

Maxillary Cemento-Ossifying Fibroma

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Abstract

Maxillary cemento-ossifying fibroma is a rare, benign fibro-osseous lesion; belong to the odontogenic lesions, characterized by replacement of the bone by fibrous tissue and cementum like material. It occur most commonly in the 3rd and 4th decade with a female predilection. The current case report represent a 26-year-old female patient, who had cement-ossifying fibroma in the maxilla that extend to the left orbital rim and treatment is successfully perform by enucleating.

Keywords: Fibro-Osseous Lesions; Cement-Ossifying Fibroma; Benign Odontogenic Tumor; Maxilla.

Introduction

Cemento-ossifying fibroma is one of the fibro osseous lesions that commonly affect the head and neck region; it is a rare, benign, odontogenic tumor that commonly affects the mandible [1]. Frequently affect the posterior area of the lower jaw [2]. It may occur in the maxilla, particularly in the canine fossa and the zygomatic arch area and has a female predilection [3]. The peak incidence in the third and fourth decades of life [4]. Clinically, appear as a slow-growing intra bony tumor, normally well delimited and asymptomatic—though over time, the lesion may become adequate large to cause facial deformation [5]. Radiologic ally, they show a number of patterns according to the degree of lesion mineralization. The more advanced lesions manifest a well delimited unilocular lesion containing variable amounts of radio-opaque material [5,6].

Cemento-ossifying fibroma is characterized by proliferation of fibrous cells, new bone formation and a cementum like tissues in replacement to the normal bone [7]; that formed from pluripotent mesenchymal cells, originate from the periodontal ligament and capable of forming bone tissue and

cement [8].

Cemento-ossifying fibroma clinically resembles fibrous dysplasia, cemetifying periapical dysplasia or cemento-osseous florid dysplasia. It originates from the periodontal membrane [9]. The treatment choice is complete excision of the tumour, along with the involved site., they are insensitive to radiotherapy and recurrences are uncommon [10]. The current case report, for 26 years old Sudanese female with cemento-ossifying fibroma in the maxilla, extend to the orbital rim and it is excised by enucleating.

Case Scenario

A 26 years old Sudanese female came to the Oral and Maxillofacial Surgery Clinic complaining from painless hard swelling in the left side of the upper jaw with difficulty in biting which started 3 years ago and increase gradually in size. There was no significant medical or social history.

A clinical examination shows a bony hard well defined maxillary swelling with intact and normal colored mucosa, without apparent discharge. The lesion had a bucco-palatal extension and the associated teeth were firm and vital (Figures 1-2).

CT scan showed a spherical shaped well defined radiolucent with sclerotic margins in the left maxilla with involvement of left orbital rim (Figure 3). Incisional biopsy result was revealed fibro osseous lesion (foci of calcified materials and cementum like

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spherules) with characteristic osteoblastic rim surrounding the fibrous stroma.

Patient was Treated by Enucleation



Fig. 1: Shows a well-defined maxillary swelling with intact overlying mucosa



Fig. 2: Shows the bucco-palatal extension of the maxillary swelling



Fig. 3: Shows axial cut of CT scan which reveals a spherical shaped well defined radiolucency with sclerotic margins in the left maxilla

Discussion

Cemento-ossifying fibroma belongs to the fibro-osseous lesions, it is benign and rare, commonly occurs in the premolar and molar regions of the lower jaw during the third and fourth decades of life. Females are affected more and black patients tend to have multiple lesions. The lesion usually rises as a painless swelling [12,13] the most common clinical sign; the bony swelling or the buccal and/or lingual cortical plates expansion [14,15]. In our case the patient's age, in the 3rd decade and it is within the common range for appearance of COF, as well as the gender predilection and the clinical presentation.

The origin of the cemento-ossifying fibroma is not well defined and in the previous literature, it has been found that history of trauma can exaggerate it. However, it was not the reason in the present case report. Few studies have considered that these lesions develop either by reactive or developmental origin, from the periodontal membrane [11].

Ossifying fibroma is usually solitary. Bilateral as well as multiple familial ossifying fibromas also have been reported [16]. In this case it was a solitary lesion in the left maxilla.

Regarding the radiographic appearance, COF can present in three stages; in early stages the lesion is radiolucent (osteolytic), which then becomes progressively radiopaque as the mineralization of the stroma starts, thus it appears as a mixed lesion. In late stages, the radiopacities coalesce to the extent that the mature lesion may appear sclerotic or radiopaque lesion [17]. In this case CT scan shows a well-defined radiolucency with sclerotic margins in the left maxilla extending to the orbital rim superiorly.

Due to the circumscribed nature of the ossifying fibroma; the treatment of choice is surgical curettage or enucleation for most small ossifying fibromas [18]. Larger lesions that caused bone destruction may require surgical resection and reconstruction by a bony graft. The prognosis is very good, and recurrence is rare [12,18]. The Sudanese case was treated by enucleation of the lesion and it was successful with no evidence of recurrence in the follow-up appointments.

Conclusion

In this case we report a cemento-ossifying fibroma for a 26-year-old female patient who came with a maxillary swelling on the left side of the maxilla.

We concluded that a good correlation of the clinical, radiological and the histological features is mandatory for determining a definitive diagnosis, and classification of all fibro osseous lesions. Surgical resection and follow-up of the patients is obligatory to avoid recurrent of the lesion..

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