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ABSTRACT:

Epulis fissuratum is a benign tumor like inflammatory hyperplastic growth which occurs on the mucosa along the borders of an ill fitting full or partial removable denture. If ulcerated, it can mimic oral squamous cell carcinoma. The treatment includes surgical removal of excess fibrous tissue and remodelling or reconstructing the denture suitably, ensuring better adaptability to the ridges. This case report describes a 55 year old male patient with characteristic clinical features of denture induced inflammatory hyperplasia.

Key words: Epulis fissuratum, ill fitting denture, inflammatory hyperplasia

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INTRODUCTION:

One of the most common tissue reactions to a chronically ill fitting denture is the occurrence of hyperplasia of tissue along the denture borders [1]. This proliferation may be the result of resorption of alveolar ridge, leading to over extension of the denture borders causing chronic irritation to the oral mucosa in the sulcus area. Characterised by slow development of elongated rolls of tissue in the mucolabial or mucobuccal fold area into which

the denture flange conveniently fits and is often asymptomatic unless ulcerations occur in the base of the fold. Epulis fissuratum (EF) can be treated conservatively or surgically based on the size of the lesion [2].

CASE REPORT:

A 55 year old, male patient reported to the outpatient department [OPD] with a complaint of missing tooth in the maxillary front region and desired replacement. The upper right

central incisor was mobile and fell off by itself two months back. He is a partial denture wearer on upper arch and complete denture on lower arch since 5 years. Intra oral examination showed completely edentulous lower arch and partially edentulous upper arch with only two teeth remaining, maxillary right lateral incisor and maxillary left central incisor, which were

having grade 1 mobility. A sessile exophytic growth was also seen on the labial mucosa of the mandibular arch in the anterior region and extending symmetrically on either side of the midline [Figure 1a]. The tissue was split longitudinally all along its length forming two folds and the denture fitted comfortably in between the folds [Figure 1b].



Figure 1: A: Exophytic growth in the mandibular anterior region with two folds and a solitary ulcer in the centre. B: The lesion comfortably fits in between the two folds.

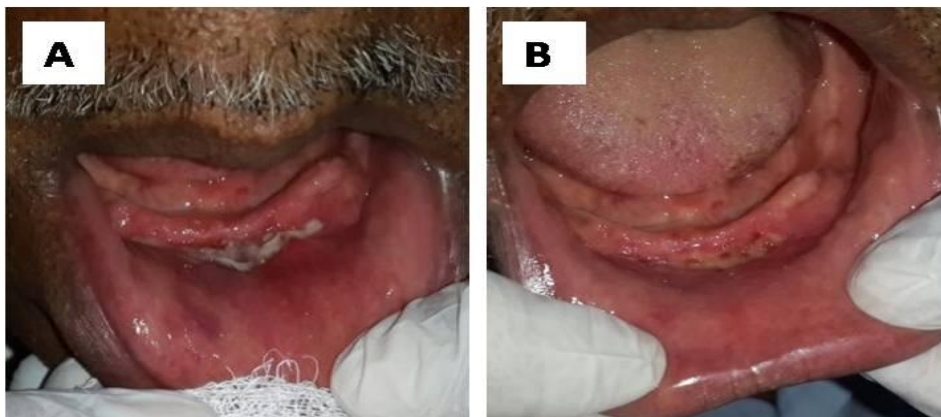


Figure 2:- A- Immediately After surgical excision. B- After 7 days

The superficial fold towards the labial mucosa was smaller measuring 1.5 x 0.5 cm and the fold towards the alveolar ridge was larger measuring 2.5 x 1.5 cm in size. The surface of the tissue was smooth and the colour and texture was same as that of the surrounding mucosa. In the centre of the two folds was a solitary ulcer about 1.0mm in diameter. The patient was not aware of the growth or the ulcer. On palpation the tissue was firm and non tender. On the basis of history and clinical examination a provisional diagnosis of denture induced inflammatory fibrous hyperplasia/ EF was made. The patient was instructed to discontinue the use of the denture. As the ulcer was a healing one no treatment was suggested. The patient underwent extraction of the two teeth and excision of the exophytic tissue [Figure 2a and 2b] and fabrication of new dentures. The excised tissue was sent for histopathologic examination.

DISCUSSION:

The term epulis, first described by Virchoff, has its origin in Greek language (epi on; oulon gum) describing something appearing on the gingival gumline [2]. EF is a common sequela of wearing ill fitting dentures, characterized by hyperplasia of the mucosa due to contact with denture border [3]. Other names used to describe the lesions are - Denture induced inflammatory fibrous hyperplasia, redundant tissue, denture injury tumor, denture epulis [4].

