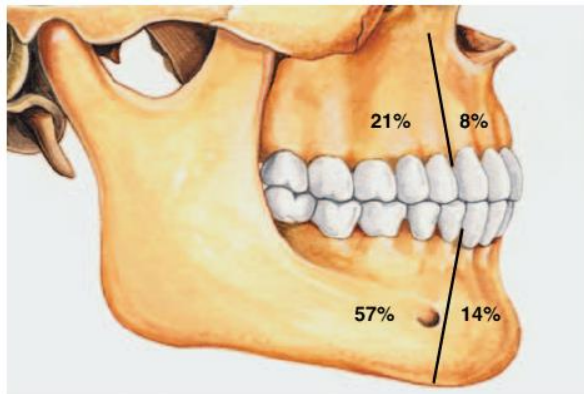


原文題目(出處) :	Peripheral Calcifying Epithelial Odontogenic Tumour Mimicking a Gingival Inflammation: A Diagnostic Dilemma
原文作者姓名 :	Danielle Lima Corrêa de Carvalho, Alan Motta do Danto, Fernanda de Paula Eduardo, LetíciaMello Bezinelli, André Luiz Ferreira Costa, Paulo Henrique Braz-Silva
通訊作者學校 :	1)Department of Stomatology, Division of General Pathology, School of Dentistry, University of São Paulo, São Paulo, SP, Brazil 2)Unit of Oral and Maxillofacial Surgery, Santa Casa de São Paulo, School of Medical Sciences, São Paulo, SP, Brazil 3)Department of Orthodontics and Radiology, University of São Paulo, São Paulo, SP, Brazil
報告者姓名(組別) :	張伯瑜 (intern D 組)
報告日期 :	2016/11/8

內文 :

一、 Introduction

1. The calcifying epithelial odontogenic tumour (CEOT) is a rare odontogenic neoplasia characterised by the presence of **amyloid material**, know as “Pindborg Tumour.”
2. The CEOT has an **epithelial origin** and accounts 1percent of all adontogenic tumours, affecting **mandibular** bone in majority



**Fig. 15-90 Calcifying epithelial odontogenic tumor.**  
Relative distribution of calcifying epithelial odontogenic tumor in the jaws.

3. For the CEOT, intraosseous variant is more common (94% of the cases) but it exclusively affects soft tissues.
4. Peripheral CEOT accounts for approximately 13.3 percent of the cases of all peripheral tumours, derive from **epithelial remnants of the dental lamina** or from the **gingival surface**
5. Peripheral CEOT is more prevalent in **females**, occurring between the third and

fourth decades of life and involving the **anterior maxillary** region. Shetty et al. (2014)

6. Peripheral CEOT is usually **asymptomatic, less aggressive** and **soft tissue affecting**, not relapsing after **surgical** treatment and properly treated.

## 二、 Case Presentation

1. An **18-year-old male** patient was referred for evaluation because of an **asymptomatic increase in gingival volume**, which was lasting for **one month**.
2. On the **clinical exam**, the gingiva showed an **exophytic** lesion with **erythematous** and **irregular surface** located in the **buccal region**, between **premolar and first lower molar**, and measuring approximately **5 × 5mm** (Figure 1).



FIGURE 1: Clinical features of the lesion.

3. The patient reported **no pain** in the region and oral hygiene was regularly performed, with the involved bone region showing no clinical or imagenological alterations.
4. As medical history, the patient had **acute lymphoblastic leukemia**, which was successfully treated by means of **chemotherapy** 1 year earlier than the emergence of the lesion, without history of local trauma.
5. An excisional biopsy of the region was performed under local anaesthesia.
6. The haematoxylin-eosin stained histological sections showed **proliferation of fusiform cells** arranged either in bundles or randomly, including intense deposition of amorphous material among them.
7. This substance had an **eosinophilic** appearance compatible with **amyloid deposition** associated with strings and islets of odontogenic epithelium dispersed through the neoplasia.

8. The specimen was **positive to Congo red** under polarized light, showing the amyloid origin of the eosinophilic material. The mucosal lining epithelium showed areas of ulceration and neutrophilic infiltration (Figure 2).
9. The case is diagnosed as a peripheral CEOT, and the patient was regularly followed up for 1year without relapse.

