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Case Report

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DENTURE STOMATITIS: A CASE REPORT

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ABSTRACT

Denture stomatitis is an inflammatory reaction of the oral mucosa associated with the use of partial or complete dentures and has multi-factorial etiology. Ill-fitting dentures and poor oral hygiene are most common etiological factors cited for denture stomatitis. Here, we present a case of 75 year old female patient who reported with the chief complain of burning sensation in mouth since 8 - 10 months. Intraoral examination revealed inflammatory hyperplasia of maxillary alveolar mucosa. Patient was provisionally diagnosed with denture stomatitis. Confirmation of diagnosis was done by brush biopsy which revealed class II atypical.

Keyword:. Stomatitis, oral mucosa, maxillary alveolar mucosa.

INTRODUCTION

The soft tissues under dentures may undergo histopathologic changes, such as inflammation and degeneration or morphologic changes such as traumatic ulceration and hyperplasia leading to denture stomatitis.[1] Denture stomatitis also called as denture sore mouth is a term used to describe inflammatory process of the oral mucosa that bears removable partial or complete denture. These changes are found under complete or partial dentures and are characterized by erythema, edema, ulceration and hyperplasia of the mucosa of both the jaws, but more frequently in the maxillary jaw. The lesion has been graded clinically into three types by Newton[2] in 1962:

Type I: pin-point hyperemic lesions (localized simple inflammation).

Type II: diffuse erythema confined to the mucosa contacting the denture (generalized simple inflammation).

Type III is an inflammatory papillary hyperplasia with inflammation of varying degree.

The institutionalized patients wearing partial or complete dentures shows increased susceptibility to denture stomatitis because of the continuous wearing of dentures; often neglected oral hygiene, predisposition to nutritional and immunological deficiencies; systemic diseases, use of antibiotics or corticosteroids, prevalence of xerostomia and general debilitation.[3]

Denture stomatitis is the most common mucosal lesion in complete denture wearers, and its etiology is multifactorial. Commonly cited factors include mechanical irritation from ill fitting dentures, maxillary denture relief chambers, continuous and nocturnal denture wearing, poor oral and denture hygiene, candida albicans infection, blocking of the minor salivary glands, chemical irritation, elevated temperature under denture, specific systemic diseases, and immunologic reactions. Most patients are unaware of the condition but occasionally complain of a painful sensation, burning mouth, dryness, or bad odour.[1]

CASE REPORTA 75 year old female patient reported to Department of Oral Medicine and Radiology, Modern Dental College and Hospital, Indore with the chief complain of burning sensation in mouth specially upper jaw since 8-10 months and also complained of poorly fitting denture. Medical history of patient revealed that she was hypertensive and was on antihypertensive medication (diuretics and beta blockers) since 18-20 years. On intraoral examination both maxillary and mandibular arches were found to be completely edentulous. Patient got her teeth removed due to loosening of teeth 15-16 years back and gave history of wearing dentures since last 10-12 years. Maxillary alveolar ridge mucosa was severely inflammed (Fig-1) with erythematous in appearance and painful on palpation. On examination of maxillary denture was found to be ill fitting. Considering her case history and based on intraoral examination a provisional diagnosis of denture stomatitis was given.

Brush biopsy was also done and histopathologic report revealed in low power, few individual epithelial cells dispersed in background of RBC's and inflammatory cells. In high power, polygonal and flat epithelial squames showing minor atypia like cellular and nuclear pleomorphism. Inflammatory cells like neutrophils and lymphocytes were evident. No evidence candida hyphae noted. The overall features were suggestive of class II atypical.

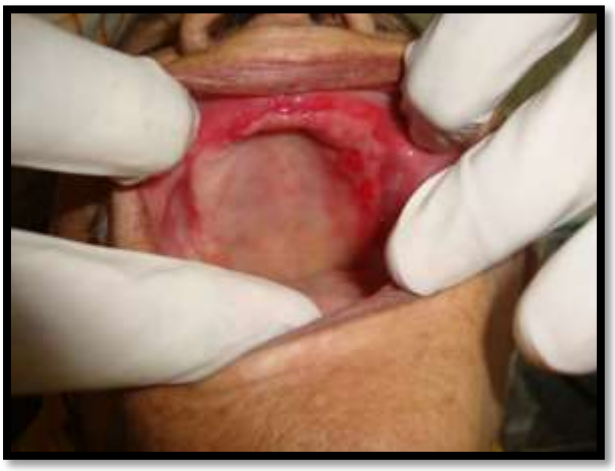
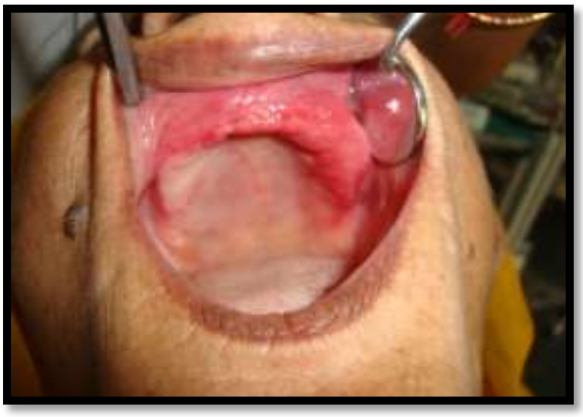


