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RESEARCH ARTICLE

PERIPHERAL CALCIFYING CYSTIC ODONTOGENIC TUMOUR OF THE PALATE MAXILLA

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ABSTRACT

The calcifying cyst odontogenic tumor (CCOT) is an uncommon odontogenic lesion, which was described by Gorlin and al. in 1962 as a distinct entity. At 2005, the World Health Organization 2005 renamed these lesions as calcifying cystic odontogenic tumors. The CCOT represents less than 2.0% of all odontogenic tumors and cysts and it's characterized by an ameloblastoma like epithelium and ghost cells that have the potential to undergo calcification. In relation to the morphoanatomy, the location of the CCOT could be intra-osseal (central) or extra-osseal (peripheral).
The purpose of this paper is to describe a case report of a peripheral CCOT located in the right palate maxilla.

INTRODUCTION

Calcificant Cystic Odontogenic Tumor (CCOT) is an infrequent injury. It arises from odontogenic epithelial rests present in the maxilla, jaw or gum.[7]

Gorlin and col. described the CCOT for first time as an own pathological entity in 1962.[2,16] Clinically, the OCCT represents less than 2% of the odontogenic injuries.[2,7] It is possible to be found from the first decade to the eighth decade. It affects in same proportion the maxilla and the gum, being the most common in the dented zones, with greater incidence in the first molar area.[7]

It presents both in intraosseous (central) and extraosseous (peripheral) locations. The intraosseous CCOT is a unilocular or multilocular destructive radiolucent lesion that may contain irregular calcifications.[9,11] The peripheral calcifying odontogenic cyst tumor (PCCOT) accounts for less than 25% of the cases of CCOT and most commonly appears as a nodule on the gingiva.[5,16]

The aim of this article is to report clinical case of a patient with PCOC located in the right retroincisor palatine maxilla.

Case Report

A 16 -year-old female patient, without relevant medical history, was referred to the department of Medicines and Surgery Oral of the Dentistry Clinic of Monastir, Tunisia, for an asymptomatic swelling in maxilla palate.

The clinical exobuccal observation was without specificities however the intraoral examination showed a swelling, hard at palpation, that occupied the palate maxilla behind both right versed superior incisors. The lesion is covered by a normal mucous aspect, without no suppuration.

The patient reports the appearance of a recent diastema between the two incisors (Fig 1).

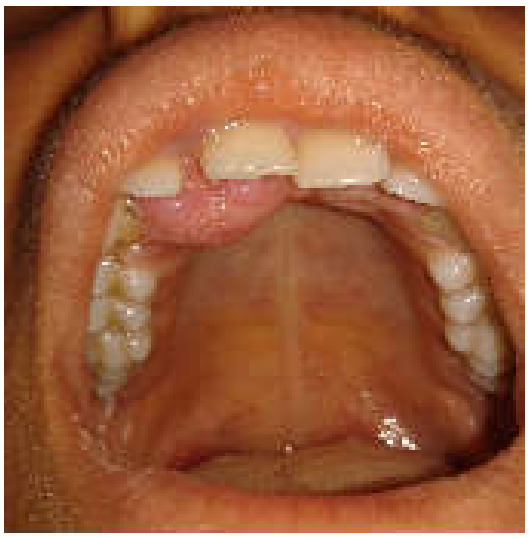

Figure 1 Palatal swelling covered by a normal oral mucosa with a recent diastema between the first and second right maxilla incisors .

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Dental examination does not disclove an evidence of caries or periodontal disease and the patient denied history of trauma in the area. Vitality tests were normal.

The radiographic exam (periapical radiograph) showed a radiolucent, unilocular image with defined margins between the roots of teeth 11 and 12. No root resorption was detected (Fig 2).

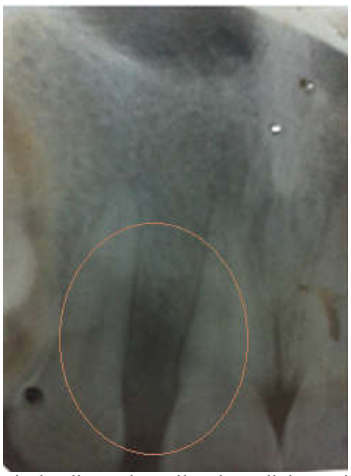

Figure 2 Periapical radiograph : unilocular radiolucent image between the divergent roots of the teeth 11 and 12.

Under local anaesthesia, surgical enucleation of the lesion was made. During the intervention, heavy bone walls were observed which facilitated its complete enucleation (Fig 3, 4).

