, iron supplements, intralesional injections of placental extracts, steroids and hyaluronidase. Medical treatment is indicated at an early stage but mostly patients approach for medical help in moderate or severe form of the disease [12]. In some cases, submucosal injections have produced symptomatic relief which is temporary in most of the cases [8]. We used inferiorly based Nasolabial flaps for the reconstruction of mucosal defects after excision of fibrous bands. The advantages of nasolabial flap include its close proximity to defect, easy closure of donor site & a well camouflaged scar. The technique is easy to master and defects as large as 6 to 7 cm can be closed. The nasolabial flap being easily accessible and modifiable can be used to reconstruct large defects intraorally. Only complication is resultant intraoral hair growth and loss of nasomaxillary crease. Another minor complication of nasolabial flap is creation of a bulky flap [13]. Still the results in the management of Oral Submucous Fibrosis - induced trismus are brilliant [8, 13, 14]. In our case also, the patient was satisfied with the treatment other than the minor problem of surgical scar which got camouflaged with beard after few days.

CONCLUSION

This case scenario suggests that the nasolabial flap is a simple and viable option in the reconstruction of selected oral defects in a low-resources setting where microvascular expertise is not available, rather than using primary closure or a skin graft, improves the functional results. The procedure can be performed with minimal complications.

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