International Journal of Research in Health and Allied Sciences

Journal home page: www.ijrhas.com

Official Publication of "Society for Scientific Research and Studies" [Regd.]

ISSN: 2455-7803

Case Report

Peripheral Ossifying Fibroma in Anterior Mandibular Region: A Case Report

Dr. Divya Jyoti[1], Dr. Harinder Gupta[2], Dr. Harmesh Sharma[3], Dr. Megha Sharma[4], Dr. Uday Sabherwal[5], Dr. R Yamini[6]

[1,4,5,6] Post Graduate student, Dept. of Periodontology, Govt. Dental College & Hospital, Patiala, Punjab
[2]Professor & Head, Dept. of Periodontology, Govt. Dental College & Hospital, Patiala, Punjab
[3]Professor, Dept. of Periodontology, Punjab Govt. Dental College & Hospital, Amritsar, Punjab

ABSTRACT:
The peripheral ossifying fibroma (POF) is a relatively uncommon, reactive gingival overgrowth usually composed of cellular fibroblastic tissue containing one or more mineralized tissues, namely bone, cementum-like material, or dystrophic calcification. The aetiology and pathogenesis of POF are yet not clear, but some authors have hypothesized a reaction originating from the periodontal ligament, as a result of irritating agents such as dental calculus, plaque, orthodontic appliances, and ill-fitting restorations. The aim of our case report was to report the clinicopathologic features of a case of POF.
Keywords: Peripheral ossifying fibroma

Received: 22 November, 2021 Accepted: 29 December, 2021

Corresponding author: Dr. Divya Jyoti, Post Graduate student, Dept. of Periodontology, Govt. Dental College & Hospital, Patiala, Punjab

This article may be cited as: Jyoti D, Gupta H, Sharma H, Sharma M, Sabherwal, Yamini RY. Peripheral Ossifying Fibroma in Anterior Mandibular Region: A Case Report. Int J Res Health Allied Sci 2022; 8(1): 68- 71.

INTRODUCTION

Peripheral ossifying fibroma (POF) is a relatively uncommon gingival growth.[1] POF accounts for 3% of all oral tumors[2] and for 9.6% of all gingival lesions.[3] The POF mainly affects women in the second decade of life. The lesions are most often found in gingiva, located anterior to molars and in the maxilla. Clinically, it manifests as a slow growing gingival mass measuring approx. 2 cm in size and is located in the interdental papilla region. The base may be sessile or pedunculated, the color is identical to that of gingiva or slightly reddish or the surface may appear ulcerated.[4] Histologically, the POF consists of a fibrocellular component with focal deposits of bone, some cementum as well as irregular amounts of decalcification. A chronic inflammatory infiltrate is commonly seen around the periphery of the lesion.[5] In vast majority of the cases, there is no apparent underlying bone involvement visible on a roentgenogram. However on rare occasions, there does appear to be superficial erosion of bone.[6]

It occurs in the younger age group with a female preponderance. It has a predilection for maxillary arch and most of them occur in the incisor-cuspid region. It presents as a painless mass on gingiva or alveolar mucosa measuring not exceeding 3 cm. It can be pedunculated or sessile. Earlier lesions appear irregular and red and older lesions have a smooth pink surface. Surface ulceration may be present.[2] Hence; we hereby present a case report of peripheral ossifying fibroma affecting anterior mandibular region.

CASE REPORT

A 44 year-old male reported with the chief complaint of soft tissue growth in the anterior mandibular region. Intraoral examination revealed a painless pedunculated, cauliflower-like rubbery mass on the anterior mandibular region. The lesion was abnormally large about 2.5 cm x 1.5 cm. History revealed that the lesion started growing on its own since she first noticed it about a month back when it was a small nodule. The lesion was painless and occasionally bled on its own or when traumatized with toothbrush and in its present state was interfering with occlusion. There was no significant medical and familial history. Radiograph revealed only soft tissue

shadow and space. After routine blood examinations, excisional biopsy of the growth was done under antibiotic coverage and thorough curettage of the adjacent periodontal ligament, and periosteum was carried out to prevent recurrence. Histomorphological examination revealed evidence of calcifications in the hypercellular fibroblastic stroma confirming the lesion as POF. The follow-up of the case showed normal healing of the area.

Photograph 1: Pre-operative before oral prophylaxis

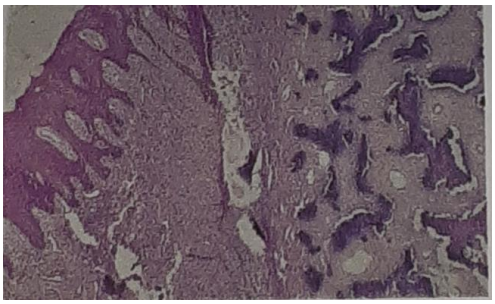
Photograph 2: OPG

Photograph 3: Pre-operative after oral prophylaxis

Photograpgh 4: Excised soft tissue

Photograph 5: Post-operative

Photograph 6: Coe-pak placed



Photograph 7: Histopathological picture


Photograph 8: After coepak removal

DISCUSSION

In oral cavity periodontium can show different types of focal overgrowths. These lesions arise due to overgrowth and proliferation of different components of connective tissue in periodontium, i.e. the fibers, bone, cementum, blood vessel or any particular type of cell. The lexicon of focal proliferative lesions commonly occurring on gingival tissue includes fibroma, giant cell fibroma, pyogenic granuloma, peripheral giant cell granuloma, POF and POdF.[7] Most of these lesions are reactive chronic inflammatory hyperplasias, with minor trauma or chronic irritation being the etiologic factors.[8]

