

AN UNUSUAL CLINICAL PRESENTATION OF MULTIFOCAL PERIPHERAL CEMENTO-OSSIFYING FIBROMA – A CASE REPORT

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ABSTRACT:

Peripheral cemento-ossifying fibroma is a gingival growth of reactive nature thought to originate from periodontal ligament. It is commonly seen in maxillary arch and has a predilection for females. The pathogenesis of this tumor is unclear, though trauma local irritation such as calculus, masticatory forces, faulty restorations could arise this lesion.

This article presents a unique case of multifocal peripheral cemento - ossifying fibroma in a 42 year old female involving both maxillary and mandible arch. The lesion was asymptomatic, slow-growing, sessile and normal mucosal color. An excisional biopsy has performed for the lesion and was diagnosed with peripheral cemento-ossifying fibroma after histological investigation.

Keywords: *Peripheral ossifying fibroma, gingival growth, Excisional biopsy.*

INTRODUCTION

Peripheral cemento-ossifying fibroma (PCOF) is a non-neoplastic enlargement of the gingiva with randomly distributed calcifications, immature bone and osteoid. The term peripheral cemento-ossifying fibroma was coined by Montgomery in 1927.[1] It is a common gingival growth usually arising from interdental papilla[7]. The etiology and pathogenesis is unclear. It has been suggested that these lesions originate in the cells of the periodontal ligament. PCOF affects both genders, but a higher predilection for females has been reported in the literature[8]. Clinically, PCOF appears as a nodular mass, either pedunculated or sessile. The color ranges from red to pink and the surface is frequently but not always ulcerated[2]. Treatment includes surgical removal of the lesion including the periosteum which reduces the high recurrence rate[3]. The present case report describes a case of Peripheral Cemento-ossifying fibroma in a 42 year female patient.

CASE REPORT

A 42 year old female visited the Department of Oral Medicine and Radiology with a chief complaint of painless swelling in gums in relation to upper and lower posterior region of the jaw since 6 months. History revealed that the growths were initially small and had gradually increased to attain the present size. Patient is not suffering from any other systemic diseases. Patient had not undergone any dental procedures. Patient was calm and quite. Extra oral examination reveals, no facial asymmetry, sinus or developmental anomalies. On Intra-oral examination there were multiple localized sessile distinct gingival growths were seen in three quadrants namely right and left upper posterior region and right lower posterior region. On inspection gingival growth

was present from mesial aspect of 16 to distal aspect of 18 extending from marginal gingiva to interdental papilla and attached gingiva. Similarly in 24,25,26 and 36,37,38 region. Growth were present only in the buccal aspect (Fig. 1,2,3). The overlying mucosa was normal in appearance without any secondary changes. Growth measures approximately 1.7x1 cm, 2x2cm, 2x1cm respectively. On palpation, the masses were sessile, firm in consistency, non-tender and no discharge. Teeth associated the growth were normal. Periodontal status reveals moderate amount of supra and sub-gingival calculus, and shows severe bleeding on probing.

As there are multiple distinct sessile gingival growths present since 6 months which is slow growing, firm and non-tender it was provisionally diagnosed as Benign reactive growth. The differential diagnosis include peripheral cemento-ossifying fibroma, peripheral odontogenic fibroma, and peripheral giant cell granuloma. Radiographic examination (orthopantomogram) reveals generalized radiolucency seen in interdental areas suggestive of horizontal bone loss. Radiolucency seen in root portion of 16,17,26,27, 35,47 region indicates angular bone loss. Radiolucency involving crown portion of 36 involving enamel, dentin and pulp suggestive of pulpitis.(Fig. 4)

Routine hemogram shows no remarkable findings. Patient underwent oral prophylaxis on the first visit and recalled after a week for curettage. Growths were persistent one week after curettage. The patient was then subjected to excisional biopsy under local anesthesia and sent for histopathological analysis. Post-surgical follow up has done. The one week follow up shows healing of surgical sites. Six months follow up shows no evidence of recurrence.(Fig. 7)

Histopathological examination shows dense fibrous connective tissue with areas of calcification seen. There is evidence of foci of minimal inflammatory cell infiltrate, and areas of moderate vascularity present. Surface epithelium shows parakeratinized stratified squamous epithelium.(Fig. 6) Van Gieson stain reveals positivity for collagen, cementum like material and ossified areas.(Fig. 5) Correlating the history, clinical and histological features the final diagnosis of peripheral cemento-ossifying fibroma was made.



