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Case Report

Peripheral ossifying fibroma : A rare case report with unusual size

Dr Aravinth R[1], Dr Sathyanarayanan[2], Dr Priyanka Ganesan[3], Dr Adithya Baskaran[4], Dr Santhanam Vidyalakshmi[5], Dr S Vandhana S[6]

[1,3]Post graduate Resident, Department of Oral and Maxillofacial surgery, Indira Gandhi institute of Dental Sciences Pondicherry;
[2]Professor and HOD, Department of Oral and Maxillofacial Surgery, Indira Gandhi institute of Dental Sciences, Pondicherry;
[4]Post graduate Resident, Department of Oral and Maxillofacial Pathology , Indira Gandhi institute of Dental Sciences Pondicherry;
[5]Reader, Department of Oral and Maxillofacial Pathology, Indira Gandhi institute of Dental Sciences Pondicherry;
[6]Professor, Department of Oral Medicine and Radiology, Indira Gandhi institute of Dental Sciences Pondicherry

ABSTRACT:
Gingival growth although not uncommon, have always been a challenging task with regard to its accurate diagnosis, for prompt treatment mainly, due to the fact that they more or less have same clinical presentation. These gingival growth can be localised or generalized. Most of the gingival growth lesions are found reactive with very less incidence of neoplastic behavior. The commonly found reactive lesions include, pyogenic granuloma, that is pregnancy tumour, drug induced enlargement, focal fibrous hyperplasia and peripheral ossifying fibroma. peripheral ossifying fibroma has been described with various synonyms and is believed to arise from the periodontal ligament comprising about 9% of all gingival growths. For differentiation of such lesions histopathological correlation is mandatory. We present a case of a reactive gingival growth with unusual size of about 2*2cm, in upper anterior maxilla extending upto hard palate. Excision of lesion under G.A was planned. Histological examination with haematoxylin and eosin stains of excised tissue confirmed presence of deeper fibro collegenous stroma with cellular area s suggestive of peripheral ossifying fibroma as final diagnosis.
Keywords: Palatal growth, hyperplastic soft tissue , excision. Benign gingival lesion.

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Corresponding Author: Dr Aravinth R, Post graduate Resident, Department of Oral and Maxillofacial surgery, Indira Gandhi institute of Dental Sciences Pondicherry.

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INTRODUCTION

Peripheral ossifying fibroma (POF)also referred as calcifying fibroblastic granuloma is one of the common reactive lesions.[1] Other less common synonyms include, peripheral cementifying fibroma, calcified or ossifying fibroid epulis and peripheral fibroma with calcification. (Gardner, 1982).[2] The term peripheral ossifying fibroma was coined by Eversol and Robin in 1972 . [3] In 1993, Waldrom described it as well demarcated and occasionally encapsulated lesion with fibrous tissue and variable amount of mineralised material resembling bone.[4] Gingival growth although not uncommon, have always been a challenging task with regard to its accurate diagnosis, for prompt treatment mainly, due to the fact that they more or less have same clinical presentation. These gingival growth can be localised or generalised. Most of these lesions are innocuous,with lesser incidence of malignancy. Peripheral ossifying fibroma are hyperplastic soft tissue growth and are associated to growth from gingival periosteum and periodontal membrane. It

comprises of 9% of all gingival growth. They are usually small,with higher incidence in anterior maxilla, innocuous with or without pain. More commonly found in second decade of life they show slightly higher female predilection. It may be pedunculated or broad based, usually with a smooth surface and varies from pale pink to cherry red in color. It has also been reported that it represents a maturation of a pre-existing pyogenic granuloma or a peripheral giant cell granuloma.[5] We present a case of peripheral ossifying fibroma (POF) in anterior maxilla region with its unusual size of 3*2cm extending upto palate in a young 16 year old male.

