NOTA CLÍNICA

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Denture induced fibrous hyperplasia a case scenario

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KEYWORDS

Denture induced hyperplasia.
Epulis fissuratum.
Inflammatory fibrous hyperplasia.

Abstract:

Denture-induced hyperplasia is a reactive oral hyperplasic mucosal lesion caused by chronic ill-fitting dentures. Clinically denture induced fibrous hyperplasia typically presents with female predilection as a sessile elevated lesion generally seen in the upper arch.
An extensive denture induced hyperplasia in a 55-year-old male is presented in this report. Histopathology and clinical implications are discussed in detail.

PALABRAS CLAVE

Hiperplasia inducida por dentadura.
Epulis fissuratum.
Hiperplasia fibrosa inflamatoria.

Hiperplasia fibrosa inducida por la dentadura postiza: un caso de estudio

Resumen:

La hiperplasia inducida por dentaduras postizas es una lesión reactiva de la mucosa oral hiperplásica causada por dentaduras postizas crónicas mal ajustadas. La hiperplasia fibrosa clínicamente inducida por dentaduras postizas se presenta típicamente con predilección femenina como una lesión elevada sésil que generalmente se observa en el arco superior. En este informe se presenta una hiperplasia extensa inducida por dentaduras postizas en un hombre de 55 años. Se discuten en detalle la histopatología y las implicaciones clínicas.

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Introduction

Epulis fissuratum or denture induced hyperplasia is a reactive hyperplasic oral mucosal lesion caused by low intensity chronic trauma from ill fitting dentures[1,2].

Epulis fissuratum or denture induced fibrous hyperplasia is also named inflammatory fibrous hyperplasia[3]. However, denture Induced fibrous hyperplasia is the most preferred term.

Clinically denture induced fibrous hyperplasia usually presents as a sessile raised lesion with single or multiple folds with a smooth surface[4].

Many times surface may be erythematous or ulcerated. Microscopically denture induced hyperplasia consists of hyperplasic connective tissue covered by stratified squamous epithelium[5].

Case report

A 55-year-old male visited a private dental clinic in Mangalore for the replacement of a partial denture. He also gave a history of a soft tissue mass in the oral cavity on the right side of the upper arch. He has noticed the mass nine months back, and it has gradually increased to the present size. The patient was wearing an upper partial denture for more than 7 years. The patient has noticed that his denture was becoming loose recently. His medical and family history was non-contributory. He has no history of tobacco consumption. On extraoral examination, no abnormalities detected.

On intraoral examination revealed a soft tissue mass with multiple folding measuring around 4x3x3 cm size hanging from the right maxillary buccal vestibule (Figure 1).

Figure 1: Clinical image of soft tissue mass in the right maxillary arch.

The lesion was non-tender and soft, and the surface was erythematous. Overall oral hygiene was poor; the remaining dentition was showing periodontitis with edematous gingiva. Based on clinical finding and history, a provisional diagnosis of denture induced hyperplasia was made. The patient was asked to discontinue wearing partial denture immediately. Complete surgical excision was performed under local anaesthesia after oral prophylaxis.

The excised specimen was submitted for histopathological evaluation at the Department of Oral and Maxillofacial Pathology and Oral Microbiology, AB Shetty Memorial Institute of Dental Sciences, Mangalore, India.

Follow up visit after one month after the surgery showed good healing without the sign of recurrence (Figure 2). A new partial denture was fabricated and delivered.

Figure 2: Post surgical image with complete healing.

Histopathological examination revealed stratified squamous parakeratinised surface epithelium, which was atrophic in most of the areas and hyperplasic at few areas.

Underlying connective tissue is oedematous with loosely arranged fibro cellular components (Figure 3). A large number of blood vessels of varying size are seen throughout the sections (Figure 4). Cellular components consisting of mixed inflammatory infiltrate predominantly lymphocytes, neutrophils and plasma cells (Figure 5). Collagen fibres are loosely arranged throughout the section (figure 6).

Considering the clinical history, and histopathology a diagnosis of denture induced inflammatory fibrous hyperplasia was confirmed.

Discussion

Epulis fissuratum or denture induced fibrous hyperplasia is a reactive tissue response to excessive mechanical pressure induced by a faulty denture[4].

Denture induced fibrous hyperplasia is usually presented with mild discomfort or asymptomatic. Due to this reason, the patient may continue to wear a defective denture[6]. The lesion becomes painful if it secondarily gets infected, and usually, it happens when the lesion becomes larger.

