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Unusual Presentation of Fibroma- A Rare Case Presentation

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Abstract

Traumatic or irritation fibroma is the healed end product of the inflammatory hyperplastic lesion which can occur at any age from almost any soft-tissue site, tongue, gingiva, and buccal mucosa being the most common. The aim of this case report is to present the clinical features and management of the benign lesion which was posteriorly positioned in the buccal vestibule of mandibular molars. Afemale patient, 19 years old, reported to the department with a chief complaint ofswelling in the left lower back tooth region since 7-8 months. On examination, thelesion was found to be a well circumscribed, smooth, non-tender, firm andlobulated pink swelling measuring 3 cm × 1.5 cm in its greatest diameter inrelation to left mandibular molar region. Surgical therapy was carried out for themanagement of the same. There was no recurrence reported at the end of 2 monthsshowing that treatment with electrocautery was highly effective as it was arelatively simple and safe method with easy handling of the electrodes without anybleeding or scarring. Irritation fibroma clinically resembles as pyogenicgranuloma, peripheral giant cell granuloma, or odontogenic tumors, so radiographic and histopathological examination is essential for accurate diagnosis.Furthermore, complete excision is the choice of treatment as recurrence has been associated with incomplete removal of the lesion.

Keywords *Fibroma, Gingival Overgrowth, Electrocoagulation*

Introduction

Fibrous growths of the oral soft tissues are fairly common and include a diverse group of reactive and neoplastic conditions. The fibroma, also referred to as irritation fibroma, is by far the most common of the oral fibrous tumor like growths.1 While the terminology implies a benign neoplasm, most, if not all, fibromas represent reactive focal fibrous hyperplasia due to trauma or local irritation.1 First case of intraoral fibroma was reported in 1846 called fibrous polyp and polypus.2 The most commonly involved oral tissues are buccal mucosa, gingival (inter-dental papilla of anterior maxilla) and tongue. Although the term "focal fibrous hyperplasia" more accurately describes the clinical entity, it is not commonly used.1 The present case briefly discusses about clinical features, histopathology and various methods for treatment.

Case Report

A 19 year old female reported to department of Oral Medicine and Radiology with the chief complaint of swelling in lower left back tooth since 7-8 months with difficulty in mastication and caused discomfort. There was no significant past dental, medical and family history. There was no history of dental and/or facial trauma. No previous episodes of similar overgrowth given by the patient. The swelling had gradually increased to the present size with no complaint of pain and bleeding from the affected region.

Extraoral examination revealed no facial asymmetry. On intraoral examination, a solitary sessile oval shaped growth noted in the buccal vestibule of 34-37 extending superio-inferiorly from 0.5 cm above the edentulous region of 36 encroaching the buccal vestibule and medio-laterally from mid of 35-distal aspect of 37, measuring superior-inferiorly 1.5 cm in widest dimension and medio- laterally 3 cm in widest dimension approximately, color of the overlying surface was same as that of surrounding mucosa. On palpation, the inspectory findings were confirmed of site, size and shape. Smooth surface, sessile in nature, about 2/3rd part of the growth was soft in consistency and posterior 1/3rd part was firm to hard in consistency. Non fluctuant, slightly compressible, non-tender on palpation. (figure 1). The provisional diagnosis was given as fibroma in relation to 34-37 region and differential diagnosis was given for the present case as peripheral ossifying fibroma.

Figure 1: (a,b) sessile oval shaped growth noted on buccal aspect of 34-37 region.

On radiographic examination, Intraoral periapical radiograph and Panoramic radiograph revealed remaining roots in relation to 36 with well defined radiolucency at the apical aspect of 36 measuring approx 0.5 cm in size with thin corticated borders. Calcification seen distal to 35. S/O- periapical granuloma irt 36 and idiopathic osteosclerosis distal to 35. The radiographic diagnosis was given as peripheral fibroma with calcifications (figure 2).

