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Oral Submucous Fibrosis – A case Report

Pankhuri Nigam * ,Krishnadeo Prasad ,Jalaj Tak and Anju Sinha
Dept. of Oral Pathology
Shree Bankey Bihari Dental College, Ghaziabad ,U.P, India
*Corresponding Author: Pankhuri Nigam

Abstract
Oral submucous fibrosis (OSMF) is characterized by excessive deposition of collagen in the connective tissue leading to secondary changes in epithelium. It has multifactorial etiology. This case reports Oral Submucous Fibrosis occurring in a 28 year old male with a history of betel quid chewing. Various treatment modalities are proposed such as nutritional support, immunomodulatory drugs, physiotherapy, surgical treatment and laser but there is no fixed treatment protocol. OSMF requires prompt treatment due to its malignant potential.
Key words : OSMF, Oral Submucous Fibrosis, Tobacco, Betel quid

Introduction
Oral sub mucous fibrosis (OSMF) is a chronic disease of insidious onset featuring the deposition of fibrous tissue in the submucosal layer of cheek, lips, palate, pharynx, fauces and oesophagus. The underlying muscles of mastication may be affected.[1]The first clinical sign of OSF is blanching of the mucosal tissues. The presence of the palpable fibrous bands contributes to the diagnosis.[2]
Early lesion presents as blanching and marble like appearance of buccal mucosa and limitations of mouth opening. As the lesion progresses, palpable fibrous band running vertically in buccal mucosa and in circular fashion are demonstrated leading to variable severity of trismus.[3]
Although the etiology is not very clear but a definitive association of the same with areca nut (Areca catechu) consumption in variable forms has been established by many studies.[4]
It affects people of all age groups and both the sex but is more prevalent in males in second and third decade. The malignant potential for oral submucous fibrosis is considered high.[4]

Case Report
A 28 year old male patient reported to department of Oral Pathology, Shree Bankey Bihari Dental College, Ghaziabad with the chief complaint of burning sensation of the oral cavity while having food since one year and restricted mouth opening since 2 – 3 months. Patient had a history of tobacco chewing 1 packet per day since ten years. Betel quid time reported was 10 minutes. There was no history of skin lesion or any other mucosal involvement. On examination blanching was seen on left(Figure 1) and right buccal mucosa. Palpation revealed vertical fibrous bands on both right and left buccal mucosa from maxillary vestibule to mandibular vestibule. Circumoral fibrous bands were present on upper and lower labial mucosa. Mouth opening was reduced to 20 mm. Provisional diagnosis was Oral Submucous Fibrosis. Incisional biopsy was performed using laser (Figure 3) and histopathological examination of the specimen was done.(Figure 4)
Histopathological examination revealed parakeratinised epithelium showing atrophy in some areas along with loss of rete ridges. Connective tissue showed numerous bundles of collagen fibres with subepithelial hyalanisation in few areas. Few chronic inflammatory cells and endothelial lines blood vessels were seen. Cut section of muscle tissue was seen lying near the epithelium. Correlating the clinical and histopathological findings the diagnosis made was Moderately advanced Oral submucous fibrosis.
Patient was counselled for habit cessation and prescribed multivitamins. Patient was also advised to undergo laser treatment for excision of fibrous bands.

Discussion
OSMF is regarded as a collagen metabolic disorder with an overall increased collagen production and decreased collagen degradation resulting in increased collagen deposition in the oral tissues, and fibrosis due to alkaloid exposure. [5]
The association of this lesion with the development of oral cancer highlights the importance of
education in reducing OSMF cases. The possible precancerous nature of OSMF was first described by Paymaster, who observed the occurrence of squamous cell carcinoma in one third of patients with OSMF.[6] Subsequent studies have demonstrated that the occurrence of carcinoma varies in OSMF from 2–30% .[2]
In central southern and Southeast Asia, 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.[7]
Many experimental studies have shown a strong association between OSMF and areca nut chewing. A clear dose-dependent relationship was observed for both frequency and duration of chewing areca nut (without tobacco) in the development of OSMF.
Different treatment modalities have been used for management of OSMF including medicinal and surgical therapy separately or in combination. However, the success rate as reported in various articles differ greatly and remain controversial. In grade III and IV OSMF cases, surgical therapy is considered as treatment of choice. [3]
Differential diagnosis of OSMF is systemic sclerosis which is an autoimmune connective tissue disorder. The changes of OSMF are similar to those of systemic sclerosis (scleroderma) but limited to oral cavity.

Conclusion

OSMF is a precancerous condition and many studies have reported its association with cancer. This case highlights the importance of timely intervention and habit cessation to reduce the morbidity associated with the disease. Biopsy from suspicious looking areas should be done promptly to detect dysplasia or squamouc cell carcinoma. Since this disease is widely prevalent among all age groups and gender, patient counselling and public awareness plays an important role in preventing the occurrence of this disease.

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FIGURES

Figure 1: Left Buccal Mucosa

Figure 2: Right buccal mucosa

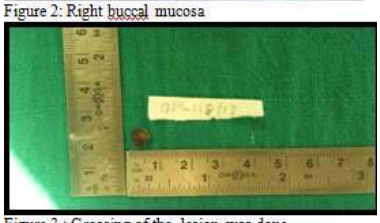

Figure 3 : Grossing of the lesion was done.

Figure 4: Histopathology revealed parakeratinised epithelium with loss of rete ridges and numerous bundles of collagen fibres with sub epithelial hyalinization. Few chronic inflammatory cells and blood vessels can be seen.