Denture induced fibrous hyperplasia is predominantly seen in the maxillary arch and has female predilection[2]. At the time of patient reporting to the dentist, a lesion may be small in few millimetres to a sizable extensive lesion. Studies have shown that more than 50% of the cases are diagnosed accurately based on clinically[7].

Histologically similar to any reactive lesion denture induced fibrous hyperplasia presents with excessive proliferation of collagen fibres and epithelial hyperplasia. As the lesion progresses, excessive proliferation of collagen fibres may induce epithelial atrophy, increasing in the size of the lesion, which in turn makes it prone to ulceration. Surface ulceration along with poor oral hygiene, will lead to secondary inflammation.

Prolonged inflammation may cause the replacement of collagen fibres by inflammatory cells to some extent. In such a situation, the lesion may mimic pyogenic granuloma. Demonstration of collagen fibres by using special stains like Van Gieson's stain used in the present case is crucial in arriving diagnosis (Figure 7).

Malignant transformation of denture induced fibrous hyperplasia is not very clear in the literature. However, persistent trauma from ill-fitting denture is known to predispose oral cancer; therefore it is advised to remove the lesion at surgically at the earliest and rectify or refabricate the faulty denture[3,8].

Conclusion

To avoid denture induced fibrous hyperplasia, the patient needs to visit the dentist regularly after the denture delivery. The patient needs to be educated to maintain oral hygiene and notice any pathological changes after denture wearing. If any persistent injury or lesion is present, it needs to be addressed at the earliest. The case reported presented as a large asymptomatic mass in a male patient with the minimum fibrous component as unique and diagnostically challenging.

