Case study

An unusual presentation of inflammatory fibrous hyperplasia: A case report with a brief literature review

Abstract

A mucosal lesion that arises due to long standing chronic irritation is called Epulis fissuratum. It is a benign reactive hyperplastic lesion that commonly develops in the mucosa close to the overextending flanges of the ill-fitting dentures. This paper presents a case of atypical presentation of epulis fissaratum in a 74-year-old woman with history of ill-fitting denture for the past four months. Total excision of such lesions is recommended because they cause problems such as pain and discomfort during mastication and speech.

Keywords (MeSH): Denture; Epulis; Fibroepithelial; Hyperplasias

Introduction

Epulis fissuratum (EF) is a mucosal lesion arising from acute and chronic irritation caused by denture-related factors. It is a benign, reactive hyperplastic lesion that commonly develops in the mucosa close to the overextending flanges of ill-fitting dentures [1]. It occurs most frequently in middle-aged and older individuals and is more common in women. It is also known as “granuloma fissuratum”, “denture-induced fibrous hyperplasia” or “reactive fibrous hyperplasia” [2].

Discomfort is not an issue initially in such patients because this condition is chronic. Therefore, patients may continue wearing ill-fitting dentures until the hyperplastic lesion has developed to a significant size. These lesions can be small or large, ranging in size from less than one centimeter to several centimeters. Typically, the anterior region of the jaw is more affected than the posterior region [3].

These lesions may be characterized by pain and discomfort when ulcerations occur. It not only causes pain and discomfort, but also hinders the patient's mastication, aesthetics, and general well-being [4]. Oral carcinoma can develop because of chronic trauma to the oral mucosa caused by ill-fitting dentures [5]. Therefore, it is vital to manage ill-fitting dentures and their associated complications.

Utilizing theoretical notions from our field, we aimed to report a case of Epulis fissuratum at an unusual location in a 74-year-old woman and recommend a course of action for future similar cases.

Case report

A 74-year-old woman visited the outpatient department of our institute with a chief complaint of pain and discomfort during mastication while using her upper denture for 15–20 days. She had been wearing an ill-fitting denture for the past four months. The medical history of the patient revealed hypertension for 15 years and she was on medication for the same. The patient had been consuming chewable tobacco for four to five years before quitting two years ago.

On intra-oral examination, completely edentulous maxillary and mandibular arches were noted. A single abnormal sessile growth measuring approximately 2 × 2 cm was noted in the upper left buccal vestibule (figure 1). The fibrous mass was split into two vertical folds; the larger mass was present towards the alveolar mucosa, and the other fold was present towards the buccal mucosa. On palpation, the lesion was soft in consistency with a smooth texture, non-tender, and mobile. Generalized tobacco-induced melanin pigmentation was noted in the right and left buccal mucosa and in the upper and lower labial mucosa.

Based on the patient's history and intraoral clinical findings, a provisional diagnosis of denture-induced fibrous hyperplasia was made. Traumatic fibroma was considered a differential diagnosis.

The patient was advised to discontinue wearing her ill-fitting denture and was educated to maintain oral hygiene. The lesion was completely removed by surgical excision. The excised specimen was sent for histological examination.

Histological examination revealed pseudo-epitheliomatous hyperplasia. The underlying connective tissue stroma consisted of thick collagen fiber bundles with spindle-shaped fibroblasts. Diffuse inflammatory infiltrates predominantly consisting of lymphocytes and plasma cells were observed. A few endothelial-lined blood vessels and ductal hyperplasia were observed in the focal area (figure 2). All these features were suggestive of inflammatory fibrous hyperplasia.

The patient was recalled fifteen days later, and the healing was found to be satisfactory. Fabrication of a new denture was planned and the patient was referred to the Department of Prosthodontics for the same. The patient was asked to follow up once a month to examine the fit of the denture and to avoid a recurrence of the lesion.

Discussion

Virchoft coined the term "epulis," which means "over the gum". This term is inappropriate for use because it refers solely to the gums as the site of the lesion. The vestibular sulcus or palatal region is the most affected mucosa rather than the gingival mucosa. Therefore, the term, “denture-induced fibrous hyperplasia” has been widely adopted [5].

Epulis fissuratum (EF) or ‘denture-induced fibrous hyperplasia’ occurs as a result of a fibroepithelial inflammatory response to poorly adapted dentures in the vestibular mucosa [3]. Tipping forces originating from an imbalanced occlusion can also be a potential cause of EF [2]. Excessive proliferation of cells (hyperplasia) and an increase in size (hypertrophy) can occur due to excessive trauma or constant pressure. Thus, EF is a mucosal reaction to the abnormal forces acting on them. EF can be caused by two etiological factors, trauma and inflammation [1]. Epulis occurs due to poorly fitting dentures, an improper adaptation of dentures, poor oral hygiene, usage of tobacco e.t.c [6]. In our case, the mucosal overgrowth appeared to have been caused by the constant use of an ill-fitting denture.

EF occurs more frequently in the edentulous maxilla [7]. According to Firoozmand *et al*., 78 percent of denture wearers had denture-induced hyperplasia, predominantly in the maxilla [5].

The lesion can take on various shapes and sizes. It can range in size from a few millimeters to several centimeters, covering the entire vestibule [8]. In this case report, the epulis is noted on in upper posterior buccal vestibule which itself is a unique feature, as it is most commonly seen in anterior buccal mucosa.

EF appears as an elevated, smooth-surfaced sessile lesion. The overlying mucosa can be normal or erythematous. It may manifest as an ulcerated surface because of prolonged inflammation or trauma. Hence, long-term irritation of mucosa causes an overgrowth [9]. The alveolar bone may deteriorate because of the continuous inflammation, which can lead to alterations in the anatomy, density, and dimensions of the jaws [10]. This ridge resorption also compromises denture retention and stability [11].

