

## ORAL SUBMUCOUS FIBROSIS IN 12 YEAR OLD BOY: A RARE CASE REPORT

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### ABSTRACT

A 12-year-old Indian male patient presented with difficulty in mouth opening. He had also given the history of burning sensation during eating. Patient had given the history of *SWEETY SUPARI* chewing. On intra oral examination, blanching was present on faucial area, right and left buccal mucosa. On palpation fibrotic bands were palpable in right and left buccal mucosa. On the basis of clinical examination and habit history the patient was diagnosed with oral submucous fibrosis. A comprehensive treatment plan was made based on conservative management. Patient was advised to quit the bad habit of chewing *SWEETY SUPARI*. Vitamin B complex supplements, antioxidants, multivitamins along with Triamcinolone Acetonide 0.1% were prescribed. Oral physiotherapy was also advised. Patient was advised to take green vegetables and non-spicy food along with orange juice.

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We present this case to highlight the case of Oral Submucous fibrosis in younger male individual.

**KEYWORDS:** Oral Submucous Fibrosis; Antioxidants; Burning Sensation; Premalignant Condition.

## INTRODUCTION

Oral submucous fibrosis (OSMF) is an insidious chronic disease affecting the mucosa of any part of the oral cavity and occasionally extending into the pharynx and esophagus. The condition is sometimes preceded by and/or associated with vesicle formation, but always associated with a juxtaepithelial inflammatory reaction followed by a fibroelastic change of the lamina propria with epithelial atrophy, leading to stiffness of the oral mucosa and causing trismus and inability to eat.<sup>[1]</sup> Joshi first described the condition in India and suggested the name oral submucous fibrosis.<sup>[2]</sup>

The etiology of this crippling condition still remains obscure. Earlier workers correlated it with hypersensitivity to capsaicin (*Capsicum nnuma nd Capsicumfr uctescens* -- an active ingredient in chilies -- secondary to chronic iron and/or vitamin B complex deficiencies; or exposure to cashew kernel oil.<sup>[3,4]</sup>

Ram Nathan has recommended that OSMF may be a mucosal change that may be secondary to chronic iron deficiency calling it as an Asian analogue of sideropenic dysphagia.<sup>[5]</sup> OSMF has been predominantly reported among Indians living in India as well as outside, to a lesser extent among other Asiatics and, sporadically, among Europeans. With a reported prevalence ranging up to 0.4% in Indian rural populations,<sup>[6]</sup> several million individuals are estimated to suffer from this malady. It has a malignant transformation rates as high as 7.6%.<sup>[7]</sup>

## CASE REPORT

A 12 year old male patient reported with the chief complaint of reduced mouth opening and burning sensation since last 2 months. History of present illness revealed that initially patient had burning sensation with the small vesicles. Patient had given the history of chewing Sweetly Supari three times per day for 3 years. Past Medical history, past dental history and family history were non-contributory. TMJ was bilaterally symmetrical. On intra oral examination, slight stains and calculus were present. Caries was evident in 36 and 46. Blanching was present on faucial area, right and left Buccal mucosa and uvula was shrunken.

On palpation all inspectory findings were confirmed. Vertical fibrotic bands were palpable on posterior right and left Buccal mucosa. Mouth opening was 20 mm and tongue protrusion was 35mm. On the basis of clinical examination, habit history and history of present illness, oral sub mucous fibrosis was given as the provisional diagnosis.

### MANAGEMENT

Patient was advised to quit the bad habit. The threat of conversion of the premalignant condition into malignancy was explained to the parents and the patient and the importance of immediate quitting of the bad habit was emphasised. Diet modification was done. Non spicy food and green vegetables were advised. Orange juice was advised. Physiotherapy was advised which included mouth opening exercise, stripes placement between the maxillary and mandibular anterior teeth were advised. Cheek ballooning exercise was also advised. Instructions were given to blow the balloon 15–20 times a day for 2 months. Ultrasonic scaling was performed to remove stains, plaque and calculus and it would further help in evaluating the continuation of habit during consequent visits. Oral hygiene instructions were given to the patient that included brushing twice a day using modified bass technique. Ointment Triamcinolone Acetonide 0.1% was prescribed for four times in a day half hour before meal. Antioxidant capsule containing beta carotene, lycopene, vit-A, B, C and E was advised twice daily. All medicine was prescribed for 15 days and patient was recalled after 15 days for follow up. After 15 days patient came for follow up and reported 60% relief in burning sensation and the mouth opening was increased by 2mm in comparison to previous visit and the tongue protrusion was increased by 1mm. Patient was advised to continue the medication for next one month. Patient is still under follow up.



**FIGURE 1: PROFILE PICTURE OF PATIENT.**



**FIG 2: BLANCHING IS PRESENT ON RT & LT BUCCAL MUCOSA AND RETROMOLAR AREA.**



**FIG 3: REDUCED MOUTH OPENING.**



**FIG 4: BLANCHING IS PRESENT ON THE FAUCIAL AREA.**

### **INVESTIGATIONS**

Biopsy is necessary for the confirmation of the Diagnosis on the basis of histology and blood count is necessary to diagnose the anemia. But the patient's parents did not give the consent for it as they considered it to be inauspicious and a taboo.

## DIFFERENTIAL DIAGNOSIS

On the basis of clinical features of the disease such as difficulty in mouth opening, the diagnosis that can be thought of are localised scleroderma and OSMF. But after knowing the history of having the habit of *SWEETY SUPARI* chewing and looking at the clinical signs and symptoms (Presence of Blanching, stiffness and presence of fibrotic bands on palpation and history of burning sensation) OSMF was confirmed as provisional diagnosis.

## DISCUSSION

OSMF is a precancerous condition of the upper airway that occurs in an estimated 2.5 million people worldwide.<sup>[8]</sup> OSMF characteristically affects the buccal mucosa, lips, retromolar areas, soft palate and occasionally the pharynx and the esophagus. Blanching of the faucial area, right and left buccal mucosa is the initial clinical features. Burning sensation is associated with the early stage of the OSMF. Palpable vertical fibrotic bands are the later clinical features. It results in progressive inability to open the mouth, pain, dysphagia and hearing loss. OSMF has high malignancy transformation rate (2-30%). Long term follow up is necessary for knowing the chance of malignancy transformation. The younger the age the more rapid is the progression of the disease. Areca nut chewing, tobacco smoking and hypersensitivity to chillies are the precipitating/causative agents in genetically predisposed patients.<sup>[9]</sup> Sirsat and Khanolkar investigated the effect of capsaicin, a component of chilli peppers, on the palates of Wister rats and noted a limited connective tissue response, although this was increased when the animals were vitamin B12 deficient. Iron and vitamin B12 deficiency has been implicated particularly in conjunction with other factors.<sup>[10]</sup>

## CONCLUSION

OSMF is a precancerous condition so proper diagnosis and treatment is important. Patient should be instructed to quit the bad habit of chewing areca nut in any forms. It is duty of oral and maxillofacial health care professional to educate the patients regarding the same. Proper follow up is mandatory for such patients. Patient should also instructed to take green vegetables, citrus fruits and non-spicy food.

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