A clinical case of peripheral ameloblastoma

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Abstract
The peripheral ameloblastoma (PA) is a rare, benign, extraosseous odontogenic soft tissue tumour that is confined to the gingiva or alveolar mucosa. The PA presents the same histological characteristics of intraosseous ameloblastoma, although it is less aggressive than this classical subtype. We report a clinical case of PA of the alveolar mucosa in the right posterior maxilla, highlighting the importance of histological examination to the diagnosis.

Key Words:
peripheral ameloblastoma, odontogenic tumour, gingival lesions

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Introduction
The peripheral ameloblastoma (PA) is a rare, benign, extraosseous odontogenic soft tissue tumour that was first truly reported in the literature by Stanley and Krogh in 1959. The clinical appearance of the PA may vary, but most of time it presents clinically as a slow-growing, firm, painless mass with a sessile or pedunculated base with a smooth surface and a normal mucosa color. Although it is usually confined to the gingiva or alveolar mucosa it may cause a depression of the underlying bone or exhibit a “cupping” effect due to the pressure resorption. We presented an additional clinical case of PA that occurred in the right posterior alveolar mucosa of the maxilla.

Clinical Case
A 79-year-old woman presented to the Stomatology Clinic of the School of Dentistry, Federal University of Minas Gerais (Belo Horizonte, Brazil) reporting a painless swelling on the gingiva. The patient could not tell when she noted the lesion. She was edentulous and did not wear dental prosthesis.

Intraoral exam revealed a nodule covered by normal mucosa with a smooth surface and firm consistency located in the right posterior alveolar mucosa of the maxilla measuring approximately 6x4x4mm. Periapical radiograph examination displayed bone erosion with cupping effect (Figure 1A). With the hypothesis of soft tissue tumours or peripheral odontogenic tumors, an excisional biopsy was performed. The specimen was fixed in 10% formalin buffer and was sent to the Oral Pathology Service.

The microscopical findings were nests and cords of odontogenic epithelial cells showing ameloblast-like peripheral cells with polarized nuclei and central cells reticulum estrellate features. These nests and cords were distributed in a fibrous stroma and they seemed to fuse with the keratinized stratified squamous epithelium that covered the lesion. The histological surgical margin of the excised lesion was disease-free (Figures 1B and C). The diagnosis was peripheral ameloblastoma. The patient is in follow-up for nine months without signs of recurrence (Figure 1D).

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**Fig. 1A** - Periapical radiograph demonstrating bone erosion with cupping effect in right posterior region. **B** - Mucosal fragment with odontogenic epithelial proliferation in the lamina propria. Fusion of nests and cords with keratinized stratified squamous epithelium are observed (arrows head). The lower histological margin is disease-free (Haematoxylin-eosin saffron, 100X original magnification). **C** - Nests and cords of odontogenic epithelium were distributed in a fibrous stroma. In the box, it is depicted a nest showing peripheral ameloblast-like and central cells resembling the stellate reticulum (Haematoxylin-eosin saffron, 200X original magnification; in the box 400X original magnification). **D**. Nine months of clinical follow-up the patient is free-disease.
Discussion
Ameloblastoma is an epithelial odontogenic tumour of the jaw bones which is thought to arise from rests of the dental lamina or from basal cells of the surface epithelium. A recent investigation demonstrated that alterations of the ameloblastin gene forms the genetic basis for ameloblastoma.

Currently, ameloblastoma was divided in four clinico-pathological types: solid, desmoplastic, unicistic and peripheral. The PA is also known as the extraosseous ameloblastoma, soft tissue ameloblastoma, ameloblastoma of mucosal origin, or ameloblastoma of the gingiva. It comprises 1.3-10% of all ameloblastomas. While some lesions are localized entirely within the connective tissue of the gingiva, others seem to fuse with or originate from the mucosal epithelium, the former present in the current case report.

Phillipsen et al. in 2001 reviewed 160 cases of PA and observed that this tumor usually exhibit as a painless, sessile, firm growth with a smooth surface. In the majority of the cases there is no radiological evidence of the bone involvement. The PA is more common in men (65%) and the mean age at the time of diagnosis is 52.1 years old. Although our case occurred in the posterior maxilla of a woman, the mandible is the most common site for PA accounting for 70.9% of the cases.

Authors believe that PA totally lacks the persistent growth of intraosseous ameloblastoma. It is less aggressive than the intraosseous ameloblastoma and the term PA can be potentially dangerous because the diagnosis may lead to unnecessary aggressive treatment. Although the recurrence rate of the PA is much lower (16%, 19%) than the intraosseous ameloblastoma, long-term follow up is required. In addition, recurrent lesion has been reported as an ameloblastic carcinoma.

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