Histologically, the overlying epithelium is usually hyperparakeratotic with abnormal hyperplasia of the rete ridges. The underlying connective tissue is fibrovascular and hyperplastic. Various chronic inflammatory infiltrates have also been observed [12].

Epulis fissuratum can be treated conservatively or surgically. The use of the ill-fitting prosthesis should be discontinued immediately. Conservative treatment includes the application of topical anesthetics at the site of the lesion to control the pain. To avoid future stress on the mucosa when the denture is fitted in the mouth, the overextended acrylic flange should be redesigned correctly, or a new denture should be made [13].

Surgical excision of the lesion is required in cases of a large fibrous epulis. Complete removal of the lesion with the help of a scalpel, laser, or with help of electrocauterization[13]. In the present case, the conventional surgical excision approach was used to treat the lesion.

Conclusion

The risk of mucosal lesions, particularly EF, is considerably increased by factors such as chronic irritation and poorly adapted prostheses. To prevent chronic conditions of the oral mucosa and safeguard the health of oral tissues, it is important for dentists to provide detailed instructions when delivering dentures on how to protect the mucosal tissues underneath the denture, how to wash the denture, and how long to wear it each day, as well as recommend regular checkups.

Ethical Clearance:

Ethical clearance was obtained from the institutional ethical board.

Informed consent

The authors certify that we have obtained all appropriate patient consent forms from the patient for clinical information to be reported in the journal.

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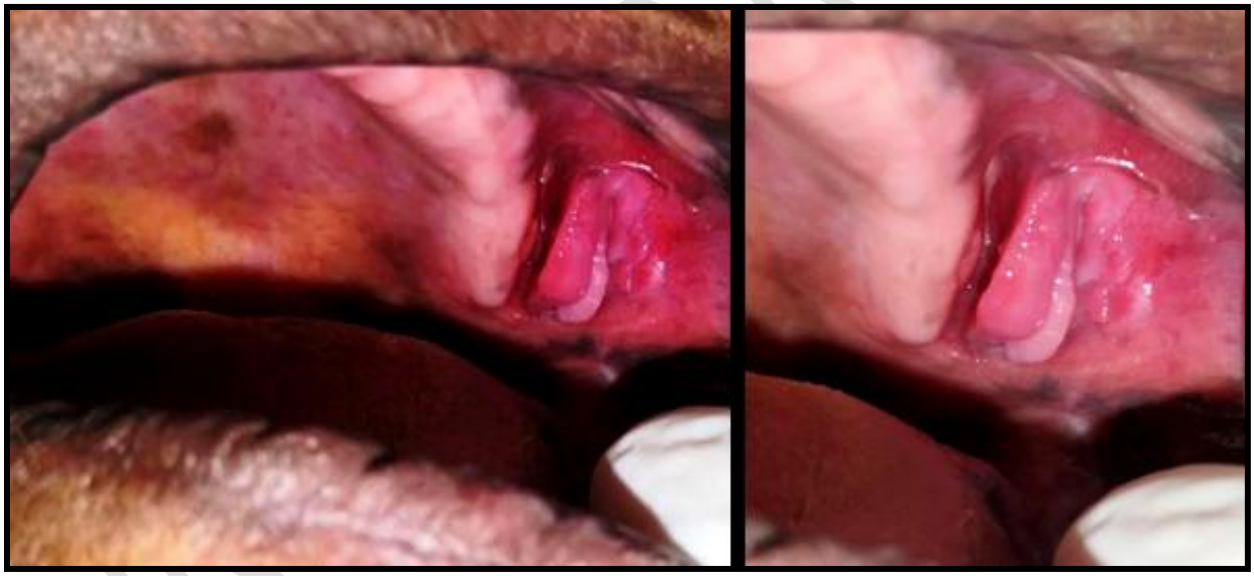
Legends:

Figure 1: Fibrous growth in the upper left buccal vestibule.

Figure 2: Histological diagnosis of inflammatory fibrous hyperplasia. Hematoxylin and eosin stain, original magnification x200.



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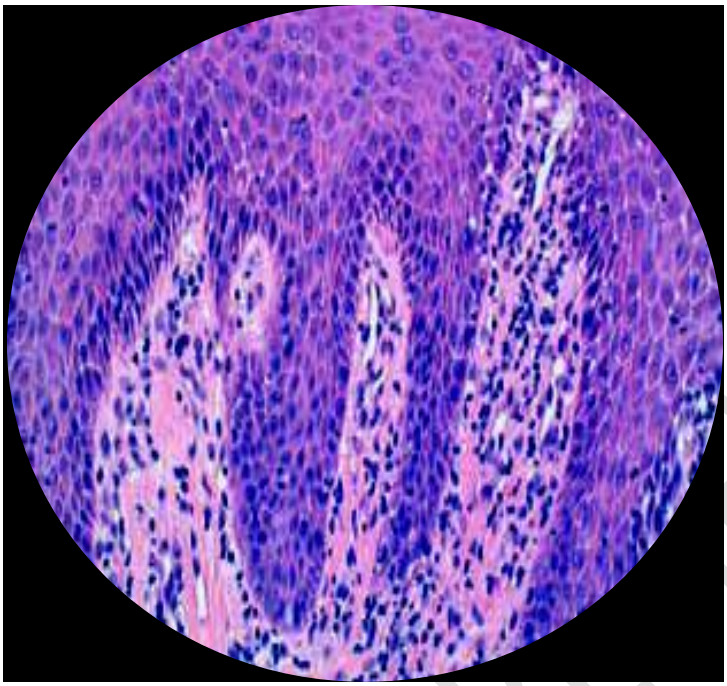

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