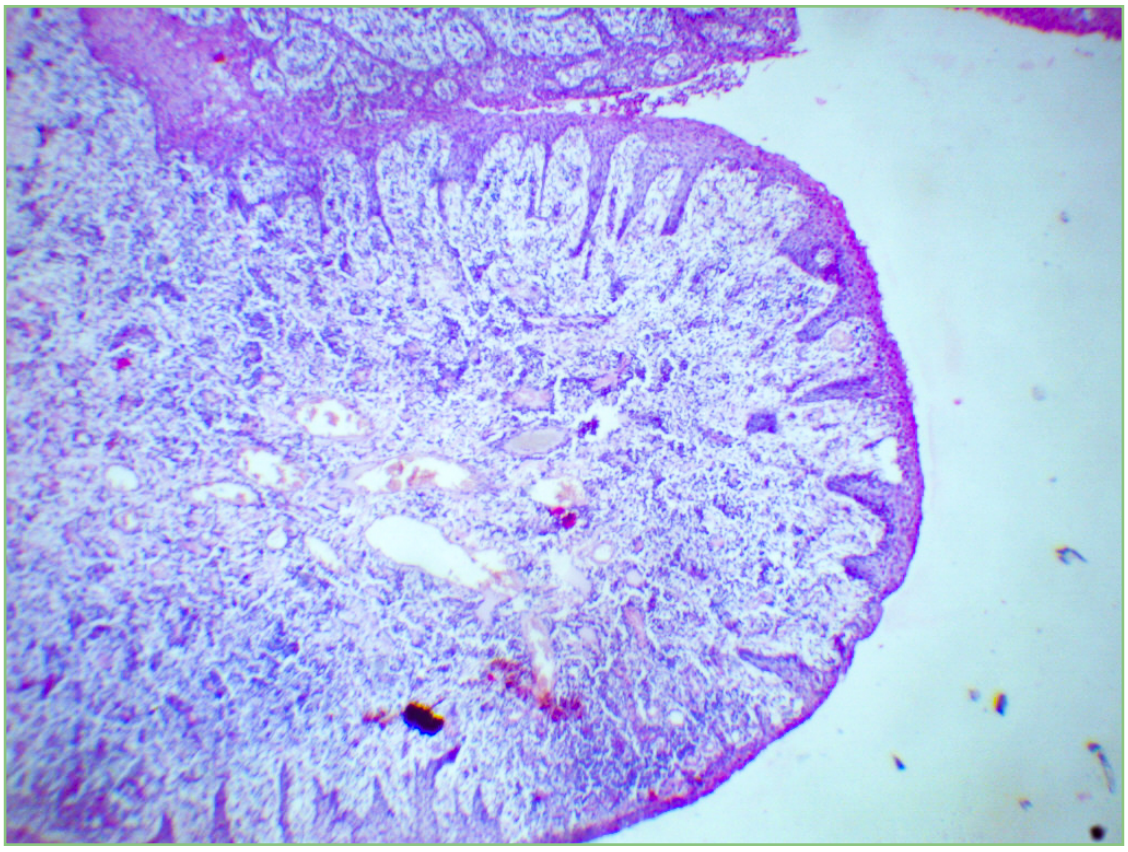

Figure 3: Photomicrograph showing low power view of the lesion (H & E stain X4).

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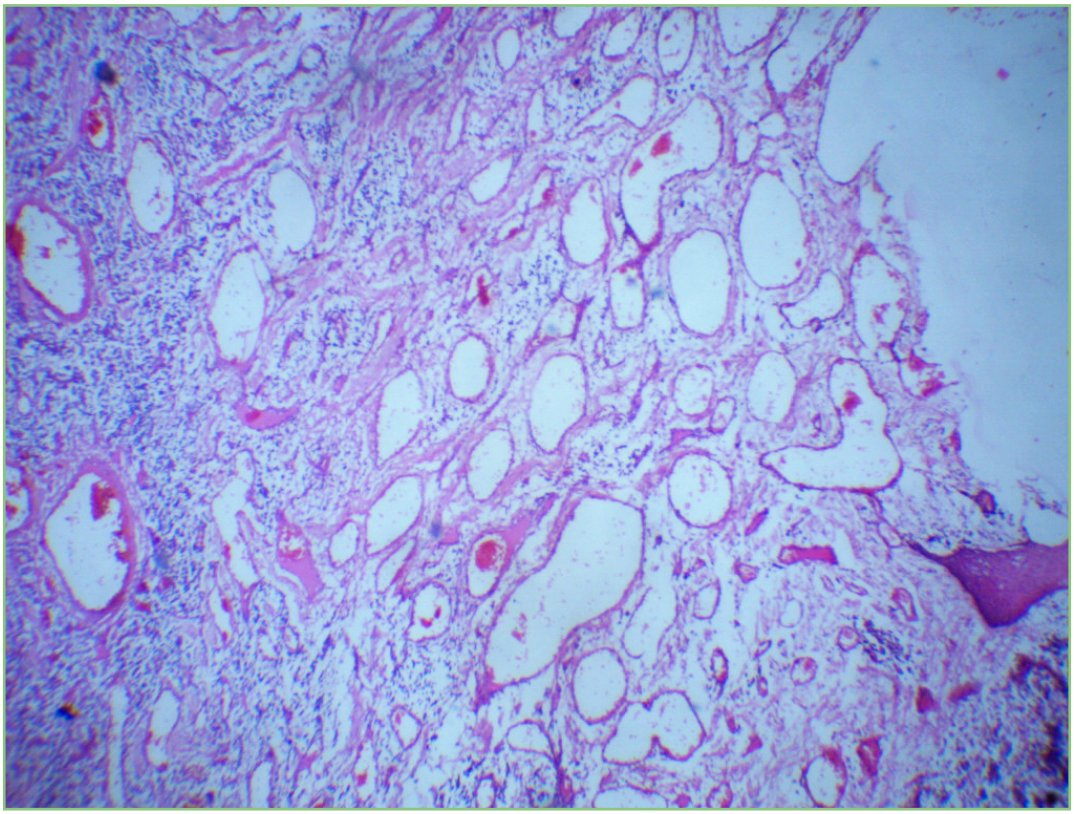

Figure 4: Photomicrograph showing highly vascular area (H & E stain X10).

