Case Report

Dentistry

Peripheral Ameloblatoma: A Case Report

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ABSTRACT

Peripheral ameloblastoma (PA) is a rare, benign, extraosseous and odontogenic soft tissue tumour that is confined to the gingiva or the alveolar mucosa. PA presents the same histological characteristics as of intraosseous ameloblastoma, although it is less aggressive than this classical subtype. We report here, a clinical case of PA of the alveolar mucosa in the left posterior mandible, while highlighting the importance of histological examination for the diagnosis of this tumour.

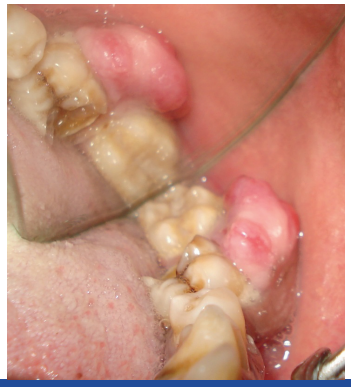
Key Words: Peripheral ameloblastoma, Odontogenic tumour, Gingival lesions

INTRODUCTION

Peripheral ameloblastoma (PA) is a rare, benign, extraosseous and odontogenic soft tissue tumour that was first truly reported in the literature by Stanley and Krogh in 1959 [1]. The clinical appearance of PA may vary, but most of the 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 colour. Although it is usually confined to the gingiva or the alveolar mucosa, it may cause a depression of the underlying bone or exhibit a "cupping" effect due to the pressure resorption [2-6]. We presented an additional clinical case of PA that occurred in the left posterior mandible.

CLINICAL CASE

A 36-year-old male patient presented to the Department of Periodontology, Govt Dental College and Hospital, Hyderabad, India, with a painless swelling on the gingiva. The patient could not tell us as to when he noted the lesion. The intra-oral examination revealed a nodule which was covered by erythematous mucosa, with an irregular surface and a firm consistency, which was located in the left posterior alveolar mucosa in relation to 36, 37, measuring approximately 6 × 4x4mm [Table/Fig 1A]. There was a disto occlusal caries with a slight lingual inclination of 36. The periapical radiograph examination displayed no bone erosion (Table/Fig 1B). On suspecting a soft tissue tumour or a peripheral odontogenic tumour, an excisional biopsy was performed. The specimen was fixed in 10% formalin buffer and it was sent to the Oral Pathology Service.

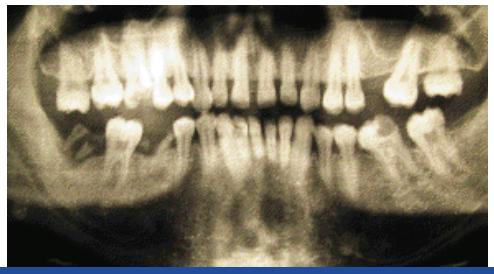


[Table/Fig-1a]: Exophytic Growth Seen in Left Vestibulein Relation to Molar Teeth

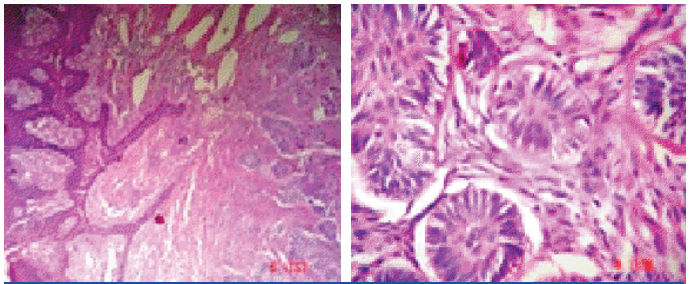
The microscopical finding was nests of odontogenic epithelial cells showing ameloblast-like peripheral cells with polarized nuclei and central cells stellate reticulum like features. These nests were distributed in the fibrous stroma and they seemed to fuse with the keratinized stratified squamous epithelium that covered the lesion. [Table/Fig 1C, 1D] The histological surgical margin of the excised lesion was disease-free. The diagnosis was peripheral ameloblastoma. The patient is in follow-up for twelve months without any signs of recurrence.

DISCUSSION

Ameloblastoma is an epithelial odontogenic tumour of the jaw



[Table/Fig-1c]: H& E Stained Section Showing Superficial Epithelium and Connective Tissue Showing Follicles of Odontogenic Epithelium in 4×



[Table/Fig-1d]: Connective Tissue Showing Follicles Of Odontogenic Epithelium In 40×

bones which is thought to arise from the rests of the dental lamina or from the basal cells of the surface epithelium [7-9]. A recent investigation demonstrated that an alteration of the ameloblastin gene forms the genetic basis for ameloblastoma [10].

Currently, ameloblastoma has been divided in four clinicopathological types: solid, desmoplastic, unicystic and peripheral [7]. PA is also known as extraosseous ameloblastoma, soft tissue ameloblastoma, ameloblastoma of mucosal origin, or ameloblastoma of the gingiva. It comprises 1.3-10% of all the ameloblastomas [3]. 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 arrangement was present in the current case report [7].

Phillipsen et al. [3], in 2001, reviewed 160 cases of PA and observed that this tumour usually presented as a painless, sessile, firm growth with a smooth surface. In a majority of the cases, there is no radiological evidence of bone involvement [3]. PA is more common in men (65%) and the mean age at the time of diagnosis is 52.1 years. Although our case occurred in the posterior mandile of a man, the anterior mandible is the most common site for PA, accounting for 70.9% of the cases [3]. The differential diagnosis should include soft tissue tumours such as peripheral giant cell granuloma, peripheral odontogenic fibroma, peripheral ossifying fibroma, papilloma and pyogenic granuloma [3-4].

The authors believe that PA totally lacks the persistent growth of intra-osseous ameloblastoma. It is less aggressive than intraosseous ameloblastoma and the term 'PA' can be potentially dangerous because the diagnosis can lead to an unnecessary aggressive treatment [11]. Although the recurrence rate of PA is much lower (16%, 19%) [12-13] than intraosseous ameloblastoma, a long-term follow up is required. In addition, the recurrent lesions are reported as ameloblastic carcinomas [14]. Our case underwent six months of follow up and the patient is free of disease.

Although the current case had the clinical appearance of reactive hyperplastic lesions, the microscopic examination revealed the diagnosis of PA. Therefore, it is important to include peripheral ameloblastoma as a differential diagnosis of the nodular lesions of the gingiva and the alveolar mucosa.

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DECLARATION ON COMPETING INTERESTS:

No competing Interests.

Date of Submission: **Aug 22, 2011**
Date of peer review: **Oct 17, 2011**
Date of acceptance: **Oct 18, 2011**
Date of Publishing: **Nov 30, 2011**