CASE REPORT

A 16-year-old Male presented to our outpatient department with the chief complaint of soft tissue swelling with pain in upper front tooth region. History revealed that the growth had appeared 3 months prior as a small nodule and had gradually increased to its present size. He also gave history of assault over upper front region of jaw 3 months back.The swelling was associated with pain, which was gradual in onset, intermittent in nature, aggravated on palpation and relieved with medications. Her medical and personal histories were insignificant. Clinical extraoral examination revealed a diffused ill-defined swelling over columella region with superior extension at ala of nose and inferiorly at vermillion border of lip. No change in skin color and texture was seen over the swelling. On palpation the swelling was nonfluctuant, firm, nonsessile and attached to underlying tissue. Intraoral examination showed swelling over upper alveolar region extending from 14 to 23 tooth region. The anterior extent was obliterating the upper vestibule while posterior extent was till incisive papilla The lesion appeared as a round to oval shiny, oval pink swelling measuring approximately 3*2cms. Grossly it appeared to be exophtyic mass which was interferring with occlusion. The growth was smooth, firm to rubbery in consistency, non-fluctuant, pedunculated, non-tender, with no temperature change over the growth, and not associated with discharge [Figure 1].

FIGURE 1: CLINICAL APPEARENCE OF THE LESION

The patient was subjected to radiographic examination and his occlusal radiograph of maxillary arch revealed a welldefined radiopaque lesion about 3 cm × 3 cm × 2 cm over anterior 1/3rd of the palate which was attached to the underlying palatal tissue in region , with a distinct plane of cleavage. [Figure 2].

FIGURE 2: RADIOGRAPHIC APPEARENCE OF THE LESION

After routine blood examinations, excisional biopsy of the lesion was done under antibiotic coverage and local anesthesia after obtaining written informed consent. And sent for histopathological evaluation that revealed epithelium overlying a richly cellular fibroblastic connective tissue stroma comprising bony trabeculae with osteoblastic rimming of mature bone with a predominantly lamellar structure. Excision of lesion was planned under general anaesthesia. The lesion was isolated and dissected from its stalk on the palatal mucosa and removed in toto [Figure 3a]

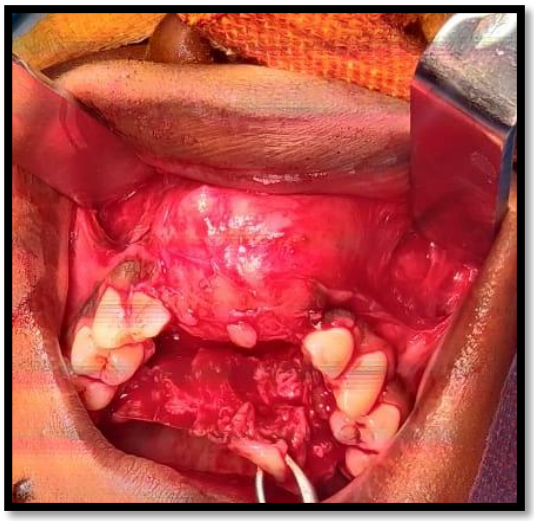

FIGURE 3A: SURGICAL APPEARENCE OF THE LESION

The excised specimen measured about 3 cm × 3 cm × 2 cm with glistening smooth pink surfaces all around,

except the resected base of the lesion which was severed and red [Figure 3b].

FIGURE 3B: EXCISED SPECIMEN FROM THE LESION

The excised specimen was sent for histopathological evaluation which confirmed the diagnosis as peripheral ossifying fibroma. On follow-up, the lesion healed uneventfully with no complications. The histopathological picture present with, three kind of minralised tissue [figure 4]