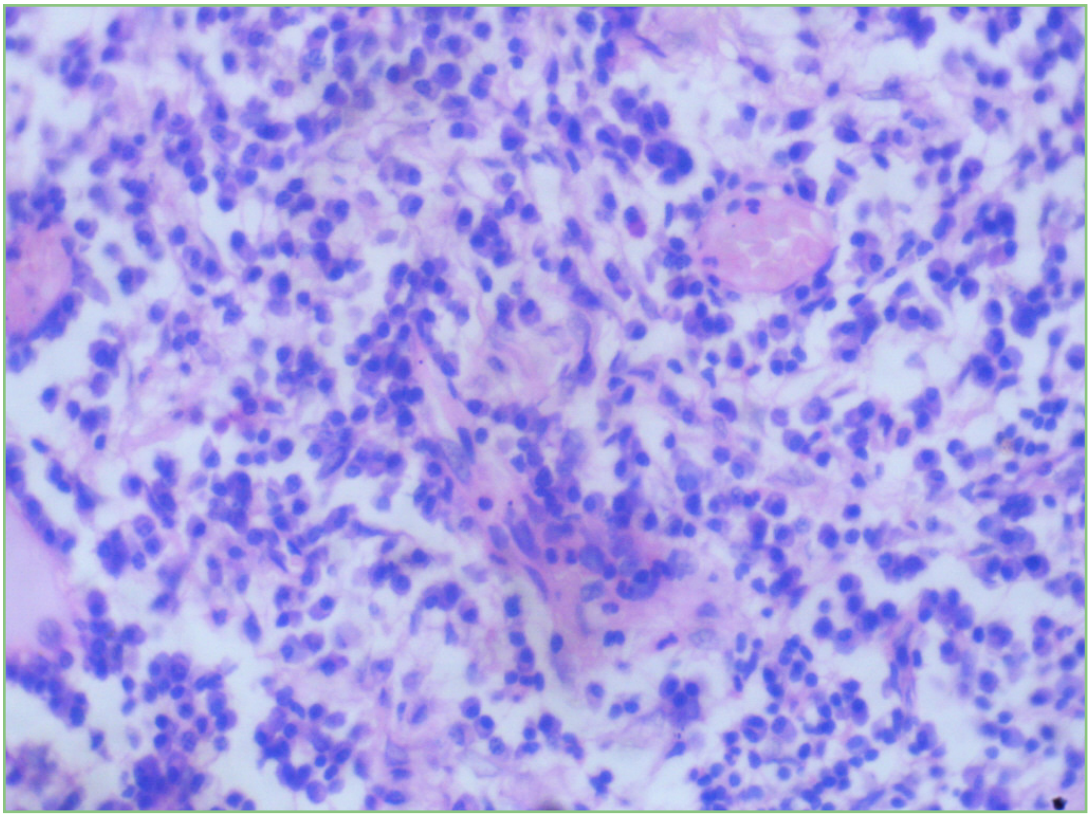

Figure 5: Photomicrograph showing cellular components of the lesion (H & E stain X40).

