Peripheral Ossifying Fibroma- A Rare Manifestation in Mandibular Posterior Region

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Abstract

Peripheral ossifying fibroma (POF) is an occasional growth of the anterior region of mandible and accounts for 3.1% of all oral tumors and 9.6% of the gingival lesions. About 60% of these tumors occur in maxilla and more than 50% of all cases of maxillary POF are found in the incisors and canine areas. A male of 45 years of age had growth arising in the mandibular right posterior region. In this age group and in mandibular posterior quadrant, POF is very occasional and has not so far been reported in the literature.

Introduction

Benign fibrous overgrowths arising from the mucous membrane are termed as fibromas and are frequent growths in the oral cavity. Many of the fibrous growths originate from underneath the periodontium, similar to peripheral ossifying fibroma. Peripheral ossifying fibroma is an occasional growth of the anterior region of mandible and accounts for 3.1% of all oral tumors and 9.6% of the gingival lesions. About 60% of these tumors occur in maxilla and more than 50% of all cases of maxillary POF are found in the incisors and canine areas. A male of 45 years of age had growth arising in the mandibular right posterior region. In this age group and in mandibular posterior quadrant, POF is very occasional and has not so far been reported in the literature.

Case Report

A non-smoker male, aged 45 years, reported with a moderately large growth in the mandibular posterior region. Medical history was insignificant. The patient was from low socioeconomic class.

History revealed that a small nodule appeared 6 months ago, which was painless. On examination, the patient’s lips were incompetent. Oral hygiene was considerably poor, which may be due to poor oral hygiene awareness, since oral hygiene is inversely related to socioeconomic class. There was a pale pink oval swelling in the mandibular right first molar region.

The surface was smooth, with no ulceration. The growth measured 3 x 3.0 cm in size and was extending out from buccal gingiva. The growth was considerably hard in consistency, sessile and not easily movable. CT scan was already with him that shows calcification within the lesion. Clinical appearance and consistency was of a hard fibrous growth, which therefore led to a provisional diagnosis of peripheral calcifying fibroma or peripheral odontogenic fibroma (POdF). Consent for the surgical procedure was obtained from the patient after proper counseling. Under general anesthesia as he was not ready for surgery under local anesthesia, the whole growth was excised and the underlying surface was thoroughly curetted up to deepest possible tissue and extraction of first molar (mobile) was done. After controlling bleeding, periodontal dressing was applied. The patient was discharged next day with prescription of antibiotics, analgesics and chlorhexidine mouth wash. The report revealed an over growth of fibrous tissue. The connective tissue of the growth comprised of bundles of collagen fibers in a cellular stroma. Numerous plumps to spindle shaped fibroblasts and fibrocytes were present. These cells were also arranged in a whirl shaped around irregular mineralization foci in the center. Few blood vessels with RBC and proliferating endothelial cells were also evident. Chronic inflammatory cell infiltrate was seen evenly distributed in whole area and the cells comprised mainly of lymphocytes and plasma cells. The calcified areas resembled cementum-like and bone-like ossifying areas. Few blood vessels with RBC and proliferating endothelial cells were also evident. Chronic inflammatory cell infiltrate was seen evenly distributed in the whole area and the cells comprised mainly lymphocytes and plasma cells. The overlying epithelium was hyperplastic parakeratotic stratified squamous epithelium showing numerous elongated rete ridges. Clinical assessment and histopathologic report confirmed and established the diagnosis as POF.

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,
The lesion appears as a nodular pale to red in color and surface is usually but not always ulcerated. Histopathologically, the lesion shows stratified squamous epithelium covering the nodular lesions which occur on gingiva (as mentioned before). Histopathologically, it is very important to understand the difference between the similar sounding lesions, i.e. POF, POF, central ossifying fibroma (COF) and central odontogenic fibroma (COdF). Despite of similarity in terminology, POF is a completely distinct entity from POdF and COF. The POF, representing a reactive benign lesion of connective tissue, is not the soft tissue counterpart (or related anyhow) to central ossifying fibroma which represents an osteogenic neoplasm. Similarly, the reactive lesion POF is completely different from POdF which is in fact a neoplasm of odontogenic ectomesenchyme with included odontogenic epithelium. As opposite to POF and COF, the POdF does represent the extraosseous counterpart of the COdF and is related to it.

Conclusion

The POF represents a reactive benign lesion of connective tissue and is not the soft tissue counterpart of ossifying fibroma (COF) and is also not related anyhow to POdF. It occurs frequently in anterior part of jaws of young females, exclusively on gingiva. The accepted treatment protocol includes surgical excision followed by histopathologic evaluation and follow-up.

References

Illustrations

Illustration 1

Intraoral Photograph

Illustration 2

Axial Section of CT scan
Illustration 3

Coronal Section of CT scan

Illustration 4

Surgical Specimen
Illustration 5

Histological Section
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