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BILATERAL ACCESSORY MENTAL FORAMEN- A CASE REPORT

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ABSTRACT

Accessory mental foramen of the mandible is not a common anatomical variation. Presence of any such variation during implant placement, regional anesthesia and surgical correction of the jaw deformities may develop neurovascular complications. In order to avoid complications, the probability of the existence of an accessory mental foramen should be kept in mind. During routine osteology demonstration classes we noticed an accessory mental foramen on both sides of mandible. So particular attention should be paid to the possible occurrence of one or more accessory mental foramen during surgical procedures involving the mandible. The clinical implications of such variation are discussed in this paper.

Keywords: Mandible, mental foramen, anesthesia, accessory mental foramen.

INTRODUCTION

The anatomical position of the mental foramen usually lies midway between the upper and lower boarders of the body of the mandible, either below the first pre molar teeth or the second. The mental neurovascular bundle emerges from the mental foramen. The posterior boarder of the foramen is smooth and accommodates the nerve as it emerges posterolaterally[1]. The inferior alveolar nerve divides into mental and incisive branches near the mental foramen. The mental nerve leaves the mandible via the mental foramen whereas the incisive nerve remains within the bone and supplies the anterior teeth. The mental nerve may extend anteriorly for 2–3 mm within the mandible before curving back to the mental foramen, called the anterior loop of the mental nerve. The intra osseous course of the mental nerve is of particular importance in dental implant surgery. The nerve may be damaged if the inter foraminal area of the mandible is invaded during surgery or while harvesting block grafts from the symphysial region. The mental foramen is most usually single in humans, when it is double or multiple the additional foramens are termed as accessory mental foramen.

Case report:

During routine osteology demonstration classes for the undergraduate students, we observed an accessory mental foramen bi laterally in an adult mandible, as shown in figure-01 .The accessory mental foramen is located anterolateral aspect of body of mandible just anteroinferior to the normal mental foramen, between the canine and premolar tooth, mid way between upper and lower borders of body. As measured by the measuring tape it is about 12-14 mm superior to the inferior border.

DISCUSSION

According to previous studies by different authors, the incidence of accessory mental foramen is as follows. Sawyer DR et al (1998)[2] reported the incidence of accessory mental foramen as 2.6% in French, 1.4% in American Whites, 5.7% in American Blacks, 3.3% in Greeks, 1.5% in Russians, 3.0% in Hungarians, 9.7% in Melanesians, and 3.6% in Egyptians.

According to Toh H et al (1992) [3] accessory mental foramen is less rare, with a prevalence ranging from 6.7 to 12.5% in Japan in a Japanese population. Absence of mental foramen has also been reported, According to De Freitas et al (1979) [4] mental foramen was absent in 3 cases out of 2870 sides of 1435 dry skulls. Cagirankaya LB et al (2008) [5] reported that accessory mental foramen is rare, with a prevalence ranging from 1.4 to 10 %.

According to Naitoh M (2009) [6] theory, the mental foramen is incomplete until the 12th gestational week, when the mental nerve separates into several fasciculi at that site. It has been suggested that separation of the mental nerve earlier than the formation of the mental foramen could be a reason for the formation of the accessory mental foramen.

Accessory foramen of the mandible is common. They may transmit auxiliary nerves to the teeth from facial, buccal, transverse cervical cutaneous and other nerves [7].

CONCLUSION

This article reviews the clinical importance of accessory mental foramen. The Accessory mental foramen and their occurrence are clinically significant in dental anesthetic blocking techniques, surgical correction of jaw deformities and periapical surgeries. Care should be taken to the accessory mental foramen and nerve during dental implant surgery and in any surgical procedure involving the mandibular molar and premolar region, so that the rate of paralysis and hemorrhage in mental region can be reduced. In harvesting the block grafts from symphysial region, the nerve may be damaged, so the intra osseous course of the mental nerve is of particular importance.

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Figure: 01: Anterior surface of body of the mandible shows (MF: mental foramen, AMF: Accessory mental foramen).