INTRODUCTION

Stafne bone cavity (SBC) is an uncommon lesion of the mandible; and generally found incidentally on routine radiographic examinations. Radiographically, a homogeneous well-defined unilocular radiolucency appears round or ovoid in shape and vary from 1 to 3 cm in diameter. It is usually located between the inferior alveolar nerve (IAN) and the inferior border of the posterior mandible; between the molars and the angle of the jaw. It is one of those few radiolucent lesions that can occur below the IAN. The radiographic differential diagnosis of SBC includes a variety of lesions including odontogenic cysts, various benign tumors, or bone metastases.

This case report describes diagnosis and intraoral surgical treatment of a SBC complicated by periapical infection.

CASE REPORT

A 22-year female patient was referred to our clinic after visiting a hospital with the chief complaint of pain in the right mandibular molar area. On radiographic examination at the hospital, a non-specific large radiolucent lesion related to mandibular molar teeth was detected (Figure 1a). Lesion was diagnosed as periapical pathology related to mandibular molar teeth, and extraoral surgical operation was planned at a plastic surgery clinic. However, patient refused the extra-oral treatment and was referred to our department. Cone-beam computed tomography (CBCT) images were taken for advanced imaging. On tomographic examination, there was no lingual cortical plate; and intraoral surgical exploration confirmed the diagnosis showing a cavity with small inflamed salivary gland tissue. Examination with CBCT on suspicious jaw lesions helps avoid unnecessary extraoral surgical interventions.

DISCUSSION

The exact cause of SBC is controversial. Stafne suggested that the occurrence of lingual cavities is

ABSTRACT

Stafne bone cavity (SBC) is an uncommon lesion of the mandible; and generally found incidentally on routine radiographic examinations. The radiographic differential diagnosis of SBC includes a variety of lesions including odontogenic cysts, benign tumors, or bone metastases. In the present case, a 22-year female patient was admitted with chief complaint of pain in the right mandibular molar area. On panoramic radiographic examination, a non-specific large radiolucent lesion related to mandibular molar teeth was detected and extra-oral surgical intervention was planned. However, on examination with cone-beam CT (CBCT), a SBC was suspected due to lack of lingual cortical plate; and intraoral surgical exploration confirmed the diagnosis showing a cavity with small inflamed salivary gland tissue. Examination with CBCT on suspicious jaw lesions helps avoid unnecessary extraoral surgical interventions.

Key Words: Stafne bone cavity. Bone cyst. Cone-beam CT.
developmental, as the defect is occupied by cartilaginous tissue due to bone deposition deficiency. However, the most widely accepted view is that the cavities develop as a result of a localised pressure atrophy of the lingual surface of the mandible from the adjacent salivary gland. It has been reported that SBC results from benign fatty or vascular lesions. On the basis of these etiologies, the content of the cavity is critical. Normal or inflamed salivary gland tissue was the most common histological finding. These cavities have been reported to contain muscles, fibrous connective tissue, blood vessels, fat or lymphoid tissue. This diversity of tissues could be the result of the removal of soft parts adjacent to the defect. Empty cavities have also been reported during surgery. In the present case report in surgical operation, an empty cavity with small inflammed salivary gland tissue was detected. This finding was compatible with the diagnosis of SBC.

Advanced imaging techniques become important in such cases. In the last decade, CBCT has been recommended as an excellent, low-cost tool for the evaluation of maxillofacial structures with only slightly more radiation than panoramic radiography and far less than a conventional CT scan. Sisman et al. suggested that since CBCT has low radiation dose and shows fine details and superior features in distinguishing suspicious radiolucent lesions of the mandible, it might be used for diagnosis of SBC. A key to anatomic feature of SBC is that the mandibular concavity is always open on its lingual face, i.e. lack of lingual cortical plate. In the present case, there was no lingual cortical bone at lesion area on CBCT images which revealed the presence of SBC.

Literature features a case of ossifying fibroma presenting as SBC. Some studies showed that SBC was not a developmental lesion and continue gradually and become larger over a long period of observation. In addition, superimposed pathology, such as pleomorphic adenoma, can develop in the entrapped salivary gland. On the other hand, a SBC complicated by periapical infection has not been reported to date.

The authors suggest a careful examination with CBCT on suspicious lesions to avoid unnecessary extraoral surgical interventions.

REFERENCES