Fig 1: Maxillary mucosa showing denture stomatitis

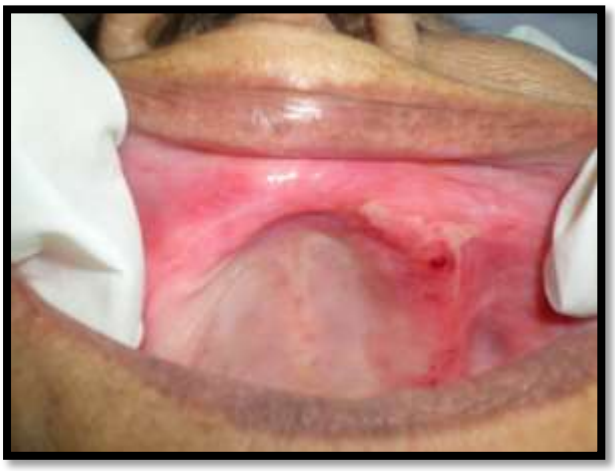
Patient was asked to discontinue wearing of her denture and was also advised for re-fabrication of denture. Patient was instructed to maintain meticulous oral hygiene. She was also prescribed vitamin B-complex (one capsule per day for one month) and topical application of anti-inflammatory and analgesic gel over maxillary mucosa was also advised. She was asked to report after seven days for follow up. Patient responded well to the prescribed treatment and on follow-up visits she showed relief in signs and symptoms (Fig 2). She was asked to continue the treatment prescribed and report after one week. On subsequent visit the lesion was completely healed (Fig 3). Patient was referred to Department of Prosthodontics for necessary correction of ill fitting denture.



(Fig 2- First follow-up visit after one week showed reduced inflammation and erythema)

DISCUSSION

Dentures produce ecologic changes in the oral mucosa that facilitate the proliferation and the colonization of microorganisms, especially candida. Therefore, Denture Stomatitis is a common lesion in denture wearers.[4] Denture stomatitis is multifactorial in nature, with trauma being the major independent cause. The trauma may originate from ill- fitting or continuously worn dentures, or dentures that do not have correct vertical or horizontal dimensions of occlusion.[1] Various predisposing factors for denture stomatitis includes microbial plaque, ill fitting denture, traumatic occlusion, denture integrity (fracture, crack), nocturnal denture wearing, poor oral and denture hygiene, vertical & horizontal dimension of occlusion,allergy to denture base materials, residual monomer, parafunctional habits, xerostomia, quality of saliva, smoking, medications, dietary factors and any systemic disease and condition affecting host's defense mechanism. It is commonly believed that interplay of many of these factors is the pathogenesis of the denture stomatitis. The extent of the interplay of these factors is still not fully understood. Ill fitting denture and plaque formation on the tissue fitting surfaces of dentures are considered as most important etiological factors of Denture Stomatitis.[5] Due to its multi-factorial etiology, the management and treatment of denture stomatitis differs depending on the causes of diseases. Several treatment procedures have been used, including meticulous plaque control, removal of denture at night, use of topical antifungal agents, correction or re-fabrication of ill fitting dentures. Recent research has suggested the use of denture lining materials containing antifungal agents, antiseptic mouthrinses, and microwave irradiation for the treatment of denture stomatitis. Poor denture hygiene and ill fitting dentures are considered to be the main predisposing factor for the occurrence of denture stomatitis. Proper adaption of denture should be considered for the management of denture stomatitis.[5]



(Fig 3- Second follow-up visit after two weeks showed completely healed lesion)

The prevalence of denture stomatitis in lower jaw is low probably due to washing and cleansing action of saliva. In present report the inflammation was completely healed after replacement of ill-fitting denture and on administration of medications.

CONCLUSION

It is concluded that in order to minimize denture induced stomatitis, denture wearers should be advised to clean their mouth and dentures regularly. They should wear their dentures during day time only, and should be recalled for the examination of oral cavity and dentures.

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