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RESEARCH ARTICLE

ORAL SUBMUCOUS FIBROSIS: A CHRONIC POTENTIALLY MALIGNANT DISORDER IN A 75-YEAROLD INDIAN MAN

Rebecca, G., Pagatur Nitish, *Veenila, P., Sambale Shruthi Patil and Harshit, B.

Final year BDS student, Tirumala Institute of Dental Sciences

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Corresponding author: Veenila, P.,

ABSTRACT

The oral Submucous Fibrosis is a long-term debilitating condition of the oral mucosa which is known to be caused by the consumption of Areca nut. It affects the people of Southeast Asian origin more prevalently. It is a premalignant disease and its malignant transformation rate was found to be as high as 7.6% and there is a relative risk of development of oral cancer. Therefore, it is crucial to diagnose the disease at an initial stage for a proper and reliable treatment planning and to improve the person's quality of life. In this article, a case of Oral Submucous Fibrosis in a 75-yearold male patient who received medical attention in our institution is reported.

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INTRODUCTION

Potentially Malignant Disorders [PMDsl are a group of disorders which show a risk of malignancy being present in a lesion or a condition at the time of initial diagnosis. These more frequently affect the oral cavity. Oral Submucous Fibrosis [OSF] is a chronic progressive irreversible collagen disorder causing fibroelastic changes in the lamina propria. Clinically, it is characterised by a persistent submucosal fibrosis leading to the difficulty of mouth opening (trismus). As it is a precancerous condition. when and if left untreated, it progresses to a malignant condition. In the previous studies, it has been reported that Oral Submucous Fibrosis eventually turns into malignancy after 3-16 years of initial diagnosis. Hence, early detection and intervention are crucial to halt the disease progression and prevent the potentially malignant transformation.

CASE PRESENTATION

A Male patient aged 75 years reported to our department with a chief complaint of difficulty in the mouth opening for two months. He presented with a history of restricted mouth opening, inability to eat and burning sensation on eating spicy foods. He gave a habit history of beetle quid chewing 6-7 times a day for the past 7 years and has refrained with the onset of the condition. On inspecting the oral cavity, blanched buccal mucosa extending from retromolar to the premolar areas antero-posteriorly and approximately 3mm above and below the line of occlusion superoinferiorly with generalized tobacco stains on all the teeth were sighted. A decreased Maximum Inter Incisor Distance [MIID] of 2.2cm was recorded. On palpation, rigid mucosa with vertical fibrotic bands were palpated on the buccal mucosa. Pertaining to the clinical observations, a provisional diagnosis of OSMF was made.

Figure 1. Fibrotic bands seen on the left buccal mucosa

Figure 2. Fibrotic bands seen on the right buccal mucosa

Figure 3. 75-year-old patient with

Figure 4. Improved mouth opening in the patient

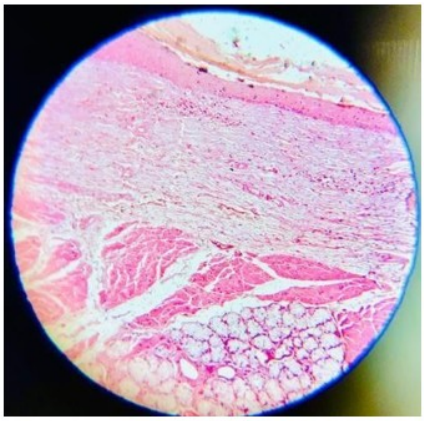

Figure 5. Stratified squamous parakeratotic epithelium atrophied with loss of rete ridges patient

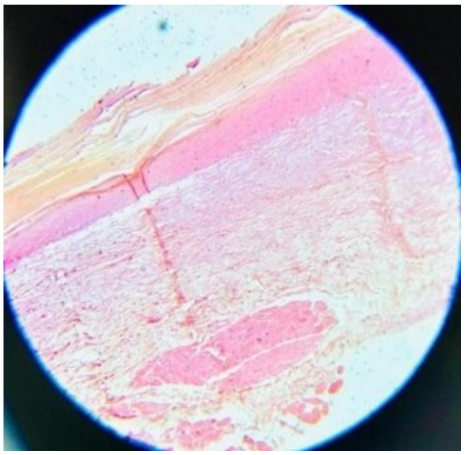

Figure 6. Dense bundles of collagen fibres in the connective tissue

INVESTIGATIONS

Furthermore, an incisional biopsy was performed and histopathological findings disclosed the presence of atrophic stratified squamous epithelium with the loss of rete ridges at some areas and flat epithelial-connected tissue interface.
Numerous dense bundles of collagen fibres were noticed in the underlying connective tissue. Mild inflammatory infiltrate was observed and these features were suggestive of moderately advanced Oral Submucous Fibrosis.

DISCUSSION

Oral cancers are known to develop in precursor lesions known as premalignant disorders [PMDs] by the world health organisation [WHO]. Among Indians, premalignant disorders are widespread and these are typically due to tobacco, usually the smokeless form. If left untreated, Squamous Cell Carcinomas [SCCs] will develop from these existing PMDs. The Oral Submucous Fibrosis is an insidious scaring disease associated with the use of betel products [paan]. Betel and paan consumption are common in Southeast Asia and the Western Pacific but is now advancing in Europe and North America. It is usually seen in young adults and is potent in males. This condition generally manifests with dispersed involvement of the oral cavity, pharynx an upper oesophagus that is clinically observed as a blanched mucosa having no elasticity. The prevalence rate of OSMF is 0.2 – 0.5% with higher percentage reported from the Southern states of India. It does not regress with cessation of habits and the lesion may remain static or become severe. According to Pillai et al, OSMF has a multifactorial aetiology which includes consumption of Areca nut, nutritional deficiency, genetic factors and autoimmunity. It is considered to be a collagen disorder which is characterized by increased fibrosis of oral mucosa due to increased buildup of collagen resulting from the chewing of Areca nut. Males are more frequently affected by this lesion with buccal mucosa being the most common site of involvement. The signs of this lesion are primarily due to inflammation which include burning sensation and xerostomia along with blanching of oral mucosa with decreased mouth opening and difficulty in mastication in long standing cases. In this case, the patient complained of difficulty in mouth opening and mastication with burning sensation that aggravated on eating spicy foods. On palpation, fibrotic bands were detected along with blanching of the oral mucosa. Limited mouth opening was predominant. On performing the biopsy of the lesion for

histological observations, the findings included atrophic epithelium with juxta - epithelial hyalinization and dense collagen bundles confirming the diagnosis of OSMF. A treatment that mainly focused on habit cessation followed by intralesional corticosteroid injections, nutritional supplements and physiotherapy was advised. A follow-up review was arranged for about 6 months and a decrease in the clinical signs was observed. The mouth opening which was about 2.2cm while diagnosing was gradually increased to 3.4cm after 6 months. Therefore, it is important to diagnose and treat the potentially malignant disorders at early stages to prevent the risk of malignant transformation. Paymaster was the first person to observe the occurrence of Oral Squamous Cell Carcinomas [OSCCs] in one-third patients of OSMF and the first person to describe the nature of Squamous Cell Carcinomas.

CONCLUSION

Unlike the other PMDs, OSMF has a higher malignant transformation rate associated with the habit of Areca nut chewing and is considered as an initiating factor. If left untreated in the initial stages, it has a potential risk of turning into an OSCC. Therefore, an early diagnosis and patient counselling with appropriate treatment strategies can improve the condition.

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