

原文題目(出處) :	<i>A Case of Simultaneous Unilateral Anterior and Posterior Stafne Bone Defects.</i> ( Hindawi Publishing Corporation, Case Reports in Dentistry, Volume 2015, Article ID 983956 )
原文作者姓名 :	Hisashi Ozaki, Shigeo Ishikawa, Kenichirou Kitabatake, Kazuyuki Yusa, Hirohiko Tachibana, and Mitsuyoshi Iion
通訊作者學校 :	Department of Dentistry, Oral and Maxillofacial Plastic and Reconstruction Surgery, Faculty of Medicine, Yamagata University, 2-2-2 Iidanishi, Yamagata 990-9585, Japan
報告者姓名(組別)	<b>Intern E 組 - 呂兆煜</b>
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## Introduction

1. **Stafne bone defects** (SBDs) were first described by Stafne as usually **unilateral, asymptomatic, well-defined radiolucent** lingual bony defects located around the posterior region of the **mandible**.
2. SBDs have **anterior** and **posterior** variants, and the posterior variant is the most well-known, which located between the mandibular angle and first mandibular molar **below the inferior dental canal**. On the other hand, anterior SBD is a rare lingual bony depression mostly seen in the mandibular canine-premolar region.
3. Stafne initially suggested that the occurrence of lingual cavities was developmental, as the defect was occupied by cartilaginous tissue due to bone deposition deficiency. However, **pressure of glandular tissues on the lingual cortex** is well recognized to cause bony depressions.
4. According to this widely accepted concept, the **submandibular salivary glands** are responsible for posterior SBDs, whereas the **sublingual salivary glands** cause anterior SBDs.

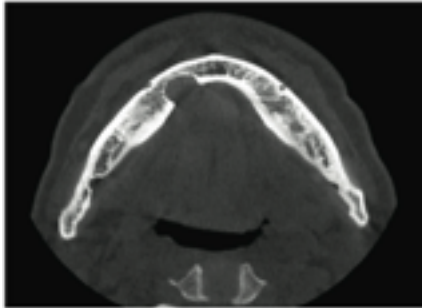
## Case Presentation

1. A 76-year-old man was referred to our facility from his family dentist after **two cystic lesions** were identified in the **right mandible**. Panoramic radiography revealed two radiolucent areas at premolar and angle regions (Figure 1).

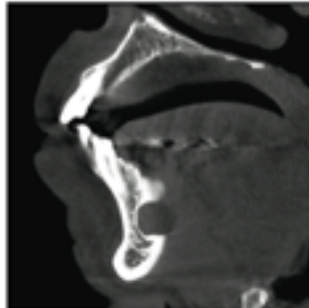


(Figure 1)

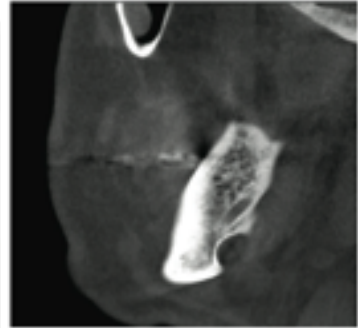
2. **Cone-beam computed tomography (CBCT)** revealed two defects of the **cortex** on the lingual aspect of the mandible (Figure 2A-2C). **No discontinuity or erosion** was seen in the lingual cortex.



(Figure 2A)



(Figure 2B)

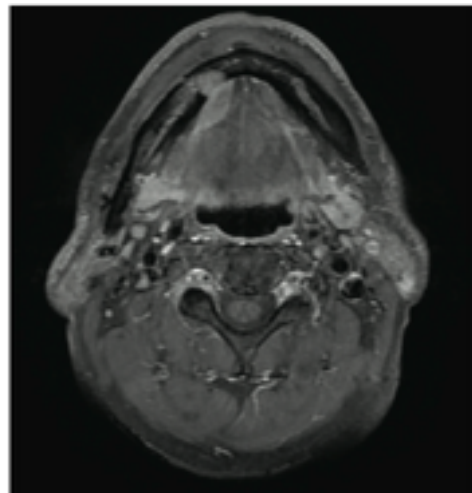


(Figure 2C)

3. On intra-oral view, the overlying mucosa of the oral floor was normal (Figure 3), and the outflow of saliva from the right sublingual caruncle was scarce, with no discharge of pus. Slight induration was evident when palpating the right floor of mouth in the premolar region, and the tongue showed normal mobility.



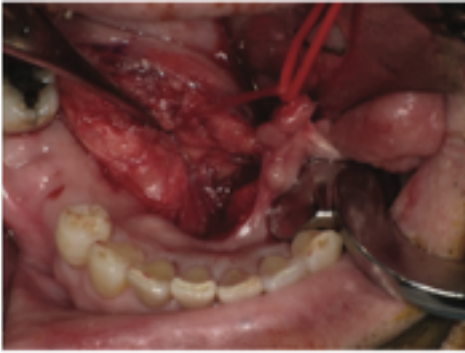
(Figure 3)



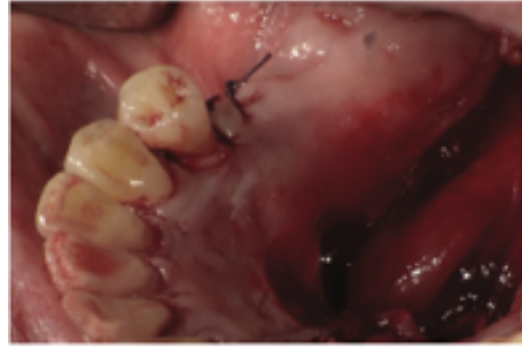
(Figure 4)

4. **Magnetic resonance imaging (MRI)** with Gadolinium contrast showed that both cavities were filled with **soft tissue**. Soft tissue in the mandibular angle seemed to be part of the mandibular gland. In the premolar region, the soft tissue in the cavity showed identical signals to that of the right sublingual gland (Figure 4).
5. On the basis of these clinical and imaging findings, posterior SBD for the bone cavity in the mandibular angle was diagnosed and the decision was made to provide **conservative follow-up by radiographic examination**.
6. As for the premolar region, not only anterior SBD, but also sublingual sialadenitis was suspected. In addition, sublingual gland tumor could not be completely ruled out. **Surgical resection** to the soft tissue in the cavity of premolar region was therefore performed under general anesthesia, including right sublingual gland.