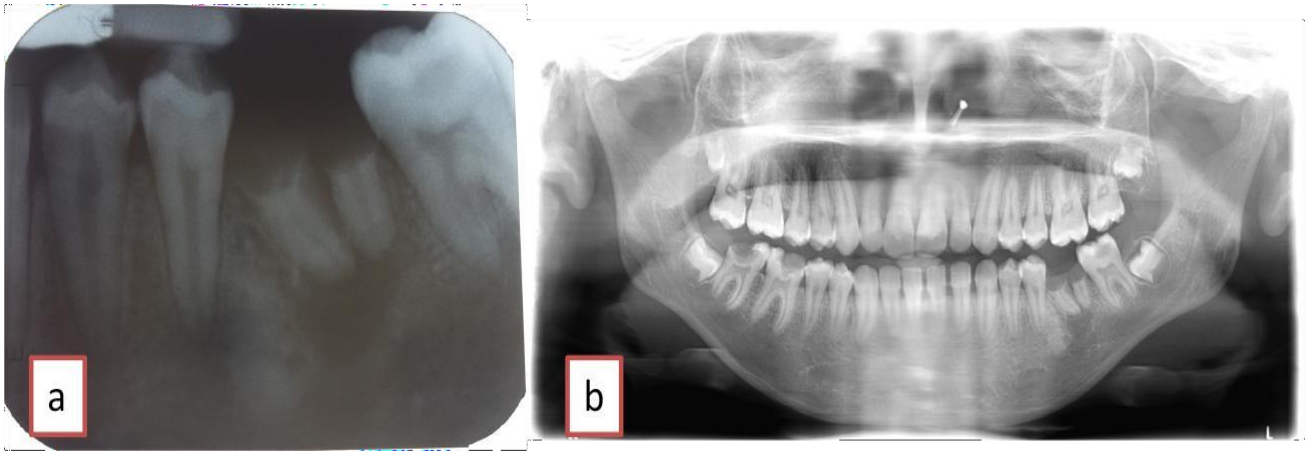

Figure 2 (a,b) reveals well defined radiolucency at the apical aspect of 36 measuring approx 0.5 cm in size with thin corticated borders. Calcification seen distal to 35.

An informed consent was taken from the patient as she was informed about the treatment procedure. Routine blood investigations were performed and they were within the normal range.She underwent extraction of root stumps in relation to 36 with excision of fibroma (by electrocautery) and sutures were placed. The excisional biopsy revealed parakeratinized stratified squamous epithelium overlying connective tissue stroma. Short and broad rete pegs seen in some areas. Underlying stroma is densely collageinized with thick collagen fibers arranged in parallel arrangement interspersed with plump to spindle shaped fibroblast and fibrocytes. Endothelial lined blood vessels with extravasated RBCs are also evident. The histopathological diagnosis was fibroma (figure 3).

