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Peripheral Ossifying Fibroma – Report of a Case

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Abstract

The peripheral ossifying fibroma is a non neoplastic inflammatory proliferation which should be differentiated from the peripheral version of the central giant cell granuloma which is a true neoplasm. The POF occurs more commonly in females than in males, more common in the maxilla and generally presents as a painless mass smaller than 2 cm.The POF is thought to originate from periodontal ligament and marginal gingival tissue. Management includes complete excision of the lesion though it has got high recurrence rate. Here a case of a large POF in the maxilla of a 45 year old adult is described.

Keywords: Peripheral ossifying fibroma, Ossifying fibroid epulis, Peripheral fibroma with calcification, Calcifying fibroplastic granuloma, POF

Introduction

The differential diagnosis of exophytic gingival lesions include peripheral odontogenic fibroma, peripheral giant cell granuloma, pyogenic granuloma, and peripheral ossifying fibroma (POF).The peripheral odontogenic fibroma, the peripheral counterpart of the central odontogenic fibroma, is neoplastic, whereas the others are generally regarded reactive in nature.[2] The proliferative activity of the reactive lesions are considered to be initiated by local irritants occurring in the gingival crevice or associated with adjacent teeth. These irritants stimulate the gingival fibers of the periodontal ligament, a specialized periosteal tissue, or the periosteum itself.[2]Depending on the tissue stimulated, these fibrous growths may contain bone and/or cementum.

The POF has been described by many names, including ossifying fibroid epulis, peripheral fibroma withcalcification, calcifying fibroplastic granuloma, and peripheral odontogenic fibroma.[2]As described by Shafer et al, it is a well-demarcated mass of tissue, located on the gingiva, having a sessile or

pedunculatedbase, and being the same colour as normal mucosa or slightly redder. The surface may be either intact (34%) or ulcerated (66%).

Case Report

A 45 year old male reported to our department with a complaint of a growth in his upper left side of oral cavity of several months duration. (Fig 1 (a)) He gave a history of chronic smoking and regular consumption of alcohol. There was history of bleeding from the growth occasionally. Intra oral examination showed a pedunculated growth in the upper left maxilla of size approximately 5x3 cm. The growth was bright red in color, firm on palpation with bleeding on manipulation. He also had poor oral hygiene (Fig 1 (b)).

An OPG was taken which showed mixed radiolucent /radiopaque changes in the left maxillary canine and premolar region (fig 1(c)). A complete hemogram was also done and the values were within normal limits. An excision of the lesion was carried out under local anesthesia along with local curettage and the specimen was sent for histopathological evaluation (Fig 2 (a) (b)). The patient was recalled for oral prophylaxis and extractions of carious teeth but failed to show up on the fixed schedule. The histopathological examination report came as peripheral ossifying fibroma of the maxilla

Discussion

Reactive or inflammatory gingival lesions are commonly found in oral cavity, corresponding to over 90% of gingival biopsies.[6]Ossifying fibromas are rare lesions affecting especially the craniofacial areaand the first descriptions were made by Menzel in 1872.They are classified into two types, central and peripheral. The first one develops from endosteum or periodontal ligament from radicular apex and grows at the cost of medular bone expansion. On the other hand, peripheral type develops in a continuous manner with periodontal ligament, involving only gingival portion.[3]

It is 2–4 times more prevalent in females and most commonly affected age group is thesecond decade of life.Caucasians seem to bemore affected than Blacks.Most reports on POF have described the size of the lesion as smaller than 2 cm.[4] It does not invade local structures and generally proliferates along the path of least resistance. Occasionally, the lesion will “cup out bone” or displace roots, but only when the lesion reaches an extremely large size.[4]Regarding time of lesion progress,it may be present in oral cavity for some months to years, depending on interference with function and discomfort to patient.

Upon clinical examination, the lesion is often described asa pedunculated or sessile nodular mass,and sessile-based is the most frequent presence.[6]Regarding location, 50% of the lesions affect the region of incisors and more than half of it is located in upper arch (60%).Single lesions are the most frequent ones.

During radiographic evaluation, in some cases the presence of radiopaque diffuse calcifications is observed in a shadow of soft tissues and rarely there is associated bone destruction.[10]Radiographic appearance of tooth migration ispresent only in 5%

of the cases, thus constituting a very rarefinding, as well as radicular resorption.[6]

As regards to microscopic evaluation, in Bhaskar andLevin's (1973)[3]work, 22 peripheral ossifying fibromas weremicroscopically assessed and 73% of the cases were observedto have mineralized mass surrounded by a stroma of fibrocellular connective tissue. Buchner and Hansen[1] reported that there are three types of mineralized tissue in the POF: dystrophiccalcification, bone (woven or lamellar), and cementum-like material. The dystrophic calcification ismost prevalent in ulcerated lesions.

The treatment of peripheral ossifying fibroma comprehendstotal excision of the lesion including periosteum andperiodontal ligament. Any identifiable etiologicagent, such as calculus, ill-fitted dental appliances,and rough restorations that may cause recurrence should be removed.[6]Relapse rate of peripheral ossifying fibroma is consideredhigh, ranging from 8% to 20%and it is usually related toincomplete elimination of the lesion and to local irritatingfactors.Then, a strict postoperative follow-up is necessary to early detect relapses.

Conclusion

POF is histologically and biologically benign, but can cause severe functional problems when present. It should be considered in the differential of gingival lesions that, based solely on their size, appear clinically aggressive.For complete recovery with no incidents and no relapses requires a surgical procedure properly performed with respect tocomplete removal of the lesion associated with periodic control of the patient regarding elimination of plaque and other bacterial foci.

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Legend Figures

Fig 1 (a)

Fig 1 (b)

Fig 1(c)

Fig 2 (a)

Fig 2 (b)