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Case Report

Enormous epulis fissuratum: A case report

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ABSTRACT

Epulis fissuratum also called as Denture-induced hyperplasia (DIH) is a tumor-like hyperplasia of fibrous connective tissue, which develops in association with an ill-fitting complete or partial denture. Virchoft first invented the term "Epulis" and the meaning is "over the gums". However the use of this term is not appropriate as it emphasizes only the actual site of the lesion. In most cases, the affected mucosa is usually the oral mucosa of the vestibular sulcus or the palatal region. Therefore, "Denture-induced fibrous hyperplasia" was considered to be a much-preferred term. This is a case report of an 65 year old female with a history of wearing complete denture for 2 years and ended up in developing multiple proliferative growths.

1. Introduction

Epulis fissuratum also called as Denture-induced hyperplasia (DIH) is a tumor-like hyperplasia of fibrous connective tissue, which develops in association with an ill-fitting complete or partial denture.[1] It is a reactive lesion of the oral mucosa to excessive mechanical pressure on the mucosa. Resorption of residual alveolar bone leads to overextension of denture border which if not attended to causes chronic irritation of the oral mucosa in the region of the sulcus.[2,3] According to the literature, two thirds to three-fourths of all cases submitted for biopsy occurred in women.[4] Chronic trauma to the oral mucosa is considered a risk factor for the development of oral carcinoma. Studies have shown that the sharp edges of teeth or the ragged edges of ill-fitting dentures have potential to cause oral carcinoma. Hence, ill-fitting dentures and its sequelae should not be overlooked.[5] Here we report a case of Epulis fissuratum of a 65 year old patient with a history of wearing complete denture for the past 2 years but the catch here is that she has never removed the complete denture in those 2 years.

2. Case Report

A 65 years old female patient came to the department of Oral Medicine and Radiology with the chief complaint of pain and excessive growth in upper and lower right and left front and back tooth region of jaw. History revealed that all the teeth were removed because of mobility and artificial teeth set was made before 2 years and patient was using artificial teeth set for past 2 years. Patient gave the history that she never removed the teeth set in the past 2 years. She also gave the history that she had mild pain and noticed the presence of growth before 3 months which was smaller in size and gradually increased to attain the present size. Patient also has history of pain in the growth which was slow in onset, moderate, intermittent, aggravates on wearing teeth set and on chewing and gets relived on its own.

On examination there was a proliferative growth [Figure 1a,b] seen on the left buccal sulcus in relation to

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24,25 which crossed the midline and extended till the right maxillary tuberosity. The growth on the right buccal sulcus appeared fissured and it was lobulated and erythematous. On the maxillary labial sulcus and left buccal sulcus the growth was smooth and it was confined to the flanges of the denture. No evidence of bleeding or pus discharge. On palpation, all the inspectory findings of site, size and extent were confirmed. It was non tender, soft to firm in consistency, surface was irregular, margins were well defined with a pedunculated base. The ridge was flabby. There was no bleeding or pus discharge seen. There was another proliferative growth seen on the lower labial mucosa involving the sulcus measuring 5x3 cm apprx extending anteriorly 2cm from the vermillion border of the lip and posteriorly to the labial sulcus, medially from the labial frenum which extends 4cm on either sides. The surface was irregular, fissured and lobulated. No evidence of bleeding or pus discharge. Growth was confined to the flanges of the denture. On palpation, all the inspectory findings of site, size and extent were confirmed. It was non tender, firm in consistency and the ridge was flabby. There was no bleeding or pus discharge seen.

Correlating with the history and clinical findings a provisional diagnosis of Epulis Fissuratum and as a differential diagnosis of Squamous Papilloma was given. Biopsy was taken and the histopathological report confirmed the diagnosis of Epulis Fissuratum highlighting the features such as hyperkeratinised stratified squamous epithelium with flattened rite ridges, atrophic epithelium in few areas of the section, the underlying connective tissue showing numerous dense bundles of hyalinized collagen fibers along with patchy chronic inflammatory cell infiltrate and few endothelial lined blood vessels with extravasated RBC's and skeletal muscle fibers[Figure 3].

Correlating with the history, clinical findings and histopathological examination a final diagnosis of Epulis Fissuratum was given and the patient was sent to the department of Oral and Maxillofacial Surgery for further management. Surgical excision was done under Local anesthesia and the patient was strictly advised not to use the denture. On the patients review after two months healing was satisfactory [Figure 2a,b] and the patient was sent to undergo prosthetic management.

3. Discussion

Virchoft first invented the term "Epulis" and the meaning is "over the gums". However the use of this term is not appropriate as it emphasizes only the actual site of the lesion. In most cases, the affected mucosa is usually the oral mucosa of the vestibular sulcus or the palatal region. Therefore, "Denture-induced fibrous hyperplasia" was considered to be a much-preferred term.[6] Trauma and irritation are the two main aetiological factors responsible for occurrence of epulis.