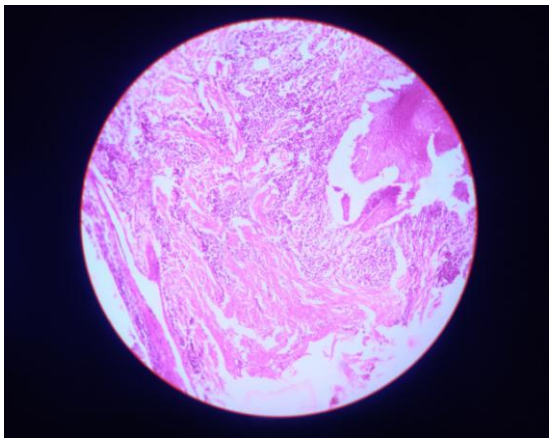

FIGURE 4: HISTOPATHOLOGICAL APPEARENCE OF THE EXCISED SPECIMEN

1.Bone that may be woven or lamellar bone sometimes surrounded by osteoid, or in trabecular form; 2. Cementum-like material that appears as spherical bodies resembling cementum or large acellular round-to-oval eosinophilic bodies; 3. Dystrophic calcifications, which can range from small clusters of minute basophilic granules or tiny globules to large, solid irregular masses [15,8].

DISCUSSION

The origin of fibromas of gingiva is mainly from the connective tissue or the periodontal ligament. Majority of ossifying fibromas with origin from craniofacial bones are benign in nature. These lesions are well demarcated from adjacent bones. Clinically, they cannot be easily differentiated from various gingival growth and often present as gingival lesion that is sessile or pedunculated, ulcerated and erythematous or appears same as adjacent gingiva. No blanching on palpation is seen(Walters et al.; Kenney et al., 1989)[6], the lesions are usually less than 1.5 - 2cm in size and seldom are of larger size. Associated bone resorption is also a clinical finding routinely seen. (Poon et al., 1995)[8]. Thus for an accurate diagnosis histopathological correlation is mandatory. Histologically the lesion is composed of proliferating fibroblasts along with interspersed bone or calcified masses. They are generally classified into two types: central and peripheral. Central ossifying fibroma as the name suggests shows origin from nidus in the periodontal ligament or endosteum adjacent to the apex of the root which leads to extraoral swelling due to expansion of medullary space. While the peripheral ossifying fibroma arises from soft tissues in the tooth bearing areas of jaw.[9,10] Precise etiology of this disease entity is still not confirmed but are usually associated with reactive stimulus for example trauma to gingiva, plaque accumulation, calculus, masticatory forces, ill- fitting appliances, mutilated teeth, poor quality or broken-down restorations and ill fitting crowns [11]. The idea for pathogenesis of POF varies, according to kumar et al the origin is frequently through the interdental papilla, its proximity to the gingiva and the periodontal ligament along with the presence of oxytalan fibers within the mineralized matrix of some lesions. It has been also Proposed that POF develops from the secondary fibrosis of longstanding pyogenic granuloma to which it resembles clinically as well as histopathologically. It may arise following chronic irritation of the periosteal and periodontal membrane causing metaplasia of the connective tissue along with formation of bone or dystrophic calcified masses [12] Literature also suggests more prevalence amongst females in their second decade suggesting the hormonal influence in etiopathogenesis of the disease. In rare cases where the occurrence is multicentric points the role of genetics in the pathogenesis [13]. Depending upon the duration of the lesion, it may show radiographic features of no change to destructive changes of the bone. In some cases, superficial erosion of underlying bone, cupping defect and focal areas of radiopaque calcifications at the center of the lesion can be seen [14]. In the present case erosive changes were encountered in relation with tooth no 11,12,13,21,22,23. Commonly found differential diagnosis of the lesion includes, pyogenic granuloma, peripheral giant cell granuloma, irritational fibroma, peripheral odontogenic fibroma while some authors noted the incidence of cancer in only 2% cases. Excision of lesion with enucleation is the best possible treatment modality to control the lesion.Tooth extraction is seldom necessary[13,8,15]. Soft tissue lasers can also be used as the lasers have the advantage of providing a dry and bloodless surgery, reduced bacteremia at the surgical site, reduced mechanical trauma with resultant lessened psychological trauma for the patient, minimal scarring. Incomplete removal of the lesion, repeated injury or persistence of local irritants.[9]The

average time interval for the first recurrence is 12 months [15,16]

CONCLUSION

Peripheral ossifying fibroma is a slowly progressing reactive lesion requiring complete removal of the lesions down to the periosteum and periodontal ligament along with regular post excision follow-ups to minimize the possible chances of recurrence.

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