

ORAL SUBMUCOUS FIBROSIS IN 17 YEARS OLD FEMALE PATIENT: A CASE REPORT AND REVIEW OF LITERATURE**Anju Singh, BDS(H), MDS¹ and Dr. Konark, BDS(H), MDS*²**¹Senior Resident, Department of Pedodontics and Preventive Dentistry, Government Patna Dental College and Hospital, Patna, Bihar, India.²Senior Lecturer, Department of Conservative Dentistry and Endodontics, Government Patna Dental College and Hospital, Patna, Bihar, India.***Corresponding Author: Dr. Konark**

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ABSTRACT

Oral submucous fibrosis (OSMF) is a pre-malignant condition of the buccal mucosa caused by chewing betel quid. OSMF causes reduced mouth opening, burning sensation and decreases tongue protrusion. OSMF causes trismus, which results in difficulty in laryngoscopy and intubations of the trachea. OSMF has higher malignant transformation rate among the all precancerous lesion and conditions. A case of oral submucous fibrosis occurring in a 17 years old female is presented.

KEYWORDS: OSMF; Areca-nut; Malignancy; Pre-malignant condition.**DEFINITION**

Oral submucous fibrosis (OSMF) is a chronic, premalignant condition of the oral mucosa which was first described by Schwartz in 1952. Pindborg (1966) defined OSMF as, "an insidious, chronic disease affecting any part of the oral cavity and sometimes the pharynx. Although occasionally preceded by and/or associated with vesicle formation, it is always associated with juxta-epithelial inflammatory reaction followed by fibroelastic change of the lamina propria, with epithelial atrophy leading to stiffness of the oral mucosa and causing trismus and inability to eat"^[1,2]

CASE REPORT

A 17 years old female patient reported with the chief complaint of burning sensation and reduced mouth opening. History of present illness revealed that mouth opening decreases gradually. There was burning sensation during taking spicy meal. Patient gave history of gutkha chewing once in a day for 2 years. Past medical history, past dental history, family history and social history were non-contributory. Patient was well built, well-nourished and well oriented to time, place and person.

On extra oral examination, no clinical findings were evident. On intraoral examination there was blanching in the faucial area and left buccal mucosa. The right buccal mucosa was normal in colour and the texture was normal. The upper and lower labial mucosa were normal in colour and shape. The right maxillary and mandibular vestibular region were normal. Uvula was normal in size,

shape and color. On palpation all inspectory findings were confirmed. There was stiffness in left buccal mucosa. Fibrotic vertical bands were palpable in left buccal mucosa. There was no tenderness on palpation on right side of buccal mucosa as well as left side of buccal mucosa. On the basis of clinical examination, habit history and history of burning sensation Oral Submucous Fibrosis was given as provisional or clinical diagnosis. Patient was advised to quit the bad habit of gutkha chewing. Antioxidants containing lycopene, beta carotene, vit-A, vit-C, Zn, Mg was advised twice daily for 15 days. Vit-E 400 mg was advised once daily for 15 days. Chlorhexidine mouth was advised twice daily. Physiotherapy including cheek ballooning exercise, strips placement and wide mouth opening and closing exercise were advised. Patient is still under medication and follow up.

**Fig. 1: Profile Photo of Patient.**



Fig. 2: Difficulty in Ballooning of Cheek on Left Side.



Fig. 3: Reduced Mouth Opening.



Fig. 4: Hypermelanosis on Right Buccal Mucosa.



Fig. 5: Blanching on Left Buccal Mucosa.

DISCUSSION

OSMF is predominantly seen in people in South Asian countries such as India and prevalence rate ranges between 0.2% and 1.2%. An epidemiological survey done a decade ago indicated not less than 250,000 cases reported in the country and suggest an overall prevalence of up to 0-4% in places in Kerala. In recent years marked increase in the occurrence of OSMF was observed in many parts of India like Bihar, Madhya Pradesh, Gujarat and Maharashtra. Other countries in which OSMF is seen are Bangladesh, Bhutan, Pakistan and Sri Lanka, or in south Asian immigrants to other parts of the world.^[3,4]

Etiology

The habit of chewing areca nuts (the fruit of Areca catechu plant) is recognized as the most important etiologic agent in the pathogenesis of this condition. In biochemical studies, four alkaloids have been identified in areca nut namely, arecoline, arecaidine, guvacine & guvacoline, of which arecoline is the main agent. The other etiologic factors for OSMF include consumption of chilies, nutritional deficiency, genetic susceptibility, altered salivary constituents, autoimmunity and collagen disorders.^[5]

Diagnostic Criterion

According to the workshop held in Kuala Lumpur, Malaysia in 1996, OSMF can be diagnosed on the basis of the presence of one or more of the following characteristics.^[6]

1. Palpable fibrous bands.
2. The mucosal texture feels tough and leathery.
3. Blanching of the mucosa together with the histopathological features characteristic of OSMF.

Differential Diagnosis

Scleroderma

OSMF needs to be differentiated from oral manifestations of scleroderma and the pale mucosa with pigmentation seen in anemia. In scleroderma, tongue, soft palate and larynx are the intraoral structures are

usually involved. Characteristic furrows radiating from mouth produce a “purse string” appearance. Another important feature of scleroderma is widening of the periodontal ligament space.^[7,8]

Radiation fibrosis

OSMF has to be differentiated from radiation induced fibrosis of oral cavity. When the muscles of mastication are involved in the treatment field, radiation induced edema and fibrosis of the muscles may result.

Vertical scar band

It can be differentiated on the basis of minor or major surgical history provided by the patient.

Amyloidosis

Amyloidosis is rare disease of difficult diagnosis that occurs due to accumulation of amyloid substance localized or systemic, and the most common sites are lungs, brain and skin. In the oral cavity, amyloid deposits are rare, but when it occurs, the tongue is usually the most involved anatomic site followed by the lip.^[9]

Investigations

OSMF does not require any investigation for confirmation, it can solely be diagnosed based on clinical presentation. But following investigation can be carried out to rule out underlying disorders and to know the etiopathogenesis.

Hematological

Nutritional deficiencies, primarily of iron and vitamins, are implicated in the etiology of OSMF. Iron is essential for the overall integrity and health of epithelia of digestive tract and its contribution to normal enzymatic functions.^[10]

Serological

IgM, IgG, IgA: are found increased in number, particularly IgG.

HLA typing: can be to done estimate familial predisposition.

β2 microglobulin: a serological marker used for squamous cell carcinoma, is found to be increased in oral submucous fibrosis, suggesting premalignant potential.

Histopathological

The gold standard for oral cancer diagnosis remains tissue biopsy with histological assessment. OSMF is characterized by the submucosal deposition of dense and hypovascular collagenous connective tissue with various number of chronic inflammatory cells.^[8]

Management

The management of an OSMF patient depends on the degree of clinical involvement. It comprises of: discontinuation of areca-nut related habit, nutritional support and antioxidants, physiotherapy, immunomodulatory drugs(steroids) for local/systemic application, intra-lesional injections of steroids,

hyaluronidase, human placental extracts etc, either singly or in combination for early/milder form of disease and surgical measures for advanced cases with post-operative nutritional support and anti-oxidants along with active physiotherapy to prevent contracture at the surgical site and recurrence. It is very essential to follow these patients closely in order to prevent recurrence and to detect any developing malignancy at it's earliest so as to manage this untoward and most common eventuality.

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