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# MANAGEMENT OF ORAL SUBMUCOUS FIBROSIS USING BILATERAL NASOLABIAL FLAP AS A SALVAGE FLAP- A CASE REPORT

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## ABSTRACT

**Background:**

Oral Submucous fibrosis is a chronic, complex, and pre-malignant condition of the oral cavity, which is predominantly characterized by an inflammatory reaction in the underlying submucosal tissues. As the disease progresses it clinically presents with limitation in mouth opening, and burning sensation in the oral cavity. Most of the patients diagnosed with this condition are either associated with betel quid or areca nut chewing and other forms of tobacco chewing habit.Versatility of Bilateral Nasolabial flap which was used as a salvage flap for management of OSMF was evaluated for this patient who had a relapse of the same condition 10 years back.

**Case report:**

A 60yr old female patient reported to oral surgery OPD at our hospital, with a chief complaint of difficulty in mouth opening and pain during swallowing for the past 6 months.Patient also gave a history of being operated for the same condition 10 years back, and had a habit of betel quid chewing before the previous surgery and had discontinued the habit since then.On clinical examination evident fibrous bands were palpable; with limited mouth opening of 15mm. Biopsy was done and histopathological diagnosis of OSMF was made. Surgical plan of bilateral fibrotomy and reconstruction with bilateral nasolabial flap was formulated.

**Results:**

Nasolabial flap was chosen as it is closer in proximity to the defect and was found to be satisfactory in this patient, there was adequate mouth opening introperatively (forced) of around 40mm, and on postoperative period day 1, the MMO was around 35mm and consecutive postoperative days the MMO was around 30-35mm, and 3 months follow up was done and showed satisfactory results.

**Keywords: Oral submucous fibrosis (OSF), hypovascularity, Visible fibrosis, Bilateral nasolabial flap**

## INTRODUCTION

Oral submucous fibrosis (OSF) is a premalignant disorder associated with the chewing of areca nut (betel nut).The initial presentation of OSF is inflammation. Inflammation is followed by hypovascularity and fibrosis visible as blanching of the oral mucosa with a marble-like appearance. Blanching may be localized, diffuse, or reticular. In some cases, small vesicles may develop that rupture and form erosions.

In the later advanced stage of OSF, a fibrous band that restricts mouth opening (trismus) is characteristic. It causes further problems in oral hygiene, speech, mastication, and possibly swallowing. Development of fibrous bands in the lip leads to thickening and rubbery appearance. It becomes difficult to retract or evert the lips, which transform into an elliptical shape. Clinical features of advanced OSF include the loss of puffed-out appearance of cheeks when a patient blows a whistle. Fibrosis of tongue and mouth impairs tongue movement and leads to depapillation and blanching of mucosa.1

Fibrosis may also affect the soft palate and uvula, whereas gingival involvement is relatively uncommon. Sometimes the blockage of Eustachian tubes impairs hearing, and esophageal fibrosis causes problems in swallowing.