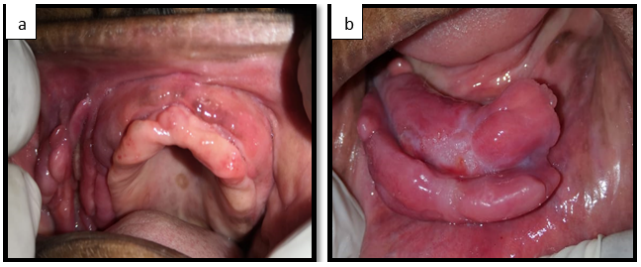

Fig. 1: a,b: Showing proliferative growth on the maxillary and mandibular alveolar mucosa

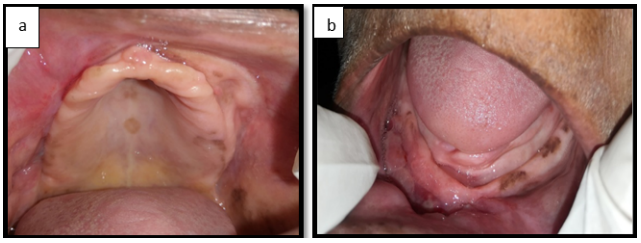

Fig. 2: a,b: Showing excellent healing after surgery

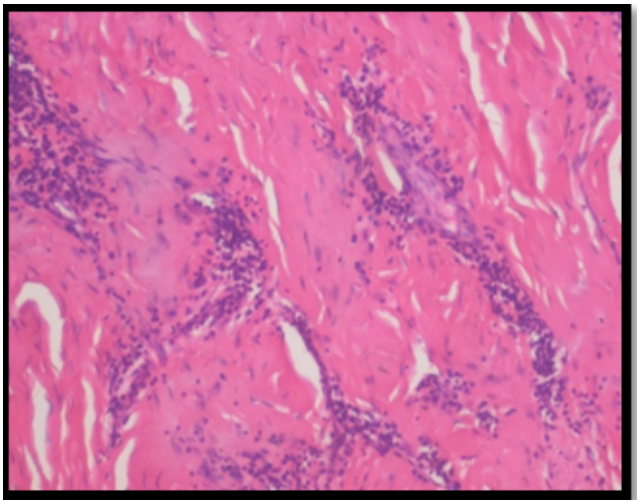

Fig. 3: Showing Histopathological picture

Clinically, it presents as a raised sessile lesion in the form of folds with a smooth surface with normal or erythematous overlying mucosa. Because of chronic irritation, it may get traumatised and present with an ulcerated surface.[7] In this present case patient was using the maxillary and mandibular complete denture for 2 years without removing the denture even for once in that timeframe. In an epidemiological survey, the incidence of epulis fissuratum was found to be 0.37 lesions per 1,000 persons in the 18–22 year age group and in people aged >35 years was found to be 4.1 per 1,000 persons and with an incidence of 3.5% in males and 4.4% in women.[8] Firoozmand et al. showed that 78% of denture wearer women presented with a denture-induced

hyperplasia mostly in the maxilla.[6]

Treatment of epulis fissuratum may be conservative or surgical. A conservative approach should be considered as the first option because of its noninvasive nature. However, a conservative approach is timeconsuming and initially requires removal of the acrylic flange associated with the trauma and relining or repairing of the full denture. After a few weeks, when the lesion is completely healed, the acrylic flange may be relined and redesigned correctly to avoid further trauma of the mucosa when it is fitted in the mouth. The surgical approach includes using any of the following: The conventional scalpel, electro cauterization, soft tissue lasers, and liquid nitrogen cryosurgery. The surgical scalpel has been used from time to time for this soft tissue lesion. Electrocauterization was also used to remove Epulis fissuratum with advantages of hemorrhage control and post-operative healing. However, with the advent of lasers, the former has taken a back seat. Some of the lasers used in dentistry for this purpose is CO2 laser, Er: YAG laser, Nd: YAG laser, diode laser, argon laser, and potassium-titanylphosphate- laser.[9]

4. Conclusion

A poorly fitted prosthesis can give rise to a plethora of problems like pain, discomfort in mastication and speech and epulis fissuratum. Dentists should give proper instructions to the patient while denture delivary in order to protect the health of the mucosal tissues under the denture. In the present case the patient worn the denture for straight 2 years because of lack of instructions and ended up with huge epulis fissuratum. Since chronic irritation even from dentures can cause carcinoma in some patients the patients with ill-fitting dentures should be diagnosed and treated early.

5. Conflict of Interest

The authors declare that there is no conflict of interest.

6. Source of Funding

None.

References

1. Veena K, Jagadishchandra H, Sequria J, Hameed S, Chatra L, Shenai P, et al. An extensive denture-induced hyperplasia of maxilla. *Ann Med Health Sci Res*. 2013;3(1):7–9.
2. Rajendran R, Sivapathasundaram B. Shafers textbook of oral pathology. New Delhi: Elsevier; 2006. p. 744–6.
3. Budtz-Jorgensen E. Oral mucosal lesions associated with wearing of removable dentures. *J Oral Pathol*. 1981;10(2):65–80. doi:10.1111/j.1600-0714.1981.tb01251.x.
4. Monteiro LS, Mouzinho J, Azevedo A, Câmara MI, Martins MA, Fuente JL, et al. Treatment of epulis fissuratum with carbon dioxide laser in a patient with antithrombotic medication. *Braz Dent J*. 2012;23(1):77–81.
5. Rosenquist K. Risk factors in oral and oropharyngeal squamous cell carcinoma: A population-based case-control study in Southern Sweden. *Swed Dent J Suppl*. 2005;(179):1–66.
6. Mortazavi H, Khalighi HR. Epulis fissuratum in the soft palate: Report of a case in a very rare location. *Dent Hypotheses*. 2016;7(2):67–9.
7. Regezi JA, Sciubba JJ, Jordan R. Oral pathology: clinical pathological correlations. 5th edn. Saunders; 2008.
8. Patil BA, Arora A. Report of a Case of Epulis Fissuratum. *Sch J Med Case Rep*. 2014;2(7):452–4.
9. Kafas P, Upile T. Mucogingival overgrowth in a geriatric patient. *Dermatol Online J*. 2010;16(8):7.

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