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Case Report

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Tale of caution-need for frozen section biopsy in the management of oral sub mucous fibrosis

Abstract

Oral Sub mucous fibrosis (OSMF) is a precancerous condition with a high malignant potential, which is often overlooked during the management of this condition. The most striking feature of OSMF is reduced mouth opening due to which, there are limitations in performing a proper clinical and Histo pathological examination. We report a case of OSMF seeking treatment for severe pain due to multiple dental caries and the importance of frozen section intra-operatively in the management of Oral Sub mucous Fibrosis.

Keywords: frozen section, oral sub mucous fibrosis, exodontia, trismus, histo pathology, maxillofacial surgery

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Abbreviations: OSMF, oral sub mucous fibrosis; WHO, world health organization

Introduction

Oral Sub mucous Fibrosis (OSMF) is a chronic, progressive, debilitating precancerous condition with a high malignant transformation potential of 7–30 percent.[1] OSMF is always associated with juxta epithelial inflammation followed by fibrotic changes in the oral mucosa leading to stiffness of the oral mucosa and trismus. This condition is multi factorial in origin with high predilection for areca nut/betel quid consumers, a habit found most frequently among the South Asian population.[2] World Health Organization (WHO) definition of precancerous condition "a generalized pathological state of the oral mucosa associated with a significantly increased risk of cancer"[3] highlights the distressing nature of OSMF as a precancerous condition. The problem is compounded due to limited mouth opening which reduces the possibility of early diagnosis of cancer, clinically as well as histo pathologically.[4] Over the past six decades numerous medical and surgical techniques have been described in the management of OSMF, to provide symptomatic relief and increase mouth opening; however its malignant potential is often neglected during its management, which may prove to be a fatal error.

Case report

A 33year old male reported to the department of oral and maxillofacial surgery with the chief complaint of severe tooth pain in mandibular posterior region since 1 month. On examination patient had mouth opening of less than 5mm (Figure 1) with flecks of scrap able white patch on the corner the mouth bilaterally indicating a fungal infection. There were no palpable cervical lymph nodes. Panoramic radiograph revealed multiple dental caries with pulpal involvement along maxillary and mandibular posterior teeth bilateral (Figure 2). Fungal infection saw resolution with Fluconazole 50mg once daily for 2weeks. Intraoral endoscopic examination revealed no mucosal ulceration or abnormal growth. Incisional biopsy was performed on buccal mucosa after toluidine staining. The histopathology reports were negative for any dysplastic changes. Treatment plan was to extract the decayed teeth to relieve his pain and improve mouth opening by bilateral mucosal fibrous band incision, bilateral Coronoidectomy and surgical reconstruction with bilateral nasolabial flap. Intra-operatively, the fibrotic band incision was carried out, increasing the mouth opening thus facilitating extraction of the carious teeth. However, close inspection of the surgical site on the right posterior muco buccal fold led to suspicion of malignant changes (Figure 3). An intra-op frozen section biopsy was performed, which confirmed grade – I carcinoma, thus differing the treatment plan and also leading to a timely diagnosis of carcinoma of buccal mucosa. The right buccal mucosa was left raw, while left buccal mucosa was closed with collagen membrane. Patient was then referred to specialized cancer centre for further management of the malignancy.

Figure 1 Mouth opening of less than 5mm.

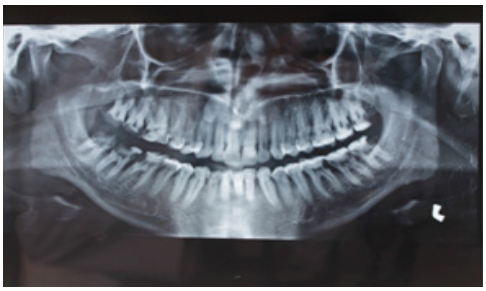

Figure 2 Panoramic-radiograph showing multiple carious teeth with pulpal involvement bilaterally in the mandible.

Figure 3 Site of suspicion along right posterior buccal mucosa.

Discussion

OSMF is a chronic debilitating condition, the most striking feature of this condition is progressive reduced mouth opening due fibrosis of the oral mucosa. Even more disturbing feature of Oral Sub mucous Fibrosis is its high malignant transformation rate, which has often been neglected during its management. With the present knowledge and options, the aim of management for OSMF is towards providing symptomatic relief, as the disease process itself is not reversible once initiated.[5] Various surveys conducted from 1980s to 2000s, state that almost 20-40 per cent of population above 15years of age consume areca nut in some form or other in India.[6] Statistical figure put more than 5 million people affected by the disease in the Indian subcontinent alone in 2002.[7] This figure is expected to be even higher at present, which makes OSMF a serious matter of public health concern, as such its malignant transformation should always be in mind during its management. As with our case where the mouth opening were less than 5mm and the cases of OSMF falling under functional classification of M4, as proposed recently by Chandramani B et al.,[8] in 2012, it may be difficult to perform biopsy in the posterior region of the oral cavity, as well as to visualize the mucosa for any suspicious change due to limited access. In these cases, frozen section (provides rapid intra-operative histo pathological diagnosis) becomes a valuable tool to rule out any dysplastic or malignant transformation once the mouth opening is improved and before any further definitive surgical management is carried out. Not just surgical correction to improve mouth opening, but long term follow up becomes very important in view of its high malignant transformation rate. Caution must be exercised during intra-operative and post-operative management of patients with Oral Sub mucous Fibrosis. It may just prove beneficial to perform an intra-operative frozen section in case of any suspicious change observed intra-operatively, even if the pre-operative biopsy was negative for malignant change in view of field cancerization.

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Conflicts of interest

The author declares that there is no conflict of interest.

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