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Peripheral Ameloblastoma of Upper Gingiva in Lao Patient: A Rare Case

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Peripheral ameloblastoma (PA) is an uncommon of odontogenic neoplasm which only 1% of case among of all ameloblastomas, most occur in age, the average is 52.1 years, and slightly in males more than female, most frequently in gingiva of the mandible region, we report a rare case of peripheral ameloblastoma occurring in a 18 years old Lao woman female in gingival of maxillary posterior region.

Keywords: Peripheral ameloblastoma; neoplasm; odontogenic tumor; maxillary.

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1. INTRODUCTION

Many countries all over the world has been report the incidence of ameloblastoma ,it is a benign odontogenic tumor which can be aggressive large sizes and locally invasive tumors [1], with high recurrence rate up to 55-90% [2,3] . If untreated ameloblastoma can damage to the other parts of mouth. About 70% of case transformation into malignant, and more than 2% metastasis to other site [3]. According to the World health Organization (WHO) in 2017 was divided the classification of ameloblastoma in to four subtypes [4]. There are peripheral/ extraosseous ameloblastoma, unicystic ameloblastoma, ameloblastoma conventional, and metastasizing ameloblastoma.

Peripheral ameloblastoma (PA) is an uncommon of odontogenic neoplasm which only 1% of case among of all ameloblastomas [5], most occur in age, the average is 52.1 years [6], and slightly in males more than female with ratio1.9:1 , and it most frequently in gingiva of the mandible [7]. In the maxillary has been report in area soft palatal tissue in the area of tuberosity [8]. The average size of the lesion measured between 1 and 2cm [9,10]. This case we report a rare case of young patient, 18 years old with peripheral ameloblastoma in gingival of maxillary posterior region

2. CASE REPORT

A 18- year-old, Laotian female patient, living in khammaoun province,Laos, come to the Faculty of Dentistry, University of Health Sciences in March 2022 with the chief complaint of soft tissue mass on the left posterior part of maxillary gingiva ,second molar area. Patient reported that she realized the mentioned growth first 1 year ago there was no history of trauma or infection and the lesion was gradually increasing in size. patient reported she has no systemic disease and drug use, no smoking and alcohol consumption. There was no extra oral swelling on the left side of face or associated lymph node enlargement. At the intraoral examination, that was seen the swelling of exophytic mass with non-tender and firm, sessile with the color of pink and red, whitish area could be observed in the periphery of ulceration that bleed easily, and measured 3x3cm in diameter approximately extending from the upper left second molar area (Fig. 1).

A panoramic Radiograph showed a well-demarcated radiolucency borders in the area tooth number 27 (Fig. 2), and no evidence of bone involvement at the exact location of gingival growth. The maxillary sinus cavity appeared normal and free from the lesion. Oral hygiene status was not good. The clinical diagnosis was made as pyogenic granuloma. A soft tissue incisional biopsy of the lesion was taken, and the specimen was sent for histopathological examination. H&E stained, the histopathology showed the islands of odontogenic epithelium (Fig. 3), arranged in plexiform pattern (Fig. 4), the cords of epithelium are bounded by palisaded columnar ameloblast-like cells (Fig. 5), the, central odontogenic epithelial islands showing polarized with stellate reticulum-like cells. The histologic findings were consistent with peripheral ameloblastoma, and no recurrence after three months follow up.