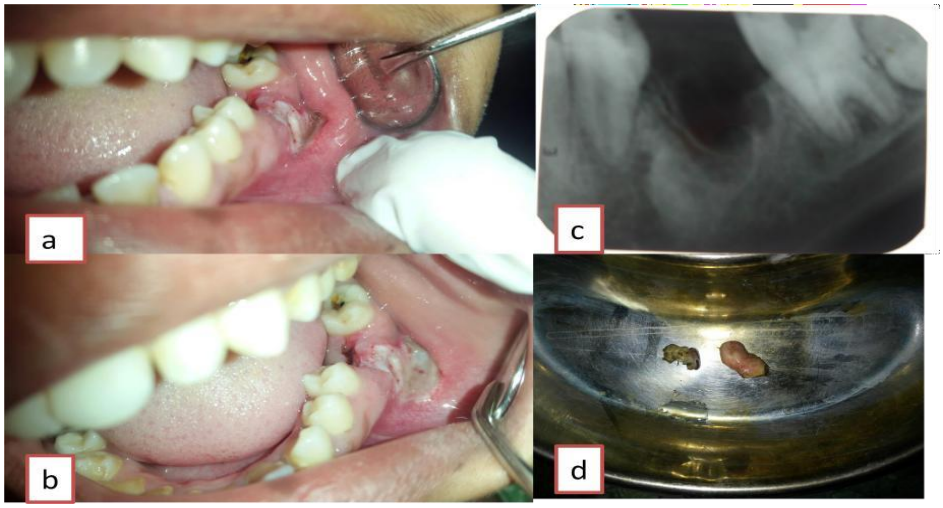

Figure 3 (a,b) shows the area of sloughing after electrocauterization of fibroma, (c) shows lamina dura of 36 with idiopathic osteosclerosis, (d) shows excised tissue specimen for biopsy.

The final diagnosis was irritational/traumatic fibroma. She was recalled after 7 days for suture removal. Normal healing process was noted (figure 4).

Figure 4 shows normal healing process in the region of the 36.

Discussion

Definition: Inflammatory hyperplastic lesion may be defined as an increase in the size of an organ or tissue due to a local response of tissue to injury or an increase in the number of constituent cells.3 Fibroma, a benign neoplasm of fibroblastic origin, is reactive in nature and represents a reactive hyperplasia of fibrous connective tissue in response to local irritation or trauma rather than being a true neoplasm.[3]

Synonym: It has been known as irritation fibroma, traumatic fibroma, fibrous hyperplasia, focal fibrous hyperplasia, localized hyperplasia, fibrous polyp,11 and fibroepithelial polyp.[4]

Prevalence: An earlier population-based epidemiological analysis showed that irritation fibroma was the second common benign oral lesion in Indians over 35 years of age. The predilection sites were the buccal mucosa, labial and lingual surfaces. It also revealed that there was no prominent difference in the incidence rate between the sexes however female predilection is greater than male.[5]

Etiology: The etiology of an irritational fibroma is usually a source of irritation. The traumatic irritants include calculi, foreign bodies, overhanging margins, restorations, margins of caries, chronic biting, sharp spicules of bones, and overextended borders of appliances.[6]

Pathogenesis: Few enlargements are because of chronic tissue trauma and irritation that causes an excessive tissue response. The result of this chronic repair process leads to the formation of granulation tissue and scars that result in formation of a fibrous sub-mucosal mass.7 According to Barker and Lucas, irritational fibromas exhibit a pattern of collagen arrangement depending on the site of the lesion and the amount of irritation. There are two types of patterns:(a) radiating pattern and (b) circular pattern. Thus, they hypothesized that when there is a greater degree of trauma, the former appears in sites which are immobile in nature (e.g., palate), while lesser trauma induces the latter and it occurs in sites that are flexible in nature (e.g., cheeks).3

Clinical features: The irritational fibromas are found more frequently in maxilla than mandible. It may occur at any oral site but it is seen most often on the buccal mucosa along the plane of occlusion of the maxillary and mandibular teeth. At times, it may also occur on the gingiva. It is a round to ovoid,

asymptomatic, smooth-surfaced, firm, sessile or pedunculated mass, the diameter of which may vary from 1 to 2 cm. The surface may be hyperkeratotic or ulcerated owing to repeated trauma.1 The lesion represents a range of stages of fibroma with ossification. Bone formation or dystrophic calcification seen with foci of radiopaque material, especially in large lesions. Fibroma can produce interdental destruction of bone with migration of teeth.8

Histopathological features: The histopathological feature of irritation fibroma appears as a nodular mass composed of collagenized fibrous connective tissue. The epidermis usually presents hyperplasia and hyperkeratosis due to chronic irritation. Dense collagen fibers and focal hyperplasia of mature fibroblasts can be found in connective tissue, with slight or no inflammatory cell infiltration.5

Differential diagnosis: When presented clinically with an intraoral or gingival lesion, it is important to establish a differential diagnosis. Although it is important to maintain a high index of suspicion, discussion with family members should prevent undue distress amongst them till a definitive histopathologic diagnosis is established.