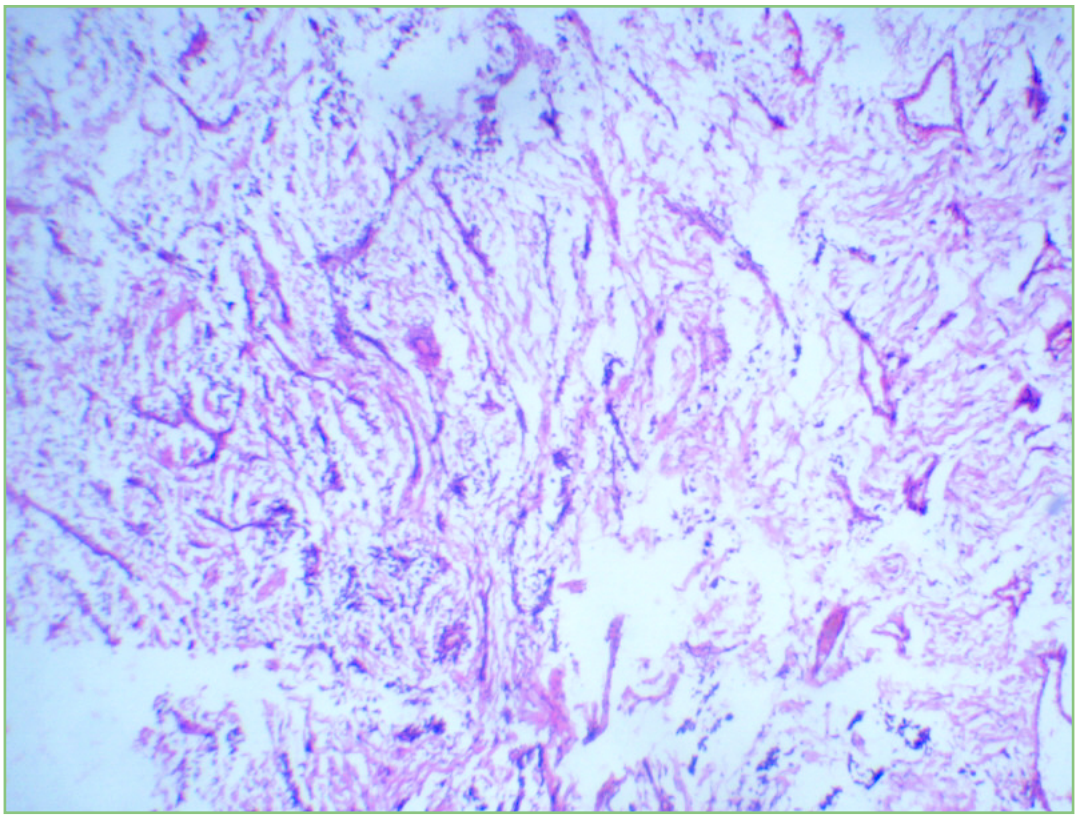

Figure 6: Photomicrograph showing loosely arranged fibrous components (H & E stain X10).

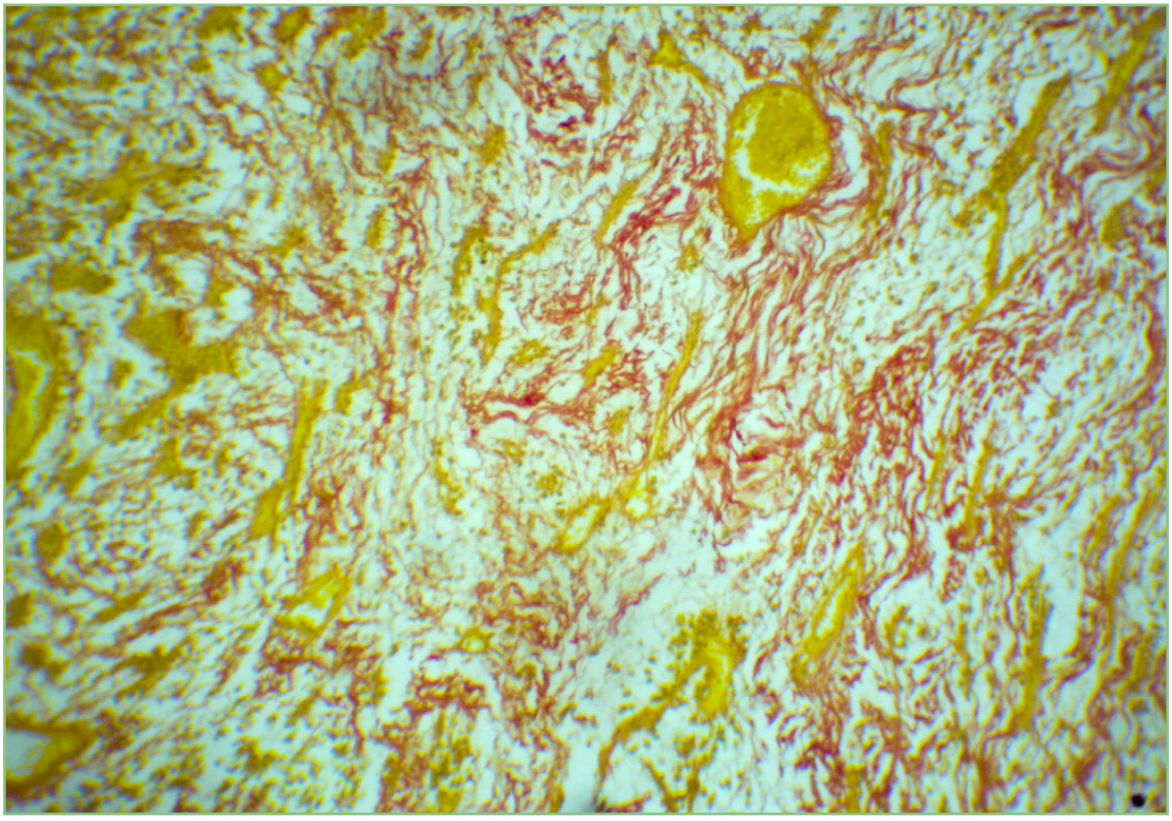

Figure 7: Photomicrograph showing demonstration of collagen fibres (Van Gieson's stain stain X4).