The nomenclature of these lesions is done in such a way so as to highlight the difference in nature of growth, location of growth, origin and the dominant proliferating histological component/cells in the lesion. The lesions which are present intraosseously are termed as "central lesions", whereas their extraosseous counterparts or the lesions which appear on outer soft tissue (e.g. gingiva) are termed "peripheral lesions". Also, a lesion may arise due to inflammation because of a stimulus and is called as a "reactive lesion" or it can be truly "neoplastic" where it is classified as a benign or a malignant neoplasm. [9]

In the present case report, we reported case of a 44 year-old male reported with the chief complaint of soft tissue growth in the anterior mandibular region. History revealed that the lesion started growing on its own since she first noticed it about a month back when it was a small nodule. Histomorphological examination revealed evidence of calcifications in the hypercellular fibroblastic stroma confirming the lesion as POF. The follow-up of the case showed normal healing of the area. Mishra MB et al reported the case report of peripheral ossifying fibroma. Their case report comprises the growth that occurred in the mandibular anterior region with displacement of anterior teeth, its satisfactory management and literature review. POF represents a reactive benign lesion of connective tissue and is not the soft tissue counterpart of ossifying fibroma and is also not related anyhow to peripheral odontogenic fibroma. POF in the age of 45 years, arising in the mandibular anterior region, is an occasional entity. Careful clinical examination and histopathology findings should be correlated to conclude the final diagnosis.[10]

POF histopathologically is described as a lesion which has a fibrous stroma in which there is presence of mineralized tissues such as bone and/or cementum-like. The one which predominates gives the term as either "Ossifying or Cementifying." There can be a mixture of both "Cemento-Ossifying." However, this term is discarded as clinical and histopathological presentation is the same in those cases where there is no cementum.[8] The mineralized material may be lamellar or woven bone. These can be in any combination with cementum. There are no giant cells reported. Some authors have reported the presence of odontogenic epithelium and also that the proliferating cells may be of myofibroblastic origin.[9] It is most commonly seen in the mandibular region anterior to the molar. It is very rare to see POF in the maxillary arch. It is seen to affect females and in the second decade of life. Its etiopathogenesis is still debated. Some researchers feel that it represents that some kind of chronic irritation is responsible for stimulation of cells in the periodontal ligament. These cells ultimately lead to the formation of bone by metaplasia. Others believe that POF is just a continuation or extension of PG. It merely represents a matured form of PG.[10] The treatment of choice remains surgical excision. There are very few cases to be reported as having a recurrence.[11] The purpose of reporting this case was to give a brief review to the surgeon that there can be a number of lesions presenting with the same picture but have varying histopathological presentation. It is always better to be aware of the fact and plan the surgery accordingly.

CONCLUSION

POFs are lesions with a common clinical presentation but distinct histopathological picture. POFs are common in the mandibular region. Some doubts on the reactive nature of POF still exist. The etiopathogenesis of this lesion is still not clear, and further studies are needed to elucidate the mechanisms of POF development

REFERENCES

1. Gundiff EJ. Peripheral Ossifying Fibroma.A review of 365 cases. Thesis Indiana University. 1972
2. Shetty DC, Urs AB, Ahuja P, Sahu A, Manchanda A, Sirohi Y. Mineralised components and their interpretation in the histogenesis of POF. Indian J Dent Res. 2011;22:56–61.
3. Gardener DG. The peripheral odontogenic fibroma: An attempt at clarification. Oral Surg Oral Med Oral Pathol. 1982;54:40.
4. Jain A, Deepa D. Recurrence of peripheral ossifying fibroma: A case report. People's J Sci Res. 2010;3:23–5.
5. Effiom OA, Adeyemo WL, Soyele OO. Focal reactive lesions of the Gingiva: An analysis of 314 cases at a tertiary Health Institution in Nigeria. Niger Med J. 2011;52:35–40.
6. Shetty DC, Urs AB, Ahuja P, Sahu A, Manchanda A, Sirohi Y. Mineralized components and their interpretation in the histogenesis of peripheral ossifying fibroma. Indian J Dent Res. 2011;22:56–61.

7. Poon CK, Kwan PC, Chao SY. Giant peripheral ossifying fibroma of the maxilla: Report of a case. J Oral Maxillofac Surg. 1995;53:695–8.
8. Yadav R, Gulati A. Peripheral ossifying fibroma: A case report. J Oral Sci. 2009;51:151–4.
9. Eversole LR, Rovin S. Reactive lesions of the gingival. J Oral Pathol. 1972;1:30–8.
10. Mishra MB, Bhishen KA, Mishra S. Peripheral ossifying fibroma. J Oral Maxillofac Pathol. 2011;15(1):65-68.
11. Sah K, Kale AD, Hallikerimath S, Chandra S. Peripheral cemento-ossifying fibroma: Report of a recurrence case. Contemp Clin Dent. 2012;3(Suppl 1):S23–5.