The differential diagnosis in such lesions should include Pyogenic Granuloma (PG), Peripheral Ossifying Fibroma (POF), metastatic cancer, fibroma, hyperplastic gingival inflammation, hemangioma and angiosarcoma.

Depending on its duration, PG will vary in texture from soft to firm and can be suggestive of fibroma, and also, peripheral odontogenic or ossifying fibroma may be another consideration, although these tend to be much lighter in color.

Like PG, it is commonly encountered among pregnant women; but unlike PG, this lesion is found exclusively on the gingiva and has minimal vascular component. Although metastatic tumors of the oral region are uncommon, the attached gingiva is the most common affected soft tissue site followed by the tongue.

In nearly 30% of cases, the metastatic lesion in the oral region is the first indication of an undiscovered malignancy at a distant site and so the microscopic appearance should resemble the tumor of origin.

One important differential diagnosis of PG is hemangioma which is a developmental disorder, but small lesions may be clinically indistinguishable.

Diascopy, the technique of applying pressure to a suspected vascular lesion to visualize the evacuation of coloration, supports the fact that patent blood filled spaces constitute the lesion.1,3,5

Treatment: Various treatment modalities have been used to treat such lesions which include the use of surgical scalpel, electrocautery, lasers, etc., depending on clinical and anatomical considerations. Conservative excisional biopsy is curative and its findings are diagnostic; however, recurrence is possible if the exposure to the offending irritant persists. However, compared to conventional methods, laser surgery is less time consuming, less painful, more accurate in the treatment of soft tissue lesions, produces less scar and tissue contraction, causes less damage to the adjacent tissues, provides visibility owing to bloodless field during surgery and maintains elastic tissue properties.9

Conclusion

Majority of the intraoral localized gingival lesions are slowly progressing, the growth of which is generally limited. Many cases progress for long periods before the patient seeks treatment for them as they are asymptomatic. However, it was observed that patients usually undergo treatment once the lesion becomes visible. The reactive focal fibrous overgrowths arise in response to chronic stimuli and are generally non-neoplastic growths. Proper diagnosis, prevention, management and treatment of these lesions are of utmost importance due to the occurrence and similar presentations of neoplastic growths though the incidence is rare. Treatment involves removal of the local irritants along with surgical excision of the lesion. Close postoperative follow-up is required as some of the lesions may exhibit recurrence.

Reference

1. Kolte AP, Kolte RA, Shrirao TS. Focal fibrous overgrowths: A case series and review of literature. Contemporary clinical dentistry. 2010 Oct 1;1(4):271.

2. Lanjekar A, Kulkarni S, Akhade S, Sonule S, Rathod U. An unusually large irritation fibroma associated with gingiva of lower left posterior teeth region. Case reports in dentistry. 2016 Dec 28;2016.

3. Jain G, Arora R, Sharma A, Singh R, Agarwal M. Irritation fibroma: Report of a case. Journal of Current Research in Scientific Medicine. 2017 Jul 1;3(2):118.

4. Sambhashivaiah S, Singh N, Bilichodmath S. Traumatic fibroma: a case series. Journal of Health Sciences & Research. 2016 Jun 1;7(1):28-31.

5. Jiang M, Bu W, Chen X, Gu H. A case of irritation fibroma. Advances in Dermatology and Allergology/Postępy Dermatologii i Alergologii. 2019 Feb 1;36(1):125-6.

6. Katara AA, Minhas R, Kumar A, Dasgupta S. A case report on the excision of irritational fibroma using the diode laser. Journal of Dental Research and Review. 2020 Jan 1;7(1):24.

7. Mohan K, Bisht J. Traumatic fibroma in buccal mucosa: a local reactive lesion- report of a case. International Journal of Contemporary Medical Research 2021;8(4):D5-D7.

8. Kumar A, Nagpal A, Nagpal B. Irritational .HTAJOCD.2018

9. Lulla V, Jaiswal D. Traumatic Fibroma: A Case Report. European Journal of Molecular & Clinical Medicine. 2020 Dec 22;7(7):1653-60.