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MYLOHYOID GROOVE BRIDGING IN NORTH COASTAL ANDHRA POPULATION

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ABSTRACT

The Bony plates stretch over the mylohyoid groove of the mandible either completely or partially is called as mylohyoid bridging. Presence of such mylohyoid bridging may compress the mylohyoid neurovascular bundle which produces the neurological or vascular disorders. This study is clinically important for Dental surgeons, anesthetists, anthropologists.

Objectives: To study the site, extension and location of the bony bridging of mylohyoid grooves on right and left sides of mandibles in north coastal Andhra population of south India and compare the present study results with those of previous studies. **Methods:** The present study is conducted on 60 macerated mandibles, which are available in the osteology section of department of anatomy. In each mandible we have examined both medial sides of the mylohyoid grooves and their bony bridging. **Results and Conclusion:** In the present study mylohyoid groove bony bridges were found as incomplete or partial type on total 4 sides (2 proximal and 2 distal types) out of 120 sides of 60 mandibles (incidence as 3.33%). All bony bridges were seen unilaterally, No cases were found as complete bony bridges.

Keywords: Mandible, Mylohyoid bridging, Mylohyoid nerve.

INTRODUCTION

Mylohyoid groove located on the medial side of ramus of the mandible, it extends downwards and forwards from below the posterior part of the mylohyoid line and it transmits the mylohyoid neurovascular bundle [1]. Sometimes the bony plates stretch over the mylohyoid groove as completely or a small part is called as mylohyoid bridging, Depending on the extension of bony bridge over the mylohyoid groove this is classified as complete type and incomplete or partial type [2]. Some authors classified bony bridging into distal (type 1), proximal (type 2) and common, uncommon types [3, 4].

MATERIALS AND METHODS

A Total number of 60 macerated mandibles were available in the Department of anatomy, Maharajah's Institute of medical sciences, Nellimarla, Vijayanagaram, North costal Andhra Pradesh, South India were used for this study. All mandibles belong to adult at different unknown ages. In each mandible both medial sides were examined for mylohyoid grooves and their bony bridges. The site and extent and location of the bony bridging of mylohyoid grooves on right and left sides of mandible were recorded. Each side of bony bridging taken as a separate case for the purpose to compare the

present study results with those of previous studies.

RESULTS

A total 120 sides of mylohyoid grooves were studied from 60 macerated mandibles. In the present study mylohyoid groove bony bridging were found total 4 sides. All bony bridges were seen unilaterally, (2 proximal and 2 distal types). Proximal type of bony bridge seen one at right and one at left side (FIG. 01 and 02), same as distal type seen one at right and one at left side (FIG.03 and 04). In the present study the Incidence of mylohyoid bony bridge in north costal group of Andhra population of south India is 3.33 %(4/120 : 33.3).

DISCUSSION

Mylohyoid groove bridging can be useful as a genetic marker in population studies and other non metric cranial traits. The mylohyoid groove bridging received attention of many anthropologists.

According to Arensburg (1979) [5] during development of the mandible the membrane covering the mylohyoid groove ossifies at different locations either proximally, distally, or at middle ,occasionally ossifies at multiple levels leads to Bony bridging.

Incidence of mylohyoid bridges have been reported from different populations and different parts of India, According to Gopinath (1995) [6] incidence is 8.63, Manjunath (2003) [7] 6.39, Narayana (2007) [8] 7.20, Shantharam V (2011) [9] 3.91 and in the world the incidences as American whites [10] 11.50, Europeans [11] 0.47, East Asians [12] 2.60, Modern Japanese [13]. In the present study the incidence is 3.33.

The Clinical significance of mylohyoid bony bridging is important for Dental surgeons, anesthetists as the mylohyoid nerve passes through a bony tunnel may get compressed against the bone which creates neurological disturbances and also mylohyoid nerve varies in its course and distribution [14].

CONCLUSION

All mylohyoid groove bridges found in the present study were incomplete, unilateral, and proximal, distal types. No cases were found as complete bony bridges. Out of 120 sides, a total 4 sides (2 proximal and 2 distal types) were observed bony bridges. The incidence of present study in North costal group of Andhra population in south India is 3.33%.

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Fig 01: Arrow showing Incomplete, proximal type of Mylohyoid Bony Bridging on Right side of the Mandible

Fig 02: Arrow showing Incomplete, proximal type of Mylohyoid Bony Bridging on left side of the Mandible

Fig 03: Arrow showing Incomplete, Distal type of Mylohyoid Bony Bridging on Right side of the Mandible

Fig 04: Arrow showing Incomplete, Distal type of Mylohyoid Bony Bridging on left side of the Mandible.