



A Case of a Multiple Mental Foramina in Human Cadaver

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Abstract

The mental foramen is located bilaterally on the buccal surface of the mandible between the lower first and second premolars. We have observed multiple mental foramina in one of the cadavers during dissection of the inferior alveolar nerve in the gross anatomy lab at the university of Detroit mercy- dental school. Accessory mental foramina are located in close proximity to the second molar on the right side of the mandible. Dental health professionals and oral surgeons should be aware of the presence possible accessory mental foramen is important to both oral surgeons and general practice dentists.

Introduction

The mental nerve is considered a terminal branch of the inferior alveolar nerve where it emerges out of the mental foramen. The mental nerve splits into three branches that supply the skin of the chin, lower lip skin and mucosa [1]. The mental foramen is located on the anterior surface of the mandible just below and between first and second premolar teeth [2,3].

The presence of accessory mental foramina with associated additional branches of the mental nerve has been seen and documented in the literature [1]. There have been rare cases of mental nerves emerging from two different mental foramina located adjacent to each other on the same side of the mandible [4,5].

Incidence of having accessory mental foramina ranged from 1.5% to 12.5% in different studies [6], Gerhenson et al. [2], examined the mental foramen in 525 dry mandibles from 50 cadavers. He reported that 4.33% of the mandibles had double mental foramens, 0.7% had triple mental foramina and one mandible had 4 mental foramina on one side. Absent Mental foramina were found absent in 2 skulls studied by de Freitas et al [7].

Prevalence of accessory mental foramen depends on the population studied and method used in the study [7-12].

Some studies used CBCT scans [13,14] others studied them in dry mandibles [2,7].

This is a case report of multiple mental foramina found on mandible of 87 year old female cadaver. It was discovered while performing dissection in the gross anatomy lab at the University of Detroit Mercy, School of Dentistry.

Case Presentation

This anomaly was discovered when dissecting cadaver's heads in the gross anatomy lab by pure coincidence. Multiple mental foramens were seen in a dry mandible of 87 year old white female cadaver, as seen in Figure 1 an anatomical anomaly of an accessory mental foramen was detected only on the right molar region. The left side was normal. There was nothing significant about the medical history.

It was quite apparent that the size of the accessory mental foramen was larger and more oval in shape rather than being rounded versus the mental foramen. Moreover, it was in a posterior-superior relation to the mental foramen.

Discussion

Knowledge of mental foramen anatomy and probability of the occurrence of accessory mental foramen does play a direct role in diagnosis, especially when a radiolucent accessory mental foramen can be misdiagnosed as a periapical lesion. Furthermore, the magnitude of anesthesia can be compromised since there is an accessory mental foramen missed.

Cone Beam Computed Tomography (CBCT) are most accurate radiologically location

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Figure: Multiple mental foramens seem in a mandible of 87 years old female cadaver.

method that can be used [15] and will help oral surgeons and dentist performing implant installation and fixation of mandibular fracture as they plan surgery so that the accessory mental nerve can be preserved. However, radiographic localization can be difficult if reference anatomical landmarks is not clear, and since the foramen cannot be palpated manually or visualized clinically. Conventional radiographs May not show the mental foramen and radiographic distortion may make visualization more challenging.

Presence of an accessory mental nerve may be missed out during routine dental procedure or oral surgery; this may lead to persistence of the neuralgic pain caused by with the presence accessory mental nerve [16]. Trigeminal neuralgia may affect the mental nerve and all of it braches that is why the clinician should be aware of the presence of a possible accessory mental foramina since failure to remove the mental nerve with all its branches is the main reason behind its possible regrowth and recurrence of the disease.

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