Case Report

Peripheral Ossifying Fibroma –A Diagnostic Enigma

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Abstract

Peripheral ossifying fibroma (POF) is a lesion of oral tissues that accounts for about 20% of all non-neoplastic oral proliferative processes. It is a reactive lesion of animal tissue and is not the soft tissue counterpart of central ossifying fibroma. It is a benign swelling of the gum developing between the teeth, affects mainly the gingiva, especially within the anterior region of the jaw. POF may be a reactive lesion of oral tissues, associated with local factors such as trauma or the presence of dental biofilm. POF treatment consists of curettage of the lesion combined with root scaling of adjacent teeth and/or removal of other sources of irritants. This particular case report aimed to critically analyze the clinical, pathological and histological features of a salient lesion of the oral cavity.

Keywords: Fibroma, Granuloma, Reactive lesions, Tumours.

Introduction

The histopathological presence of calcifications growth with Reactive fibrous called peripheral ossifying fibromas (POFs) (Figure 1). In response to trauma or irritation POF is a non-neoplastic entity, which occurs on the gingiva.[1] It is a reactive lesion of connective tissue and is not the soft tissue counterpart of central ossifying fibroma.[2] It is a benign swelling of the gum developing between the teeth (interdental papilla), most commonly seen in teenagers and young adults, derived from cells of the periodontal ligament. It is seen most commonly in the upper jaw towards the front, common site is related to an incisor or cuspid tooth. It can be red or pink in color with a smooth or pebbled irregular surface can be ulcerated or not with a broad base limpet-like attachment or less often on a short stalk (pedunculated). Clinically, it was difficult to distinguish from other common lumps in the mouth such as pyogenic granuloma, oral irritation fibroma, giant cell fibroma or peripheral giant cell granuloma (PGCG).[3] It can happen from practically any delicate tissue site, tongue, gingiva, and buccal mucosa being the most well-known. No age predominance is seen.[4]

Case Report

An 18-year-old male patient reported to the Department of Periodontology, People's Dental Academy, Bhopal with the chief complaint of swelling in right lower front tooth region for 6 months. The lesion increased in size gradually with no history of bleeding and pain. Intra-oral clinical examination revealed a pedunculated, soft and oedematous inconsistency and well-defined growth in relation to 42, 43, 44 on the lingual side, measuring 2.5 × 3 cm in diameter, extending from distal surface of 42 to mesial surface of 44, upper border covers the middle third level of 42, 43, 44 (Figure 2). On the basis of histological and clinical evaluation, the provisional diagnosis made was POF. Differential diagnosis was suggested as chronic fibrous epulis, irritation fibroma osteosarcoma and pyogenic granuloma.[5]

A complete hematological investigation, radiograph intraoral periapical was included (Figure 2). Post-operative photographs after the immediate procedure, 1 week and 1 month have been mentioned (Figures 3 and 4). After that scaling and root planning was done. After phase 1 therapy, surgical excision of the fibroma was done with the use of scalpel. Educated assent was taken, effective sedative specialists (2% lignocaine hydrochloride and 1:80,000. adrenaline) was applied to the careful site and nearby sedative penetration was controlled. After sedation was discovered to be compelling, extraction

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Figure 1: Clinical presentation of the case