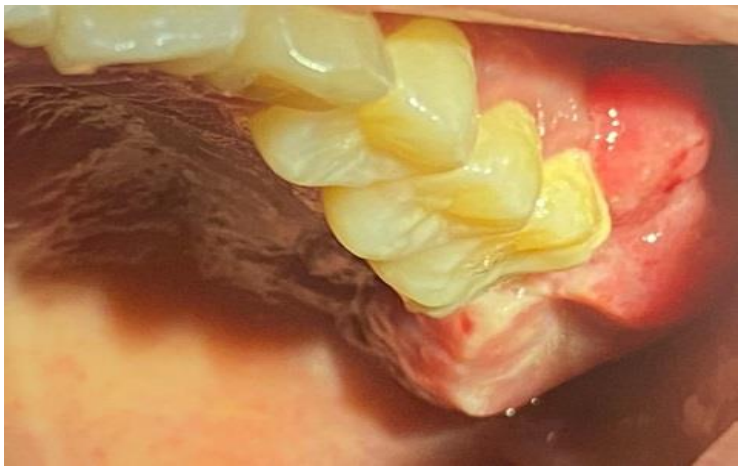

Fig. 1. Clinical examination: showing an exophytic growth in the alveolar mucosa of the left maxillary 27-28 regions

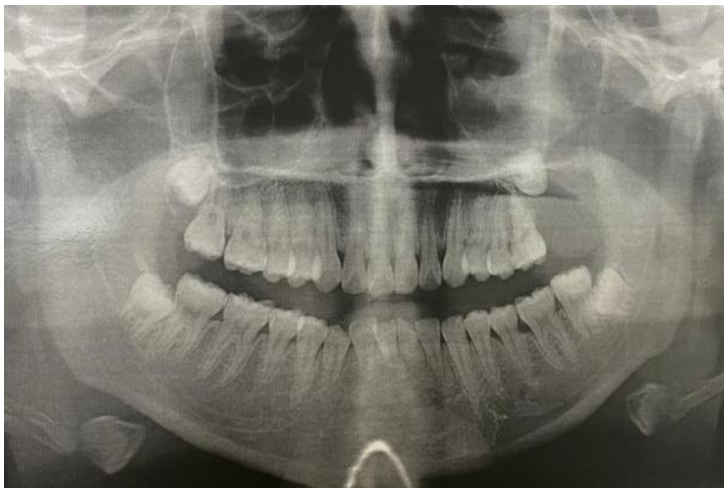

Fig. 2. Extraoral panoramic radiography of patient without bone involvement

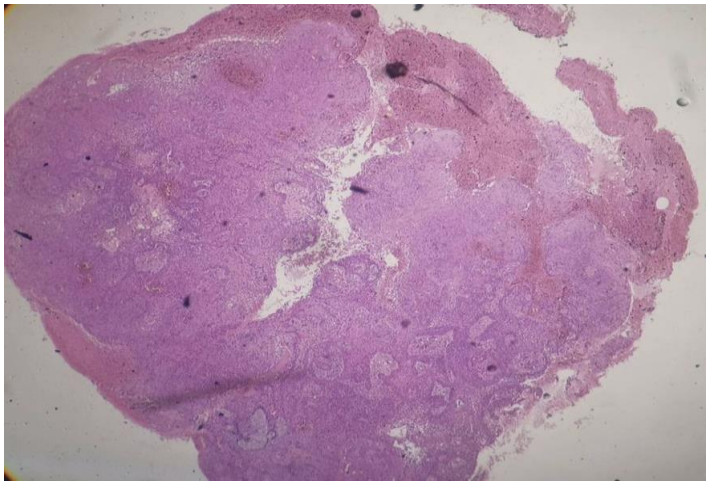

Fig. 3. Photomicrograph showing peripheral ameloblastoma (H and E stained x10)

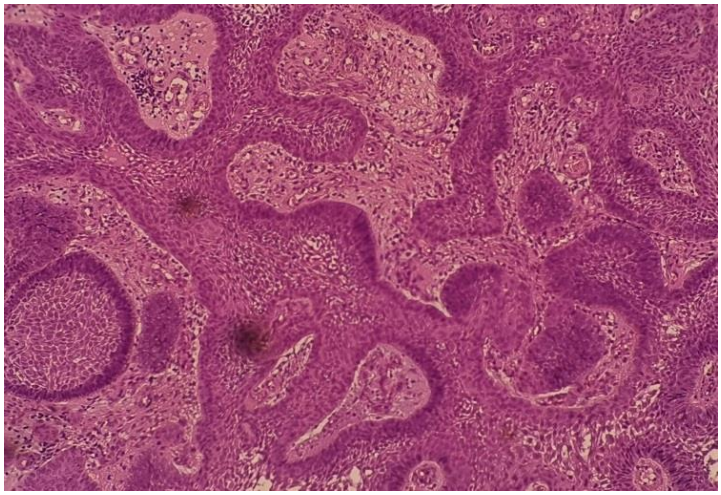

Fig. 4. Histological view of the plexiform ameloblastoma connective tissue contains Longanastomosingodontogenic epithelium (H and E stain, x40)

