

## A CASE REPORTING A PATIENT OF ORAL SUBMUCOUS FIBROSIS

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### Abstract

Oral submucous fibrosis (OSMF) is a pre-malignant lesion of the buccal mucosa caused by chewing betel quid. It results in the progressive inability to open the mouth. Patients with OSMF require anesthesia for trismus correction, resection and reconstructive surgery for coexisting oral malignancies or other unrelated surgeries. OSMF causes trismus, which results in difficulty in laryngoscopy and intubations of the trachea. A case of oral submucous fibrosis occurring in a 35 year old man is presented.

**Keywords:** OSMF, Areca-nut, Malignancy, Pre-malignant

### 1. Introduction:

Oral submucous fibrosis (OSMF) is a pre-malignant lesion of the buccal mucosa caused by chewing betel quid. It results in progressive inability to open the mouth. OSMF causes difficulty in laryngoscopy and intubation of the trachea<sup>1,2</sup>. Patients with OSMF require anesthesia for trismus correction, resection, and reconstructive surgery for coexisting oral malignancies or other unrelated surgeries. Patients with oral malignancies and OSMF had increased requirement for fiberoptic endotracheal intubations compared with those without OSMF (44.4%)<sup>3</sup>. Ram Nathan has suggested that OSMF may be a mucosal change secondary to chronic iron deficiency calling it an Asian analogue of sidero-penic dysphagia. It has also been suggested that it is a nonspecific inflammatory reaction to trauma yet the exact aetiology is unknown<sup>4</sup>. Cases of OSMF have also been reported in individuals of South Asian origin living outside the sub-continent but it is extremely rare in White populations<sup>4</sup>. The present report describes a case of OSMF presenting in a 35 year old male of India<sup>5</sup>.

### 2. Case Report:

A 35 year old man came to us with difficulty in opening the mouth since 2 year. He started having burning sensation over the mucous membrane on right side with spicy food and smoking 1 years back. Since then he was having restricted movements of the cheek on right side. Patient was a chronic smoker for the last 20 years and was smoking about 15-20 cigarettes per day. There was no history of any other skin lesion or other mucosal involvement. On examination, the mucous membrane on right side (Fig. 1) was

smooth, shiny and pale while on left side it was normal. On palpation, the mucous membrane of right cheek was firm and there was a fibrous band extending from the buccal aspect of molar area upto the angle of mouth. Oro-dental hygiene was poor but all the teeth were intact. The movements and opening of the mouth was reduced on the right side. All the routine investigations were normal. Biopsy from right buccal mucosa showed atrophy of the stratified squamous epithelium. In the juxta-epithelial part there were present fibrous bands.



**Fig. 1 Oral Mucosa Showing Fibrous Bands**

### 3. Discussion:

OSMF is a precancerous condition of the upper airway that occurs in an estimated 2.5 million people worldwide<sup>6</sup>. In Central, Southern, and Southeast Asia, the abuse of smokeless tobacco popularly involves the chewing of betel quid or pan-supari. This is a combination of betel or Areca nut (fruit of the Areca palm tree), betel leaf (Piper betel), tobacco and slaked lime. The

mixture is held adjacent to the buccal mucosa and slowly chewed over a long period of time. It produces effects similar to those of smoking tobacco and is addictive<sup>7</sup>. OSMF typically affects the buccal mucosa, lips, retromolar areas, soft palate and occasionally the pharynx and the esophagus. Early lesions appear as a blanching of the mucosa, imparting a mottled, marble-like appearance whereas later lesions demonstrate palpable fibrous bands that render the mucosa pale and thick and stiff. It results in progressive inability to open the mouth, pain, burning sensation, dysphagia and hearing loss. The precancerous nature of OSMF and the reported occurrence of SCC in OSMF (2%–30%) emphasize the importance of an earlier and more aggressive surgical approach toward OSMF and long-term follow-up on a regular basis. The younger the age the more rapid is the progression of the disease. All the available treatments give only symptomatic relief, which too is short lived. Areca nut chewing, tobacco smoking and hypersensitivity to chilies are the precipitating/causative agents in genetically predisposed patients<sup>8</sup>. So habit restriction should be there in clinically suspected cases, to retard the disease process and as it is a pre-malignant condition, there is need for careful observation and follow up in each and every case. Irritant components like capsaicin are also important factor in this. Sirsat and Khanolkar investigated the effect of capsaicin, a component of chili 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>9</sup>. In 1919 Paterson and Brown-Kelly independently described the condition of chronic dysphagia and mucosal atrophy in women who had chronic anaemia – this was later termed sidero-penic anaemia or Brown-Kelly-Paterson Syndrome and has the potential for cancerous change in the oro-pharynx<sup>10</sup>.

#### Conclusion:

OSMF described in the present case was difficult to manage in part caused by the continuous tobacco consumption and poor oral hygiene maintenance. In addition he was found to be a poor attender and this made monitoring and managing the earliest stages of the condition difficult. It seems inevitable that OSMF is likely to worsen since he would not appear to be able to stop the ingestion of areca-nut. If the condition does worsen, he may in the long term need

surgical intervention with grafting and there is always the possibility of malignant change and therefore close monitoring of his oral mucosa is essential.

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