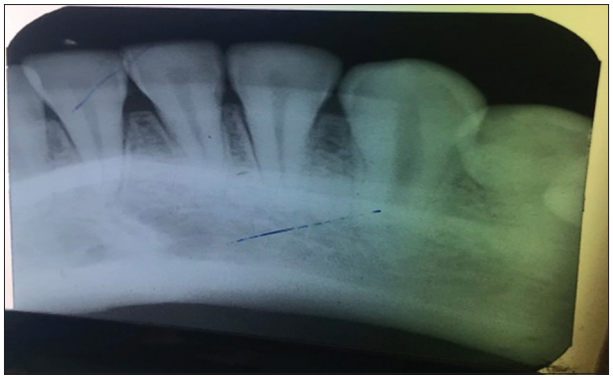

Figure 2: Intraoral periapical of the lesion

Figure 3: Immediate post-operative

Figure 4: After 1 week and 1 month post-operative

of fibroma was finished with the surgical blade. The patient was recalled after 15 days and 2 months, respectively, for re-evaluation. Post-operative instructions were given, and antibiotic capsule amoxicillin (500 mg) thrice a day for 5 days and nonsteroidal antiinflammatory drug paracetamol thrice a day for 3 days were prescribed to prevent post-surgical infection and pain. The postoperative session was uneventful with no delayed haemorrhage. The mucosa was found to be normal in colour and showed no vascular markings. The excised tissue was submitted to the Department of Oral Pathology for histopathological investigations. Based on the history, clinical examination, and histological analysis of biopsy, the case was diagnosed with POF.

Discussion

The gingiva might have various types of localized reactive lesions which occur on such as focal fibrous hyperplasia, pathology tumours, pyogenic granuloma, pyogenic granuloma, fringe monster cell granuloma (PGCG), and POF benign tumours. POF is a non-neoplastic enlargement of the gingiva that is classified as a reactive hyperplastic inflammatory lesion, a common gingival growth, which is typically seen on the interdental papilla. It represents 9.6% of gingival lesions.[2,5-9]

Histologically stays disputable and there are two ways of thinking to comprehend the histogenesis of POF. It might at first create as pyogenic granuloma that goes through ensuing stringy development and calcification, that addresses the reformist phase of a similar range of pathosis. It is due to inflammatory hyperplasia of cells of the periodontal ligament/periosteum. Metaplasia of the computed tomography leads to dystrophic calcification and bone formation. Provoking factors such as subgingival plaque and calculus, dental appliances, poor quality of dental restorations, micro-organisms and food lodgement initiate the inflammatory response. POF clinically presents as smooth lobulated pink mass on a pedunculated or sessile base. It has an increasing incidence in II decade and declining incidence after III decade. Female predilection is higher in the lesion due to the hormonal influences. It is usually occurring in anterior to molars, especially in incisor canine region. POF must be separated from other responsive sores of a gingiva such as PGCG and fringe odontogenic fibroma. Pyogenic granuloma shows red mass with surface ulceration clinically and minutely display vascular expansion looking like granulation tissue. PGCG shows dissipated goliath cells in a sinewy stroma. Fringe odontogenic fibroma contains unmistakable islands of odontogenic epithelium. Bone association, however not critical in the vast majority of the cases, a few adjustments are noted like: Superficial disintegration of bone Foci of calcifications Widening of the periodontal tendon space and thickened lamina dura. Relocation of teeth with Interdental bone misfortune. The essential tiny example of the POF is stringy multiplication related with the arrangement of mineralized parts. Mineralized part differs from 23% to 75%. Dystrophic calcifications Bone (woven/lamellar) Cementum.

An obsessive substance whose histogenesis is yet to be outlined is fringe hardening fibroma. It presents a shifted facility neurotic introduction. Generous cover exists between different central

responsive abundances of the gingiva. The usual presentation clinic-pathological characteristics may vary to contrary; our case presented a different age, sex and site of POF. Surgical excision is considered therapeutic and may present a high the recurrence rate (8–20%) of POF. It has been viewed as the high for responsive sores and it likely happens because of fragmented introductory evacuation, rehashed injury, or industriousness of the neighbourhood aggravations. Patient evaluation and management of patient for identification of any reactive lesions requires the formulation of differential diagnosis to enable accurately.

Conclusion

An obsessive substance whose histogenesis is yet to be outlined is fringe hardening fibroma. It presents a shifted facility neurotic introduction. Generous cover exists between different central responsive abundances of gingiva. The usual presentation clinic-pathological characteristics may vary to contrary; our case presented a different age, sex and site of POF. Surgical excision is considered therapeutic and may present a high the recurrence rate (8%–20%) of POF. It has been considered the high for reactive lesions and it probably occurs due to incomplete initial removal, repeated injury, or persistence of the local irritants. Patient evaluation and management of patient for identification of any reactive lesions requires the formulation of differential diagnosis to enable accurately.

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