Fig 1: Gingival growth present buccal aspect of 16,17



Fig 2: Gingival growth present buccal aspect of 24,25,26



Fig 3: Gingival growth present buccal and lingual aspect of 46,47,48



Fig 4: OPG revealing generalized horizontal bone loss and angular bone loss in 16,17,26,27,35,46,47

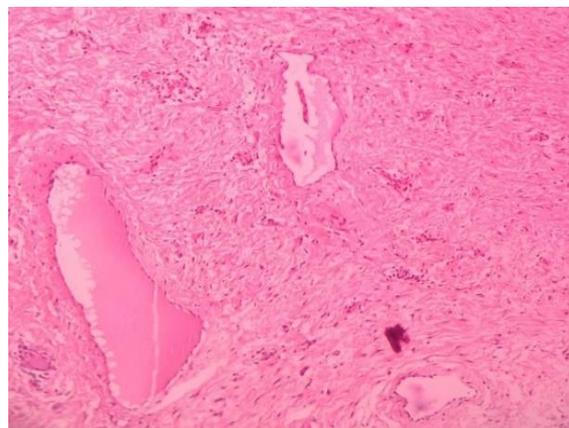


Fig 5: Van Gieson stain reveals positivity for collagen, cementum like material and ossified areas.

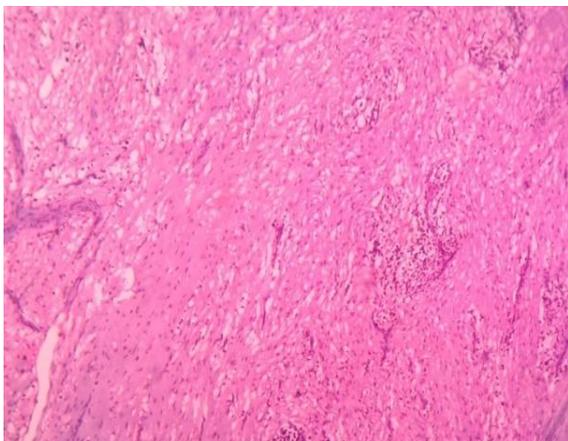


Fig 6: Photomicrograph reveals positivity for collagen and ossified areas.



Fig 7: Six months follow up shows no evidence of recurrence.

DISCUSSION

Peripheral cemento-ossifying fibroma (PCOF) is defined as a well-demarcated and occasionally encapsulated lesion containing variable amounts of mineralized material resembling bone and cementum.[8]PCOF accounts for 3.1% of all oral tumors[5] and for 9.6% of gingival lesions[5] The peak incidence is found most frequently in teenagers , young adults and women are 2-4 times more likely to be affected than men[1]. PCOF occur more in maxilla and more often found in anterior region. It usually measures less than 1.5 and rarely reaches more than 3 cm in diameter[1] PCOF usually occurs a solitary gingival growth. The present article discuss a unique multifocal Peripheral cemento-ossifying fibroma present in three quadrants namely right and left upper posterior region and right lower posterior region in a 42 aged female. Multicentric variant of Peripheral ossifying fibroma was reported in 2 cases involving two quadrants[5,7]. This case has two unique features namely multifocal variant of Peripheral cemento-ossifying fibroma and

involvement of three quadrants which has not been previously reported.

Trauma, local irritation such as sub gingival calculus, microorganism, masticatory forces, faulty restorations, food impaction and iatrogenic factors could also arise this lesion. In the present case patient had moderate amount of supra and sub-gingival calculus.

Clinically PCOF presents as a solitary, slow growing and well-demarcated nodular mass that exhibits a smooth surface, usually with normal colored mucosa. It has a sessile or pedunculated base and is generally of a hard consistency[5]. If the lesion is ulcerated mucosal color will alter. In the present case Secondary changes were not present in this case.

Radiographically PCOF varies from completely no changes to areas of calcification depending upon the degree of mineralization. Superficial bone loss, cupping defect and focal areas calcification have been reported in some cases.[3] Present case shows both angular and horizontal bone loss.

Histopathology, PCOF, can exhibit either an intact or ulcerated stratified squamous epithelium. The deeper fibroblastic component is highly cellular with central areas of calcification. The mineralized tissue may consist of bone, cementum like material, dystrophic calcification, or a combination of each[1]. The treatment of choice for PCOF is local resection with peripheral and deep margins including both the periodontal ligament and the affected periosteal component[4]. Incomplete resection of the lesions can cause recurrence. In addition, elimination of local etiological factors such as bacterial plaque and tartar is required[4]. The teeth associated with PCOF are generally not mobile, though there have been reports of dental migration secondary to bone loss. Extraction of the neighbouring teeth is usually not considered necessary.[4] Recurrence rate is approximately 16%.[2] In the present case, scaling and curettage was performed to prevent the progression of lesion and excision of lesion performed along with the periosteal component in relation to 16,17,24,25,26,46,47,48 to prevent the recurrence.

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