

Stafne's Bone Cavity: Report of Two Cases

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Abstract

Stafne's bone defects are asymptomatic lingual bone depressions of the lower jaw. There are two variant of Stafne's bone defects, the common variant exists at the third molar region posterior of the mandible and the other anterior variant is relatively uncommon and is located in the premolar region anterior of the mandible. In the present study we described two cases with Stafne's bone defects exists at the third molar region posterior of the mandible. The two cases were observed incidentally during routine radiographic examination.

Keywords: Lingual bone depressions; Stafne's bone cavity; Stafne bone cyst; Stafne bone defect

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Introduction

Stafne bone defect is known as Stafne bone cyst, also known as lingual mandibular salivary gland depression; latent bone cyst; static bone cyst; static bone defect or lingual cortical mandibular defect [1]. Edward C Stafne was the first to describe Stafne Bone Cyst in 1942 [2]. He described them as Bony Cavities in the posterior mandible [1]. These cavities are asymptomatic and are found only during routine radiography below the inferior alveolar canal, located distal to 3rd mandibular molar in the mandible and inferiorly limited by the mandibular border [3-5]. They are radiolucent and unilateral, and rarely bilateral [6].

Studies revealed that there are two variant of Stafne's bone defects, the common variant exists at the third molar region posterior of the mandible and the other anterior variant is relatively uncommon and is located in the premolar region anterior of the mandible [7-10]. The incidence of Stafne's bone defect ranges from 0.10% to 0.48% [2,6,7] with a male-to-female ratio of 4 to 1 [9-11]. Most of these painless lesions occur in the fifth and sixth decade of life. They are round or ovoid, and their sizes vary between 0.5 cm and 2.0 cm in diameter [3,8]. This lesion is easily diagnosed from the radiographs as they appear at a typical site & shape and clearly distinguished from its surroundings. CT scans add as important tool in confirmation of these lesions [12-17].

Cases Report

Case 1. A 42-year-old woman was referred to Cumhuriyet University, Faculty of Dentistry, Department of Dentomaxillofacial Radiology for routine dental examination and prosthetic management.

Medical history and dental history were not contributory. Panoramic radiograph of the patient revealed a well-defined radiolucent area at the molar region posterior of the mandible below the mandibular canal (Figure 1). The defect shape like a saucer, which was diagnosed later as a stafne's bone cavity. The overlying mucosa of the defect was quite normal and there was not any sign of infection or fistula. The defect was unilocular, asymptomatic and no history of expansion was recorded.

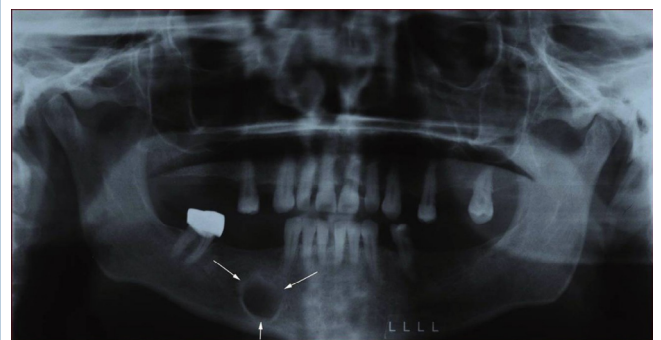


Figure 1: Case 1. A 42-year-old woman.

Case 2. A 39-year-old male patient was referred to Cumhuriyet University, Faculty of Dentistry, Department of Dentomaxillofacial Radiology in order to detect origin of the severe pain, the panoramic radiograph revealed presence of profound caries on the left maxillary posterior region which is underwent to surgical extraction. Also we observed radiographically the exist of a radiolucent defect on mandibular posterior region which was diagnosed later as a stafne's bone cavity the shape of the defect was elliptic. Medical and dental history

was not contributory. Palpation of the defect was not painful with no discomfort (Figure 2).

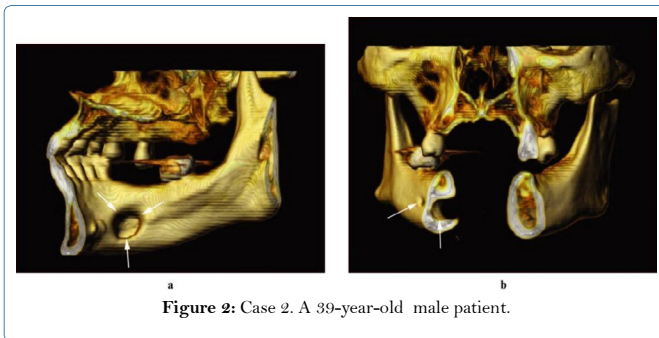


Figure 2: Case 2. A 39-year-old male patient.

Discussion

The Stafne's defect is thought to be a normal anatomical variant, as the depression is created by ectopic salivary gland tissue associated with the submandibular gland and does not represent a pathologic lesion [2]. The differential diagnosis of Stafne's defect includes benign and malign jaw lesions such as odontogenic cystic lesion. Radiographically, it is a well-circumscribed, monocular, round, radiolucent defect, 1-3 cm in size, usually between the inferior alveolar nerve and the inferior border of the posterior mandible between the molars and the angle of the jaw.[3-6]. It is one of the few radiolucent lesions that can occur below the inferior alveolar nerve, with the exception of a portion of the submandibular gland [3-8]. The Stafne's defect also tends to not increase in size or change in radiographic appearance over time and this can be used to help confirm the diagnosis. Also this defect is easily diagnosed from the radiographs as they appear at a typical site and shape and clearly distinguished from its surroundings [15,16]. The biopsy is not usually indicated, but if carried out, the histopathologic appearance is usually normal salivary gland tissue.

CT is more specific to bone lesions of the jaws and much less so to soft tissue have led some authors to advocate MR imaging as the primary diagnostic technique [16,17]. MR imaging should be adequate to make the diagnosis of stafne's defect. Sialography is able to depict salivary tissue in the bony cavity and has been used to confirm the diagnosis [17,18].

In this paper, orthopantomograph is used for diagnosing the stafne's defect (Unfortunately we haven't advanced non-invasive radiologic technique such CT to evaluate this position.

In conclusion, advanced non-invasive radiological assessment with CT scans is usually sufficient to achieve a final diagnosis of Stafne's defect, and to avoid surgical interventions, which would be an unnecessary option in the management of Stafne's defect except for symptomatic or concomitant other pathologies. In this paper, we are used only the orthopantomograph for diagnosing the stafne's defect.

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