The lesion has a strong female predilection and is seen in age group of 30-60 years, with a peak incidence in the sixth decade [5]. Majority of lesions are seen in the maxilla than in mandible. Anterior portion of jaws is affected more often than posterior area. The strong female predilection is thought to be due to various factors like more women are denture wearers than men due to cosmetic reasons, they have a longer life span than men and hormonal deficiencies can enhance formation of epulis especially after menopause [6]. It is seen more in the maxilla than the mandible because the area of mucosa covered by a denture is greater in the maxilla than the mandible so the pressure being inserted to the underlying mucosa is higher in maxilla. There are some contradictory results, such as those in the De Baat et al. [5] study that shows that the lesions are more in the mandible than the maxilla.

In the present case the EF is seen in a male patient in the same age group as mentioned above and in the mandibular anterior region. The lesions may be single or numerous composed of flaps of hyper plastic tissue. Presence of inflammation is variable and if present is seen in the bottom of deep fissures. In some cases ulceration may occur. Diagnosis can be made based on the history and clinical examination of the patient. However after surgical excision histopathological examination is mandatory to yield a confirmatory diagnosis

as there are many lesions that may appear in the area which can have a more serious outcome [7].

Histopathologic feature of epulis fissuratum include excessive bulk of fibrous connective tissue covered by a layer of stratified squamous epithelium [7]. Connective tissue is composed of bundles of collagen fibres, with few fibroblasts or blood vessels unless there an active inflammatory reaction is present. Lesions with almost similar clinical features are pyogenic granulomas, fibromas, peripheral giant cell granulomas, peripheral ossifying fibroma, neurofibroma, oral squamous cell carcinoma [4]. Pyogenic granulomas are purple-red nodular inflammatory hyperplastic lesion usually pedunculated, again seen more commonly in females, on the maxillary anterior region especially on the gingiva due to chronic irritation [8] It bleeds on slightest provocation, but is painless unless ulcerated and has a rapid growth pattern unlike epulis fissuratum and is not associated with denture wearing and also histologic picture shows granulation tissue.

Fibromas are common benign soft tissue neoplasms more commonly seen in the buccal mucosa in the line of occlusion, though can be seen on other sites also including gingival [7]. They appear as elevated nodules of normal colour with a smooth surface and a sessile or occasionally pedunculated base. It is a slow growing lesion more common in females seen in the third, fourth and fifth decades. Histologic features include bundles of collagen fibers

interspersed with fibroblasts and blood vessels. Here the distinction between hyperplasia and neoplasia may not be very clear cut in all the cases.

Peripheral giant cell granuloma/epulis is a reactive lesion seen more commonly in females in the fourth to sixth decade of life occurring in the mandibular gingiva or alveolar process anterior to molars as a sessile or pedunculated mass [9]. Surface has a dark red or vascular appearance and ulcerations may be seen. Histologic appearance is characteristic here, with presence of multinucleated giant cells. In edentulous patients peripheral giant cell granuloma can cause superficial erosion of bone seen as peripheral cuffing in a radiograph.

Peripheral ossifying fibroma are focal gingival over growths seen anterior to the molars, in young females [10]. The surface of the lesion smooth and is of the same colour as surrounding mucosa. Characteristic feature seen in the histopathologic examination is the presence of multiple calcifications, which is the differentiating feature of the lesion.

Neurofibroma is a benign neoplasm of nerve tissue origin. Oral lesions are rare, but when present, are seen to occur on the buccal mucosa, palate, alveolar ridge, vestibule and tongue, as discrete non ulcerated nodules having same colour as the surrounding mucoa [11]. Histologic features of neurofibroma are considered to be virtually diagnostic with myxomatous peripheral nerve tissue within the

perineural sheath scattered within a collagen rich matrix. Oral squamous cell carcinoma is the most common malignant neoplasm of the oral cavity occurring at any intra oral site [12]. It can be seen as rapidly growing mass with ulcerations and indurations of the margins, affecting men more commonly than women. Based on histologic findings it can be well differentiated, moderately differentiated and poorly differentiated. Treatment includes conservative or surgical management depending on the duration and size of the lesion [13]. Conservative management includes repairing the denture, relining it or fabricating a new denture if it is ill fitting. And surgical managements include the use of surgical scalpel, the electro surgery or laser techniques (a carbon dioxide laser, Erbium:YAG laser, Neodymium-YAG laser, or diode laser) [2]. Prognosis is usually good as long as the causative factor is removed successfully.

CONCLUSION:

Epulis fissuratum is a common lesion seen in elderly people associated with chronic trauma due to ill fitting dentures. Hence care should be taken while fabricating dentures and frequent review should be done to check for ridge resorption. Proper hygiene of the denture should be maintained by the patient. Surgical excision and biopsy of the tissue is recommended to rule out the other pathologies

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