Subscription Agency
Exploring and Distributing Knowledge Globally

International Journal of Advanced Nursing Education
Volume 3 Issue 2, 2023
ISSN- 25827383

Variation of Tympanic Part of Temporal Bone: Foramen Of Huschke /Tympanicum

R. Yasodai*
Department of anatomy, RVS Dental College and Hospital, Tamio Nadu, India
Corresponding Author
Email: yasoanatomy@gmail.com

ABSTRACT

Introduction
The foramen of Huschke occur in the temporal bone. It is presented posteromedial to the temporo-mandibular joint occurs due to a defect in ossification process. It represents a developmental defect in the antero-inferior aspect of the bony external auditory meatus. It pre-dispose individuals to TMJ pathology. The aim of this study is to find the incidence of foramen in the temporal bone.
Materials and Methods: *A total of 50 dry adult skulls of unknown sex and age were observed and then presence of foramen incidence was noted from the Department of Anatomy, Sri Ramakrishna Dental College and Hospitals, Coimbatore.*
Results: Foramen Of Huschke /Tympanicum *was observed in two dry human skulls of the 50 with an occurrence of 2 to 3%. Foramens were present on the both or either right and left side of the skull. Formens look almost circular/irregular in shape and sizes may vary.*
Conclusion: *This study described that 2 to 3% of skull variance have foramen of Huschke with its embryological and clinical diagnosis like ENT. This study might enhance aware of persistent foramen of Huschke and keep it as one of the possible diagnoses while dealing with patients presenting with otological complications.*
Key Words: *External acoustic meatus, Foramen Huschke, TE Tympanic plates, temporomandibular joint (TMJ).*

INTRODUCTION

The foramen of Huschke or tympanum is small aperture in the tympanic portion of the temporal bone is extremely rare. It is located in the antero-inferior part of the external auditory canal (EAC) and posteromedial to the temporo-mandibular joint (TMJ).

It is an anatomic variation due to defective embryological condition [1]. This foramen is usually closing before first 5 years of life but is occasionally persists through-out the life.

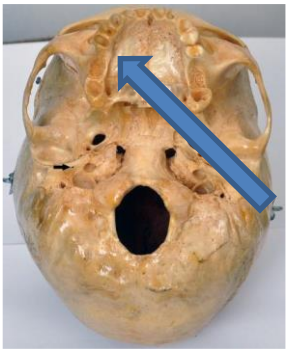
If the Foramen can either be asymptomatic or it may cause a persistent ear discharge after mastication process, in which case it might be connected to the TMJ or parotid gland fistula formation causes ear injury or infection. The presence of the foramen may make the external and internal part of the ear vulnerable to injuries mainly during arthroscopy of the TMJ [2].

The presence and size of the foramen were noted and it may useful for future clinical procedures. According to the report is usually present more in female went compared to male. [3]

MATERIALS AND METHODS

A total of 50 dry human adult skull of unknown sex and age were observed from the Anatomy Department, Sri Ramakrishna Dental College and Hospitals, Coimbatore. The size of the foramen was measured by using calber and variations were noted.

International Journal of Advanced Nursing Education
Volume 3 Issue 2, 2023
ISSN- 25827383



DISCUSSION

The tympanic bone is developed by incompletely after birth age of 5 incomplete ossification causes this foramen. The factors that incomplete ossification led to the difficulty in mastication, deglutition, and respiration against the tympanic bone. Furthermore, a persistent FH has been associated between the parotid gland and the external auditory meatus. This foramen is a bony defect in the antero-inferior wall of external audiotry meatus .The FH is variable in shape, size, and location. They can pin-point, pinhead, circular, irregular, triangular, and U-shaped foramen[10]

In this study, the most probable reason could be the ethnic variation. Knowledge and information of this anatomical defect may be useful in evaluating patients with short-lived otorrhea where no local cause is identified [8]. Occasional or frequent ear discharge after mastication may be due to this foramen with the possibility of it connecting with TMJ or parotid gland.

Awareness of the presence of FH may prevent unintentional passage of the endoscope into the TMJ and ultimately result in its damage [9]. Data obtained from this study might benefit anatomists, ear, nose, and throat surgeons, dentists, and radiologists. Clinicians and the health-care system should be aware of the presence of this defect because it may affect the diagnosis of the problem and the successful treatment and prognosis [7, 8].

CONCLUSION

The study revealed that the occurrence of FH in dry human cranium is around 2 to 3% out of 50 dry skull. Its presence may affect the health and cause many different abnormalities of the EAC and may lead to ontological complications. Therefore, this study might useful to ENT surgeons should be aware of persistent FH and consider it as one of the possible diagnoses while dealing with patients presenting with ontological complications.

REFERENCES

1) Lacout A, Marsot-Dupuch K, Smoker WR, Lasjaunias P. Foramen tympanicum, or foramen of huschkle: Pathologic cases and anatomic CT study. Am J Neuroradiol 2005;26:1317-23.
2) Humphrey LT, Scheuer L. Age of closure of the foramen of Huschke: An osteological study. Int J Osteoarchaeol 2006;16:47-60.
3) Rezaian J, Namavar MR, Nasab HV, Nobari ARH, Abedollahi A. Foramen tympanicum or foramen of Huschke: A bioarchaeological study on human skeletons from an iron age cemetery at Tabriz Kabud Mosque zone. Iran J Med Sci 2015;40:367-7.

International Journal of Advanced Nursing Education
Volume 3 Issue 2, 2023
ISSN- 25827383

4) Sharma PD, Dawkins RS. Patent foramen of Huschke and spontaneous salivary fistula. J Laryngol Otol 1984;98:83-5.
5) Sharma PD, Dawkins RS. Patent foramen of Huschke and spontaneous salivary fistual. The Journal of Laryngology & Otology 1984;98:83-5.
6) Applebaum EL, Berg LF, Kumar A, Mafee MF, Otologic complications following temporo mandibular joint arthroscopy. Ann Otol Rhinol Laryngol 1989;97:675-9.
7) Herzog S, Fiese R. Persistent foramen of Huschke: Possible risk factor for otologic complications after arthroscopy of the temporo mandibular joint. Oral Surg Oral Med Oral Pathol 1989;68:267-70.
8) Bhanu PS, Sankar KD, Incidence of foramen of Huschke in South Andhra Population of India. J Clin Diagonos Res 2016;10:AC01-3
9) Stedman TL. Bone. In: Stedman TL, editors. Stedman's Medical Dictionary. 26th ed. Baltimore: Lippincott William and Wilkins; 1995. p. 674.
10) Sperber GH. The temporomandibular joint. In: Derrich DD, editor. Craniofacial Embryology. 2nd ed. Chicago: John Wright and Sons; 1975. p. 121-49.