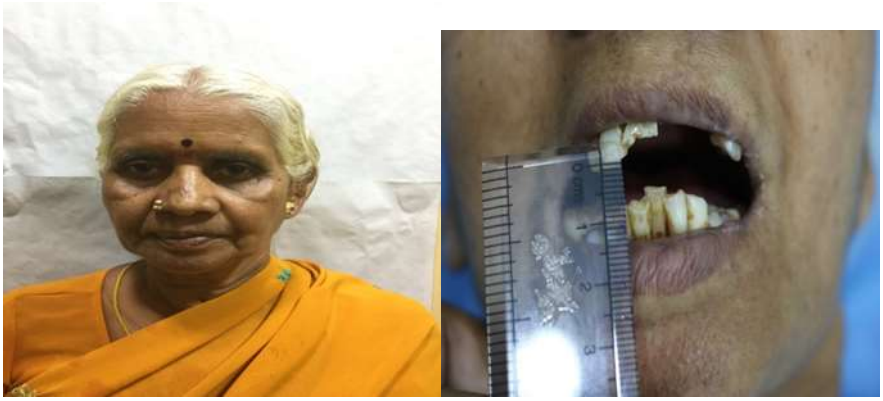

**Figure 1: pre-operative profile picture and MMO**

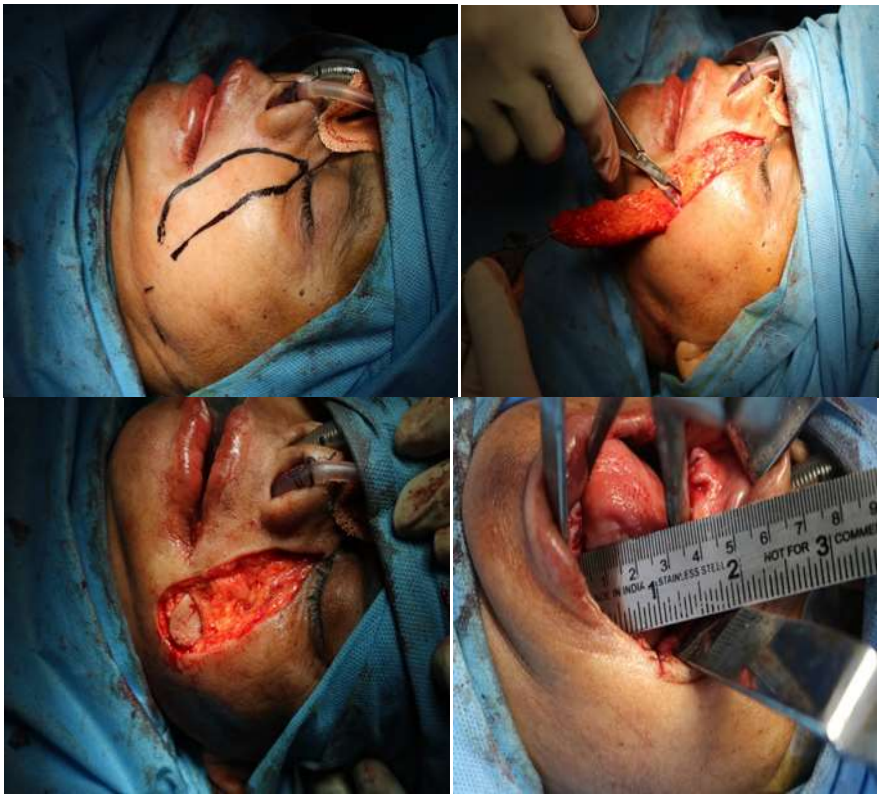

**Figure 2: Inter-operative picture**

**Figure 3: Bilateral intra oral closure**

**Figure 4: post-operative picture and MMO**

## DISCUSSION

Treatments for oral submucous fibrosis are mainly symptomatic, because the aetiology of the disease is not fully understood, and it is progressive. Conservative treatment includes vitamins, iron supplements; intralesional injections of hyaluronidase, placental extracts, and steroids. Submucosal injections of various drugs may produce temporary symptomatic relief but can lead to aggravated fibrosis, pronounced trismus, and increased morbidity from the mechanical injury secondary to insertion of the needle and chemical irritation from the drug.

The nasolabial flap is a versatile flap, which can be successfully used in the reconstruction of defects created after the release of fibrotic bands. Nasolabial flaps is raised from the tip of nasolabial fold to the inferior border of mandible in the plane of the superficial musculoaponeurotic system from both terminal points to the region of the central pedicle. The pedicle is 1 cm lateral to the corner of mouth and the diameter of the pedicle is roughly 1 cm. The flap is transposed intraorally through a small transbuccal tunnel near the commissure of the mouth, with no tension and sutured over intraoral defect. The postoperative extraoral scars were hidden in the nasolabial fold. The scars were more acceptable in older patients who had prominent nasolabial folds and laxity of the skin as compared to the younger patients.

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 nose **(Schmidt & Dierks, 2003)**. Fifty-seven years later, **Esser (1921)** described the use of the inferiorly based nasolabial flap to close palatal fistulae **(Esser, 1921)**. Inferiorly based nasolabial flap is a reliable,

economical option for the management of oral submucous fibrosis **(Borle *et al*, 2009)**.

**History:**

In 1952, Schwartz1 described five Indian women from Kenya with a condition of the oral mucosa including the palate and pillars of the fauces, which he called "atrophiaidiopathica (tropica) mucosaeoris". Later it was termed oral submucous fibrosis (OSMF) ; other names are "diffuse oral submucous fibrosis", "idiopathic scleroderma of the mouth", "idiopathic palatal fibrosis", "sclerosingstomatitis" and "juxta-epithelial fibrosis". Submucous fibrosis is an insidious, chronic disease affecting any part of the oral cavity and sometimes the pharynx Occasionally it is preceded by and/or associated with vesicle formation and is always associated with a juxta-epithelial inflammatory reaction followed by progressive hyalinization of the lamina propria. The later subepithelial and submucosalmyofibrosis leads to stiffness of the oral mucosa and deeper tissues with progressive limitation in opening of the mouth and protrusion of the tongue, thus causing difficulty in eating, swallowing and phonation. Epithelial atrophy is marked in advanced stages of the disease. Apparent divergencies in these characteristics between groups of patients in different studies raised the question whether OSMF should be considered as one, or more than one disease. Although the evidence that it predisposes to cancer is not yet absolutely conclusive, it is highly probable that this relationship exists. The WHO definition for an oral precancerous condition-a generalized pathological state of the oral mucosa associated with a significantly increased risk of cancer-accords well with the characteristics of OSMF.

**CONCLUSION**

Nasolabial flap was chosen as it is closer in proximity to the defect and was found to be satisfactory in this patient, there was adequate mouth opening intraoperatively (forced) of around 40mm, and on postoperative period day 1, the MMO was around 35mm and consecutive postoperative days the MMO was around 30-35mm, and 3 months follow up was done and showed satisfactory results.

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