

## Oral Submucous Fibrosis- A Case Report

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### INTRODUCTION

Oral Submucous Fibrosis (OSMF) is a chronic oral mucosal disease characterized by epithelial atrophy and fibroelastic changes in the lamina propria and the submucosa of oral mucosa [1]. It leads to stiffening of oral mucosa and inability to open the mouth. In severe cases dysphagia occurs. Histologically, atrophy of surface epithelium seen [2]. It is frequently associated with leukoplakia and oral cancer therefore OSMF is suggested as a precancerous condition [3]. It has a high risk 7.6% for cancer development [1].

The use of chillies (*Capsicum annum* and *Capsicum frutescens*) is one of the possible etiological factors but recently the habit of chewing areca nut (*Areca catechu*) is proved to be the most important etiological factor for the pathogenesis of OSMF [4]. This disease is seen mostly in Indian population between 20 and 40 years of age mostly [5]. Males affected mostly than females [6]. Here we present a case report of 48 year old female patient.

### CASE REPORT

A 48 year old female patient came to our department with chief complaint of white patch on both right and left buccal mucosa since 15 days. Patient also complained of burning sensation on taking hot and spicy food. There was a history of tobacco chewing 6-8 times a day since 20 years and history of betel nut chewing 6-8 times a day since 20 years. She places tobacco and betel nut in both right and left mandibular buccal vestibule alternatively and swallows it.

On oral examination a greyish white patch was seen on both right and left buccal mucosa. Cracked mud like appearance was seen. Blanching was seen on both right and left buccal mucosa. Slightly restricted tongue movements were seen. On left buccal mucosa, lesion extends in relation to mesial

aspect of 36 to the retromolar pad area anteroposteriorly and middle third of buccal mucosa to the mandibular buccal vestibule superoinferiorly. On right side, lesion extends in relation to distal aspect of 46 to the retromolar pad area anteroposteriorly and middle third of buccal mucosa to the mandibular buccal vestibule superoinferiorly.

Lesion was nonscrapable and nontender. Based on clinical findings a provisional diagnosis homogenous leukoplakia and Oral Submucous fibrosis stage I was made.



Figure 1 Showing intraoral clinical photograph on right buccal mucosa



Figure 2 Lesion seen on left buccal mucosa

Investigations like toluidine blue staining was performed. Punch biopsy was taken from the dye uptake area. Routine hematologic tests were done which were within the normal range.

**submucous fibrosis associated with hyperkeratosis”.**



Figure 3 Showing punch biopsy

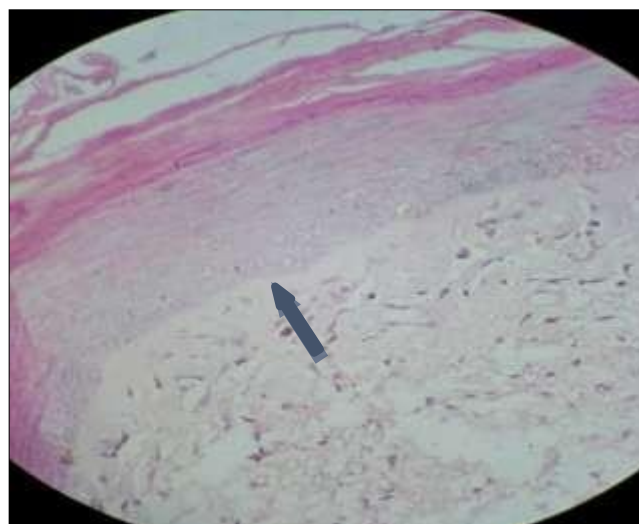


Figure 5- Microscopic features under high power view showing juxtraepithelial hyalinization (arrow)

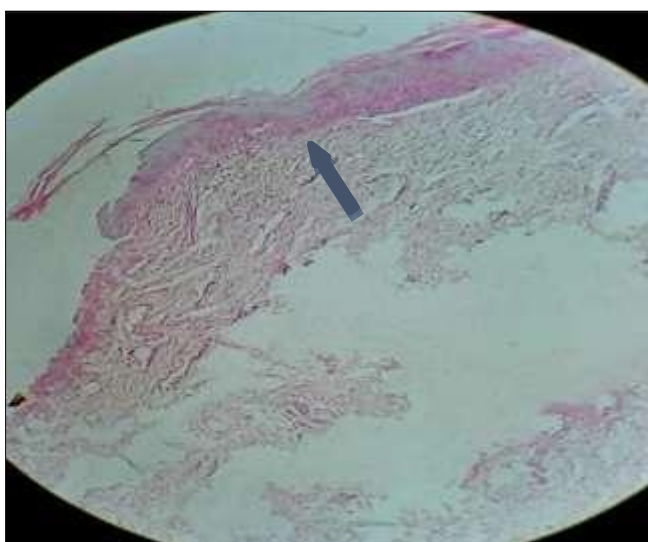


Figure 4 microscopic features under 10x showing epithelial atrophy (arrow) and underlying dense collagen fibres.

Microscopic findings on low power view revealed stratified squamous keratinized epithelium and underlying connective tissue stroma. Epithelium was irregular with shortened rete ridges. At places epithelial atrophy seen. Collagenous stroma with dense bundles of collagen fibres was seen. On high power view juxtraepithelialy a thin band of eosinophilic hyalinization was seen. Underlying Collagenous stroma showed densely packed bundles of collagen fibres with numerous fibroblasts. Diffuse mild inflammatory infiltrate was seen. The histopathological features were suggestive of **“Moderately advanced oral**

#### DISCUSSION

OSMF is a common health problem first reported by Schwartz by a term ‘atrophia idiopathica mucosae oris [2,6]. In 1953 Joshi coined the term ‘Submucous fibrosis’ [7]. OSMF is characterised by inflammation and a progressive fibrosis of lamina propria. Later difficulty in mouth opening seen because of accumulation of inelastic fibrous tissue in the juxtraepithelial region of the oral mucosa, along with degenerative changes in the muscle fibres of deeper connective tissue [8]. OSMF might be associated with leukoplakia and oral cancer [3]. Patient with habit of mawa chewing shows higher risk compared to the patients who chew areca nut without tobacco [4].

Toluidine blue has been used for decades as an aid to the identification of mucosal abnormalities of the cervix and the oral cavity. It has been valued by surgeons as a useful way of demarcating the extent of a lesion prior to excision. Toluidine blue stains deoxyribonucleic acid and/or may be retained in intracellular spaces of dysplastic epithelium and clinically appear as royal blue. Toluidine blue staining is considered to be sensitive in identifying early oral premalignant and malignant lesions. This method is used to assist selection of biopsy site, to assist margins of lesions [9]. In this case part of the

lesion stained for toluidine blue was taken for punch biopsy.

Punch biopsy adequately samples the whole of the skin needed for diagnosis of inflammatory skin diseases to establish a diagnosis of an inflammatory or neoplastic lesion [10].

For management, stoppage of habit is required. Then local hydrocortisone injection hyaluronidase, placental extract and vitamin and iron supplements have been used. Surgery is indicated in cases of severely reduced mouth opening [11].

In the study of Shruti Pandya and et al. similar to our study an increase in histopathological grading was found with severity and duration of habit and no significant correlation was found between clinical staging and histopathological grading [12].

## CONCLUSION

OSMF is a precancerous lesion requires close monitoring and follows up. Various treatment modalities are present for different stages of disease. Correct diagnosis and treatment planning is important for management of disease.

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