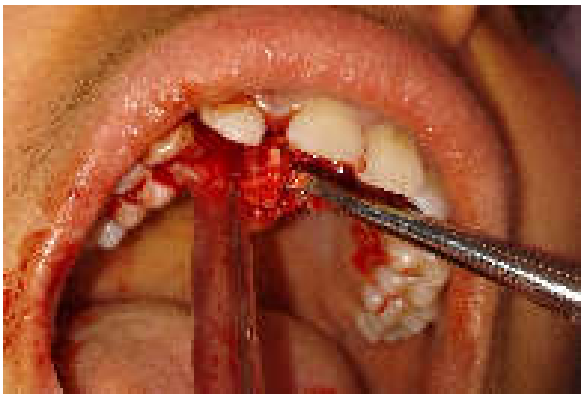

Figure 3 Excision of the lesion.

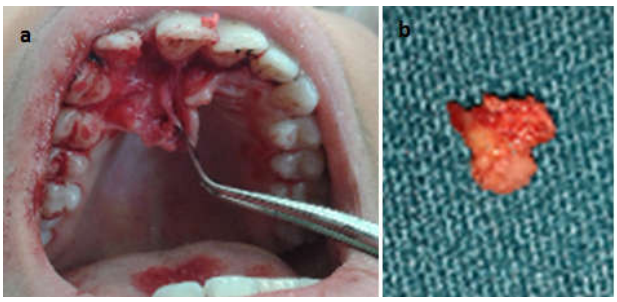

Figure 4 a Surgival site: corticalised bone depression ; b: specimen.

The histopathologic exam confirmed the diagnosis of peripheral odontogenic calcificant cystic tumor.

The postoperative evolution was satisfactory without complications after two years following. The diastema disappeared and no signs of recurrence were seen (Fig 5).

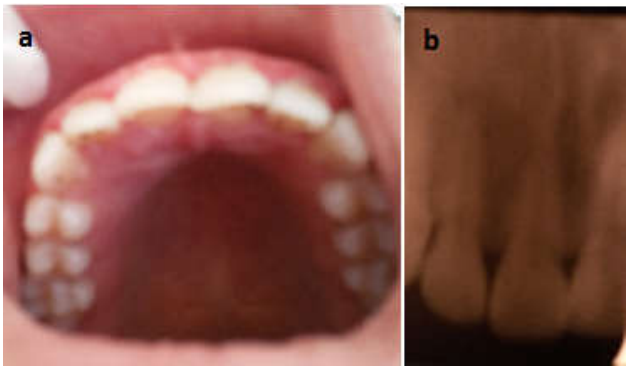

Figure 5 After 2 years followup : a : disappearance of diastema ; b: Periapical radiograph : normal bone aspect.

DISCUSSION

Odontogenic tumors are relatively uncommon lesions that are derived from epithelial, mesenchymal, or epithelial/mesenchymal remnants of the components of the developing tooth germ.[2]

In relation to the morphoanatomy, the location of the CCOT could be intra-osseal or extra-osseal.[7,15]

Peripheral odontogenic tumors are rare and exhibit the histologic features of their central counterpart but occur only on the soft tissue covering the touth-bearing portion of the maxilla and mandible.[14] The etiology is very controversed.

Radiographically, unilocular [14,19]and, occasionally, multilocular images are seen [8,18,20] with well-circumscribed limits that contains diffuse radiopacities areas noted in one-third to one-half of cases.[14,18,19]

CCOTs can occur alone or in association with other odontogenic tumors such as odontomas (20%), adenomatoid odontogenic tumors and ameloblastomas.[12] Root resorption and divergence are common in radiographic findings[3,12] and an association with an impacted tooth occurs in approximately one-third of cases.[6,12]

The principal characteristic of the CCOT is the presence of ghost cells, which can also be found in other lesions, including ameloblastomas, ameloblastic fibroodontomas, complex and compound odontoma and ameloblastic fobromas.[2,10,14]

The nature of these cells is not clearly known. Nevertheless, the accepted theory is that there would be a squamous metaplasia of the epithelium with the subsequent queratinization that could be normal or aberrant.[7,10]

Due to the non-aggressive behavior of this lesion, for most CCOTs, a conservative treatment like enucleation or local resection, is appropriate. [1,13,17] The lack of recurrence depends on the degree of complete excision . Following enucleation treatment, only a few recurrences have been reported, including intraosseous and extraosseous-type lesions. [2,21]

The final diagnosis is always established with an histopalogical exam.

In this case, a conservative treatment was decided, by making the complete enucleation of the tumor. No complications were

reported during two years follow-up. However, 10 years follow up is recommended for possible recurrences.

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