



A Case Report: An Accessory Mental Foramen

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Abstract

Aim: The aim of this article is the presentation of a case report on an accessory mental foramen.

Introduction: Any foramen which is in addition to Mental Foramen (MF) is considered as an Accessory Mental Foramen, (AMF) and it is usually located below the 1st molar teeth. This accessory mental foramen may transmit the branches of the mental nerve. Presence of the accessory mental foramen would be of much use for dental surgeons while they do surgical procedures on the mandible.

Report: Seventy (70) mandible analyzed in a study of Morphometric analysis of mental foramen in dry human mandible in the region of North India, where five accessory mental foramen was found. Three on left side and two on right side of mandible.

Summary: Variation in the existence of accessory mental foramen was studied and statistical analysis, to find out the minimum and the maximum incidences of accessory mental foramen was performed.

Key Words: Mental foramen, Accessory mental foramen, Anatomical variation, Mental nerve block, Surgical Procedure to Mandibular Premolar and 1st Molar tooth.

INTRODUCTION

The mental foramen (MF) is situated on the anterolateral aspect of the body of mandible. It gives path to mental nerve and vessels (Agthong S. et al (2005) ¹ Igbigbi P. S. & Lebona S (2005)⁵ and Phillips J. L. et al (1992)⁹

The mental nerve and vessels radiate through the mental foramen and supply sensory innervations

and blood supply to the soft tissues of the chin, lower lip and gingival on the ipsilateral side of the mandible (Sinnathamby (1999)¹³, Williams P. L. et al (2000)¹⁵).

Any foramen which is in addition to MF is considered as an Accessory Mental Foramen (Sawyer et al (1998)¹¹), (AMF) and it is usually located below the 1st molar teeth (Cag Irankaya LB

and Kansu (2008)²). This accessory mental foramen may transmit the branches of the mental nerve.

The precise knowledge on the variations in the position, shape, and the size of the mental foramen and the presence of the accessory mental foramen would be of much use for dental surgeons while they do surgical procedures on the mandible, such as the Curettage of the premolars, Filling procedures, Dental implants, Root Canal Treatments (RCT), Orthognatic surgeries, etc (Udhaya K. et al (2013)¹⁴)

The absence and variation of accessory mental foramina have been reported previously and can range from 0.03% to 0.06%. (Defreitas V. et al (1979)³, Agthong S. et al (2005)¹). Gershenson A. et al (1986)⁴ examined 525 dry mandibles focusing on variation, shape and location of the mental foramen related to the teeth, reported that 4.3% mandibles had double mental foramina and 0.7% mandibles had triple mental foramina.

CASE REPORT

During study in Morphometric analysis of mental foramen in dry human mandible in the region of North india.

70 mandible analyzed, 9 human adult dry Mandible, obtained from the Department of Anatomy, IIMS & R, INTEGRAL UNIVERSITY , Dasauli , Kursi Road, Lucknow-226026, U.P, 31 human adult dry Mandible, obtained from Department of Anatomy, King George Medical University, Chowk, Lucknow- 226003, U.P and 30 human adult dry Mandible, obtained from UP RIMS & R, Saifai, Etawah-206130, U.P are examined for Morphometric measurement of mental foramen.

In this study we found five accessory mental foramen. Three on left side and two on right side of mandible (Figure 1). The SPSS, version 16.0 software were used for the statistical analysis, to find out the minimum and the maximum incidences of accessory mental foramen.



[Fig-1]: Left side of a mandible showing two mental foramen.

MF-Mental Foramen, AMF-Accessory Mental Foramen.

DISCUSSION

In human mental foramen is usually a single opening on each side of mandible. However in some case there is no mental foramen said by Defreitas V. et al (1979)³ and in other cases there are several said by William PL et al (1989)¹⁶, Toh H et al (1992)¹⁸, Shankland WE 2nd (1994)¹², Sawyer et al (1998)¹¹, Berge JK et al (2001)²⁰, Kieser J et al (2002)¹⁷ and Sithiporn A et al (2005)¹⁹. Double mental foramina are presumed to be the result of branching of mental nerve, prior exit to the mental foramen said by Serman NJ (1989)⁸.

Table-1: Number of Accessory Mental foramen-
Left side

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|---------|---------------|--------------------|
| 1 | 3 | 4.3 | 4.3 | 4.3 |
| 2 | 67 | 95.7 | 95.7 | 100.0 |
| Total | 70 | 100.0 | 100.0 | |

One number of accessory mental foramen was seen 4.3% in the left side.

Table-2: Number of Accessory Mental foramen-
Right side

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|---------|---------------|--------------------|
| 1 | 2 | 2.9 | 2.9 | 2.9 |
| 2 | 68 | 97.1 | 97.1 | 100.0 |
| Total | 70 | 100.0 | 100.0 | |

One number of Accessory mental foramen was seen in 2.9% in the right side.

In this study we found five accessory mental foramen. Three on left side and two on right side of mandible. Which indicate its occurrence of 4.3% in left side of mandible and 2.9 % in right side of mandible. Total incidence of Accessory mental foramen was 7.2 % and bilateral single mental foramen was present in 92.8% of mandible.

Others who worked on this subject and support my study are as mention.

*Gershenson A. et al (1986)*⁴ the mental foramen (MF) was found single in 94.67% of the cases and multiple in 5.33%.

*Shankland WE 2nd (1994)*¹² said 6.62% of the mandibles possessed accessory mental foramina.

*Naitoh Munetaka et al (2008)*⁷ result shows the accessory mental foramen was observed in 7% of patients.

*Ilayperuma, I. et al (2009)*⁶ reported the incidence of multiple mental foramina was 3.92%.

*Udhaya k et al (2013)*¹⁴ said the accessory foramens were noted in five mandibles.

*Pokhrel R et al (2013)*¹⁰ said accessory mental foramen was found in 7.22% sides, bilaterally in 4.81% and was more common in males and in right side.

CONCLUSION

The recent trend of replacement of missing teeth by dental implants and the increasing frequency of orthognathic surgeries have highlighted the clinical significance of the mental foramen. Mental foramen and Accessory Mental foramen variation often remains unnoticed and undiagnosed. In order to obtain effective nerve block and to avoid post procedural neurovascular complications in the mental region, particular attention should be paid to the morphology of the Mental foramen and Accessory Mental foramen.

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