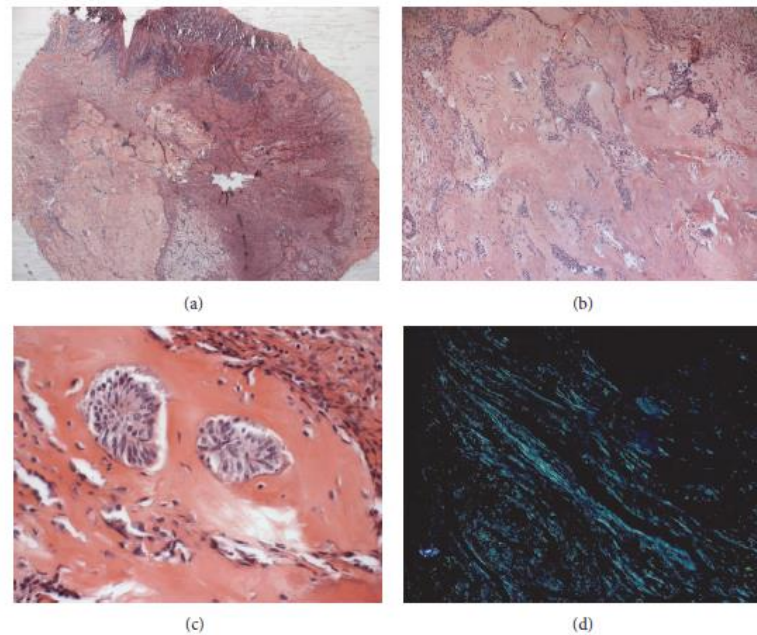


FIGURE 2: Histopathological features of the peripheral CEOT. (a) A general overview of the lesion, showing the mucosal lining epithelium with areas of ulceration and inflammatory cells infiltration. Proliferation of odontogenic epithelial cells organized in strands, cords, and nests and amyloid-like material (H & E, original magnification:  $\times 25$ ). ((b) and (c)) Strands, cords, and nests of odontogenic epithelial cells dispersed through the amyloid material (H & E, original magnification:  $\times 40$  (b),  $\times 100$  (c)). (d) Amyloid stained by Congo red showing apple-green birefringence in polarized light (original magnification:  $\times 40$ ).

### 三、 Discussion

1. CEOT is rare neoplasia accounting for a small percentage of all odontogenic tumours.(200 cases worldwide).And peripheral variant is even more uncommon.
2. Peripheral CEOT is more prevalent in **females**, occurring between **the third and fourth decades** of life and involving the **anterior maxillary** region. Shetty et al. (2014)  
However, some authors describe a higher rate of this variant among **males**, affecting areas of **canines and premolars in the mandible**
3. The majority of the lesions are **unilateral**
4. These tumours only stem from the **dental lamina epithelium** due to its association with teeth enclosed within the bone. However, as soft tissues are exclusively affected, it is strongly demonstrated that these tumours stem from **basal cells of the oral epithelium**, which persist in the rests of Serres.
5. Different diagnosis:

- (1) peripheral odontogenic tumours
  - (2) odontogenic carcinoma with dentinoid
  - (3) clear cell odontogenic carcinoma with dentinoid
  - (4) minor salivary gland tumours
  - (5) tumour metastasis
  - (6) reactive hyperplasia
  - (7) acute gingival inflammations
6. Characterisies Shetty et al. (2016)
- (1) amyloid material
  - (2) calcifications
  - (3) absence of mitoses
  - (4) immunohistochemical positivity to cytokeratin 14
  - (5) absence of S-100 protein expression
  - (6) positivity to Congo red under polarized light can be useful
7. Histopathological aspect:
- (1) consisting of epithelial cells with **cytoplasmatic eosinophilic content** and **amorphous amyloid substance** with spots of calcification organized in concentric lamellas
  - (2) These cells have empty and vacuolated cytoplasm (like clear cell)
  - (3) These cells contain glycogen and Langerhans cells in some cases.
- Ps. due to higher aggressiveness of the clear cell tumours, CEOTs presenting this cell variation can exhibit greater tissue destruction and higher trend for relapse
8. Although authors have described the potential reoccurrence of clear cell CEOT, studies showed evidence that soft tissue variants are less severe neoplasia as they usually have small sizes (i.e., 0.5 to 2 cm), preserve osseous tissue, and do not tend to relapse if properly removed
9. Only one case described by Shetty et al. (2014) showed an atypical presentation of peripheral CEOT with **great dimensions and calcifications** and was treated through maxillectomy.

#### 四、 Conclusion

1. The changes in gingival mucosa should be thoroughly examined because of the possibility of development of soft tissue peripheral neoplasia.
2. Peripheral CEOTs have clinical similarities with several soft tissue lesions and thus their differentiation regarding other pathologies is of extreme importance for adequate treatment and follow-up.

題號	題目
1	Which is not true about the calcifying epithelial odontogenic tumor(CEOT)? (A) The CEOT, Pindborg tumor, are most found in mandible. (B) The CEOT are always painless, slow-growing. (C) After Congo red staining, the amyloid material will exhibit apple-green when viewed with eyes only. (D) Peripheral CEOT are often on the anterior gingiva, with sessile gingival masses.
答案 (C)	出處 : Oral and Maxillofacial Pathology, 3e
題號	題目
2	Which is not the feature of the CEOTs x-ray finding? (A) They often associated with impacted teeth. (B) The lesions may be unilocular or multilocular. (C) They may be completely radiolucent or contain opaque foci. (D) They are often found at maxilla than mandible.
答案 (D)	出處 : Oral Pathology Clinical Pathologic Correlations