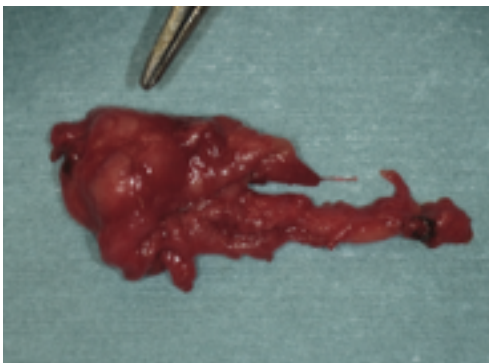
7. Intra-operatively, **intrusion of a sublingual salivary gland** into the cavity was seen (Figure 5). No adhesion between the sublingual gland and bone was identified (Figure 6A and 6B).



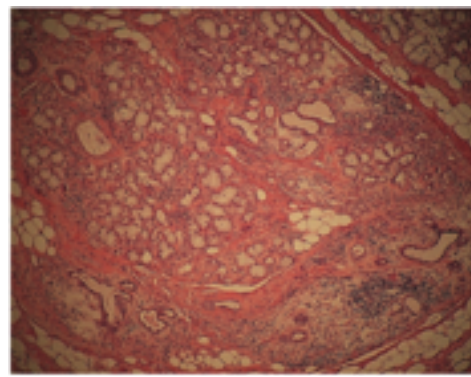
(Figure 5)



(Figure 6A)



(Figure 6B)



(Figure 7)

8. The pathological diagnosis was **salivary gland with chronic inflammation**. Histopathological examination revealed expansion and duct, expansion or atrophy of the acinus in comparison with the acinus to be normal, retention of mucus, and infiltration of lymphocytes into the sublingual gland (Figure 7).
9. Based on these findings, a definitive diagnosis of anterior SBD was made for the lesion in the premolar region. The postoperative course was uneventful, and **no functional disturbance** has been noticed.

## Discussion

1. **Posterior SBD is the most common variant of SBD**, and anterior SBD is rare, with reported prevalences of 0.10-0.48% and 0.009-0.03% respectively.
2. Most SBDs are unilocular, well-defined radiolucencies appearing unilaterally on panoramic radiography, and bilateral multi-locular cases are less frequent.
3. In contrast to posterior variants, **anterior SBD is difficult to diagnose**. Since Richard and Ziskind offered the first description in 1957, about 50 cases of anterior SBD have been reported, with **surgical exploration** or **biopsy** performed in most cases before diagnosis.
4. Because anterior SBD may be located between and below the tooth roots, it may be misdiagnosed as other radiolucent entities, such as **odontogenic cyst**, various **benign tumors**, or **bone metastases**.
5. Because of the superior soft tissue contrast, MRI was found useful in making a diagnosis of SBD. In the present case, MRI showed that the soft tissue in the bony

- defect was continuous and identical in signal intensity with the sublingual gland.
6. **FNAB (fine-needle aspiration biopsy)** is diagnostic procedure used to investigate superficial lumps and masses, which was very safe, minor surgical procedure.
  7. In this case, due to the lesion in the bony defect was small and seemed to be difficult to puncture correctly, therefore, FNAB was not executed. Instead, intra-operative **frozen section diagnosis** was performed, and salivary gland with chronic inflammation was diagnosed.
  8. A review of the literature reported that these cavities can have contents other than glandular tissue, such as **fibrous connective tissue, adipose tissue, muscle, nerve, lymph nodes, and blood vessels.**
  9. Surgical exploration or biopsy should be performed to rule out other pathological entities when the diagnosis is uncertain, or clinical symptoms are present.

### Exercises

題號	題目
1	<p><b>Speaking to Stafne bone defects, which of the following statements is NOT true ?</b></p> <p>(A) Stafne bone defects typically remain stable in size, hence it is also named “ static bone cyst “ .</p> <p>(B) It has anterior and posterior variants, and posterior variants are more often observed by panoramic radiographs than anterior variants.</p> <p>(C) Most cases have been reported in middle-aged and older adults, with children rarely affected and a striking female predilection is observed.</p> <p>(D) Usually no treatment is necessary for patient with Stafne bone defects of the posterior mandible, and the prognosis is excellent.</p>
答案 (C)	<p>出處 : <b>Oral and maxillofacial pathology, third edition, p. 24-25</b>  <b>[Hint]</b>  <b>Posterior Stafne bone defects are not rare, having been reported in 0.3% of panoramic radiographs. A striking “ male “ predilection is observed, with 80-90% of all cases seen in men.</b></p>
題號	題目
2	<p><b>Which of the following tools is less helpful in distinguish anterior Stafne bone defects from other pathological entities ?</b></p> <p>(A) Cone-beam computed tomography (CBCT)</p> <p>(B) Magnetic resonance imaging (MRI)</p> <p>(C) Biopsy</p> <p>(D) Panoramic radiographs</p>
答案 (D)	<p>出處 : <b>Oral and maxillofacial pathology, third edition, p. 24-25</b></p>