Peripheral Ameloblastoma Presenting as a Gingival Mass

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Abstract
A case of a peripheral ameloblastoma of the lower lingual gingiva is reported with a discussion. A 23-year-old woman with epulis-like mass in the lower lingual gingiva was seen in 2001. Excision of the mass was performed and pathological diagnosis of the surgical specimen was peripheral ameloblastoma.

Introduction
Peripheral ameloblastoma (PA) is a rare odontogenic tumor which arises in the tooth-bearing gingiva and has histological character of the intraosseous ameloblastoma. PA usually shows slow growing and asymptomatic, and it is observed as a sessile, board, firm and 1 to 2 cm in size covered by normal smooth mucosa. PA is reported to account for 0.2 to 1.0% of all ameloblastoma (1-3). PA is common in middle-aged and elderly men (4). The most frequent location is the mandibular lingual gingiva of the premolar in the mandible (5). This report describes a case of peripheral ameloblastoma of the lower lingual gingiva in a young female showing epulis-like exophytic growth.

Case Report
A 23-year-old woman came to Oral Surgery, Nihon University Dental Hospital at Matsudo on August 2001, with a chief complaint of a swelling of the gingiva. She had noticed the swelling for one year, but did not receive any treatment because of painless swelling. However, since the swelling had subsequently enlarged, she was referred to our hospital via her private dentist. There was no special affair on medical and family history. Oral examination revealed a large broad bean-sized (30×15×7 mm), pedunculated (epulis-like), elastic, slightly soft mass with reddish gingival color having smooth surface in the lower lingual gingiva of the left central incisor to the left second premolar region (Fig. 1). Radiographic examination showed a slight radiolucent in the edge of the mandible in this region (Fig. 2). The clinical diagnosis of epulis was made. On September 27, the excision of the mass including the periosteum was performed under local anesthesia using 2% lidocaine. A slightly vertical bone resorption was recognized at this region. The excised material consisted of an irregular globe-shaped grayish-white solid mass measuring 20×16×3 mm in size. Microscopically, the mass was composed of ameloblastic cell proliferation (resemble to enamel organ) exhibiting mainly pleomorphic pattern and partly follicular pattern (Figs. 3a, 3b). Squamous metaplasia and parenchymal cyst were also recognized. The surface area of the tumor nests partly connected with the mucosal epithelium. In the stroma, over growth of collagen fibers or capillary vessels, lymphocytic infiltration, mucous degeneration around the tumor nest, edema and hyalinization were observed by the area. Histopathological diagnosis was PA. In the comment, oral pathologist required strict follow-up or additional excision, because tumor cells remained at the margin. Therefore, marginal resection of the mandible from the left incisor to the left second premolar was performed under general anesthesia. Some tumor nests were recognized in the resected the mandibular bone, but no tumor cell was identified at the
margin. Up to this time, there has been no sign of recurrence and best operative course was uneventful.

**Discussion**

PA is a rare, benign odontogenic tumor that histologically resembles conventional intraosseous ameloblastoma but develops in the soft tissues of the gingival and exhibits an innocuous clinical behavior. PA is a relatively rare type and accounts for 2% to 10% of all ameloblastomas. It is reported that most patients with PA are in the fifth to eighth decades with the average of 50.7 years (Table 1) (1). Male are 1.3 times more affected by PA (4). The youngest patient was 8 years old, and the oldest was 82 years old in Japan (5). PA occurred more frequently in the mandible (70.9%) and usually appears as a single lesion as the case presented (Table 2). On the present case, she was 23 years old and the youngest case in Japan.

The differential diagnosis must be made with fibrous nodules, gingival tumors, peripheral odontogenic fibromas, pyogenic granulomas, peripheral giant cell granulomas and other peripheral hyperplastic swelling
superficial to the alveolar ridgeref. The most common diagnosis was epulis, followed in decreasing order by tumor, fibroma, and papilloma (7). Macroscopic examination often develops as the mass having to do with a polyp of the painless with the big of 1-2 cm² (5) Therefore, this case is slightly massive (3 cm in diameter). PA can be spherical, nodular or papillary, when it has papillae on the surface. On these cases, it is difficult to distinguish from papilloma. In addition, when it involves an ulcer or born resorption, it is necessary to distinguish it from a malignant tumor to make a diagnosis.

The radiographic examination of the bone beneath PA is usually negative (6). However, in a few instances superficial cupping, or “saucerization” of bone, has been reported. This is generally believed to be attributable to resorption rather than neoplastic invasion. In the case reported, bone involvement was advanced, but this may be attributed to press produced by the mass superficially and the cyst centrally.

A treatment of PA is surgical resection (5–7). Complete resection of tumor requires no further treatment. There are many cases in which the bone resection is added in respect of the persistence of tumor cell, when it was indicated like present case at the cutting thing stump. Therefore, it is important to evaluate of the presence of invasion to the bone using radiographic examination, observation of the bone surface during operation and histopathological findings.

Recurrences are rare, even in conservative surgeries with the small amount of normal tissue (8). Despite the no aggressive course and low recurrence rate of the peripheral ameloblastoma, long-term follow up is absolutely necessary. As shown, this patient was youngest in the study of Japan. In the case presented, there was no evidence of malignancy and no signs of recurrence 5 years after treatment.

References