

Peripheral ameloblastic fibroma: a rare case report



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Abstract

Ameloblastic fibroma is a rare mixed odontogenic tumour which involves mostly the posterior mandible. Its peripheral variant is very rare. Only eight cases have been reported worldwide. In this report, we described a case of peripheral ameloblastic fibroma occurring in the maxillary gingiva in a 10 year-old child. The lesion was excised with a conservative surgical approach and no recurrence has occurred. Peripheral ameloblastic fibroma should be considered in the differential diagnosis of a slow growing lesion involving the gingiva.

KEYWORDS Ameloblastic fibroma, peripheral ameloblastic fibroma, odontogenic tumor, case report

Introduction

Peripheral odontogenic tumours are rarer than their central variant and histologically similar to these. Clinically, they may have morphology similar to other soft tissues malignancies [Bajpai et al., 2018]. The extraosseous form of ameloblastic fibroma is an exceedingly rare lesion. Only 8 cases were reported worldwide, two of which are in the Japanese literature [Bajpai et al., 2018]. We described a case of peripheral ameloblastic fibroma occurring in 10-year-old children.

Case description

A 10-year-old child complaining of an asymptomatic swelling in the right upper molar region was referred to our Oral Medicine Unit. The patient reported that the lesion had been present for 6 months with a progressive increase in size. His medical history and family history were unremarkable and laboratory tests were within standard limits. On clinical oral examination a sessile polypoid lesion with papillary erythematous surface on the marginal gingiva was observed in the right maxillary

between first and second deciduous molar. The lesion measured about 0,8 mm and was tender to palpation, without cervical lymphadenopathy (Fig. 1). Radiographic examination revealed no bone involvement (Fig. 2). Based on clinical and instrumental findings, the main diagnostic hypotheses were pyogenic granuloma, hemangioma, papilloma, peripheral odontogenic fibroma and malignancies. An incisional biopsy was made, and the specimen was sent for histopathological evaluation. Microscopically sections showed an inactive-looking odontogenic epithelium in the form of nests/islands associated with connective tissue of variable cellularity and no inductive changes were present (100x magnification) (Fig. 3). Based on clinical and microscopic findings, the final diagnosis was peripheral ameloblastic fibroma, a benign odontogenic tumour. A radical surgical excision was made, histopathological examination again confirmed the diagnosis of peripheral ameloblastic fibroma, and all margins were free of neoplasm. No recurrences were observed after 12 months, and the patient will continue the follow up every six months.

Discussion

Ameloblastic fibroma is a rare, benign, mixed odontogenic tumour with odontogenic epithelium in an ectomesenchymal connective tissue similar to dental papilla, without dentin or enamel [Darling and Daley, 2006]. It represents 2% of all odontogenic tumors. The mean age of occurrence is 15 years, ranging between (0.5-62 years) and a slight male predominance was reported [Kalantari et al., 2016]. In more than 80% of cases the mandible is involved, mostly in the posterior area [McGuinness et al., 2001]. Its extraosseous (peripheral) variant is very rare and was not described in the odontogenic tumour literature until 1991. Peripheral ameloblastic fibroma share the same histopathologic features of its central (intraosseous) counterpart consisting of both odontogenic epithelial and ectomesenchymal components without the formation of dentin or enamel [Darling and Daley, 2006]. The main clinical differential diagnoses are represented by epulis, pyogenic granuloma, peripheral giant cell granuloma, localised juvenile spongiotic gingival hyperplasia, focal fibrous

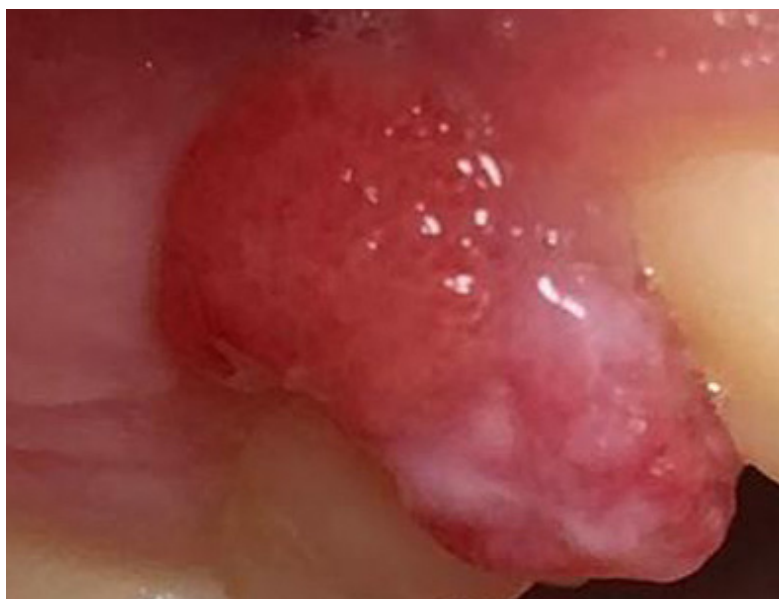


FIG. 1 Clinical pictures showing intraoral soft tissue growth.



FIG. 2 Radiograph of the right maxilla showing no bone involvement.

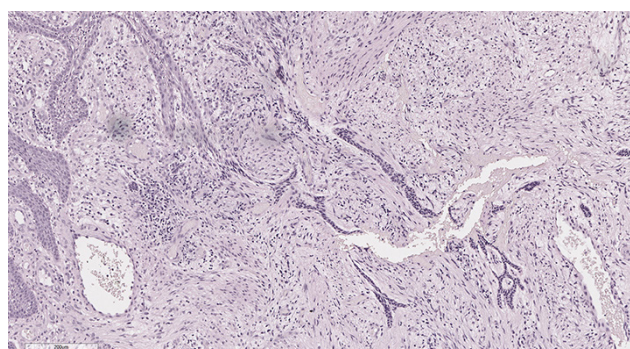


FIG. 3 Photomicrograph with hematoxylin and eosin staining, 100x magnification, showing nests/islands of odontogenic epithelium with connective tissue.

hyperplasia, peripheral odontogenic fibroma and other peripheral odontogenic tumors [Bajpai et al., 2018; Decani et al., 2021]. For a correct diagnosis it is necessary to distinguish histologically the peripheral ameloblastic fibroma from the peripheral odontogenic fibroma. In fact, on histological examination peripheral odontogenic fibroma shows a myxoid, fibroblastic or hyalinised stroma and odontogenic epithelium may be absent or inactive. Instead in the peripheral ameloblastic fibroma epithelial component with cords and islands of odontogenic epithelium with central stellate reticulum-like areas is prominent and myxoid stroma is present to a lesser extent [Langer et al., 2015].

Conservative surgical excision is the treatment of choice for peripheral ameloblastic fibroma and no recurrences were reported.

Other intraosseous odontogenic tumours, such as odontomas, or enamel defects are more common in the juvenile population compared to peripheral tumours such as the one described here (Marra et al., 2021; Borrego-Martí et al., 2021).

Therefore, the clinicians should be aware that peripheral ameloblastic fibroma clinically may mimic a wide range of entities and should be considered when a patient showed a slow growing lesion involving the gingiva.

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Conflicts of Interest

The authors have no conflict of interest to declare.

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