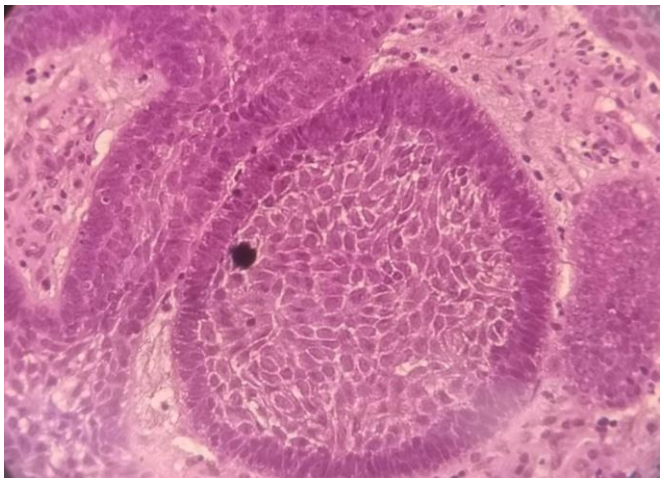

Fig. 5. Section show island of odontogenic epithelium showing columnar cells that display reverse polarization and central loose stellate reticulum-like cells(H and E stained x 100)

3. DISCUSSION

Peripheral ameloblastoma (PA) is rare benign tumor, which is not considered very frequent in young age, it is commonly seen in men 65% and the mean age 52.1 years [6], in the present case is 18 years younger than the average age with lesion occurred in posterior maxilla. Many cases have been reported the region of PA which occur in gingiva mandible [7], only 28% occurred in anterior gingiva of maxillary [11,12]. The clinical appearances of PA that may resemble of pyogenic granuloma, hence, clinical feature of these lesions are not pathognomonic and necessary for histopathological examination for the definitive diagnosis. The differential diagnosis included: peripheral ossifying fibroma, peripheral odontogenic fibroma and pyogenic granuloma [13] ,the characteristic of PA is painless, firm, sessile exophytic mass growth and no radiological does not invade to the bone, this is similar in our case.

The histopathological findings of PA consists of island of ameloblastic epithelium with similar histological pattern as intraosseous ameloblastoma that is follicular,plexiform, acanthomatous, and basal cell. As seen in this case is plexiform. There are two origin the histopathology of PA the lesion arise from remnants of dental lamina in the soft tissue, that was no content with the surface epithelium [7,14]. On the other hand , the lesion arise from the surface of epithelium [7] , in our case the lesion was no surface epithelium, therefore it may arise from the remnants of the dental lamina [15].

Treatment and prognosis of PA by surgical excision with adequate disease free margins 1-2 mm [7] in the present case , the patient was treatment by surgical removal. The recurrence rate of PA is 16-19% which is lower than that of solid multicystic ameloblastoma [16,17], the recurrence as ameloblastic carcinoma have been reported [18,19] long term follow-up is necessary ,however the report of malignant PA transformation have been report by Ide et al. (2004) and suggested that the large size over 2cm in diameter is a powerful predictor of aggressive locations [20], in our case the measured 3x3cm in diameter.

4. CONCLUSION

We have reported a rare case of Peripheral ameloblastoma, which already treatment by surgical removal, and no recurrence after three months follow-up. The present result suggest the importance to complete surgical excision and careful histopathological evaluation is necessary to differentiate and long -term follow-up is advised to detect the late local recurrences and metastatic transformation.

CONSENT

As per international standards or university standards, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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