

TO STUDY THE OCCURENCE, SIDE AND LATERALITY OF THE ACCESSORY INFRAORBITAL FORAMEN IN THE DRY SKULLS AMONG SOUTH INDIANS

R.Keerthana and Thenmozhi

Department of Anatomy, Saveetha Dental College

ARTICLE INFO

Article History:

Received 26th July, 2017

Received in revised form 19th

August, 2017 Accepted 25th September, 2017

Published online 28th October, 2017

Key words:

Accessory Infraorbitalforamen,
Skulls

ABSTRACT

Introduction: Prolene Hernia System is a tension free anterior inguinal hernia repair using a bilayered modification of inguinal hernia mesh. Inguinal hernia repair by Prolene hernia system is comparable with almost equal operating time, smaller incision and with a trend towards decreased complications rate and reduced rate of recurrences. **Aim:** This study was conducted to study the compare the results of Prolene Hernia System and Lichtenstein Tension Free mesh hernioplasty with respect to its operative time, post-operative pain, intra/post-operative complications and total hospital stay. **Methods:** The effectiveness of PHS were compared to Lichtenstein tension free mesh hernia repair in patients presenting with uncomplicated Inguinal Hernia for elective surgery in the Surgery department of IGMC, Shimla. **Results:** Duration of surgery was shorter in Prolene Hernia System group ($p=0.04$) than the Lichtenstein tension free mesh hernioplasty [32 vs 34 minutes], The mean pain intensity in present study was 2.9 in Lichtenstein tension free mesh hernioplasty group and 2.7 in Prolene Hernia System, No intra-operative complications were seen with either of the two groups. Post-operative complications in the form of Seroma formation were more in Lichtenstein tension free mesh hernioplasty group than Prolene Hernia System group (8 vs 0). There were two cases of recurrence in the Lichtenstein tension free mesh hernioplasty group, while no short term recurrence was seen in Prolene Hernia System group over 12 weeks. Mean duration of post-operative hospital stay was 1.57 days for Lichtenstein tension free mesh hernioplasty group and 1.33 days for Prolene Hernia System group. **Conclusion:** This study concludes that even though the difference between the two methods in this randomized study were small, the Prolene Hernia System repair method for open inguinal hernia repair was associated with a shorter operative time, lower rate of recurrence, as well as fewer complications when compared with the Lichtenstein tension free mesh hernioplasty. Further prospective studies are needed to rigorously evaluate the comparative advantages of Prolene Hernia System repair in relation to other repair methods.

Copyright©2017 R.Keerthana and Thenmozhi. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

The infra-orbital foramen (IOF) is an opening by which the infra-orbital canal, giving passage to the infra-orbital artery, vein and nerve, communicates with the face. It locates below the infra-orbital margin in the maxilla and is present bilaterally in the facial skeleton. However, the accessory infra-orbital foramen (AIOF), the frequency of which changes between 2.2-18.2% and through which a branch of the infra-orbital nerve passes, should be taken into consideration during these interventions. The aim of the present study is to investigate the occurrence, laterality and side of AIOF, to make morphometric analyses and to provide convenience to clinical applications.(1) The presence of accessory infraorbital foramen may cause difficulties during anesthetization of the region innervated by infraorbital nerve. Accessory infraorbital

foramina lie immediately adjacent to the infraorbital foramen and they are comparatively smaller than infraorbital foramen.(2) There may be an accessory branch of the infra-orbital nerve that passes through the accessory infra-orbital foramen [3]. Knowledge regarding this accessory foramen is scarce. The foramen should be taken care of during various interventions in this region.(3)

MATERIALS AND METHODS

22 adult dry human skulls of unknown sex of south indian origin were investigated. The skulls which are damaged were excluded. The skulls were obtained from the Department of Anatomy, Saveetha Dental College, Chennai, Tamilnadu, India. The occurrence, laterality and the number of accessory foramen was observed.

RESULTS

The largest or prominent foramen is considered as a main foramen and others are accessory foramen. Among 44 skulls

*Corresponding author: R.Keerthana

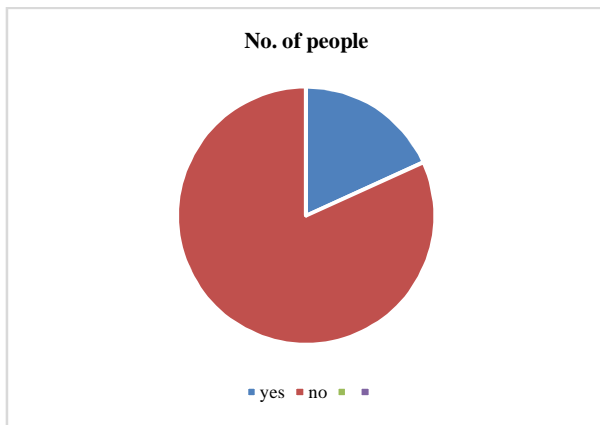
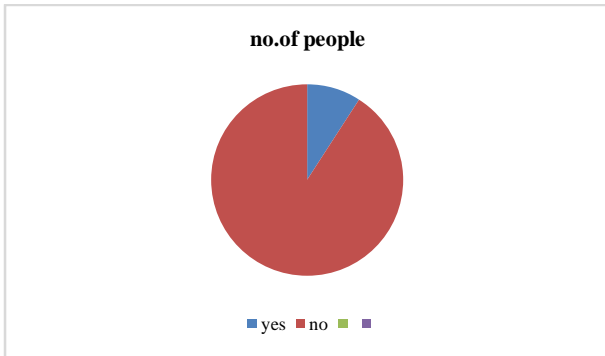
Department of Anatomy, Saveetha Dental College

11.4% has accessory foramen. Mostly the accessory foramen were located medial to the main infra orbital foramen.

Frequency Table

Presence of Accessory Foramina

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	5	11.4	11.4	11.4
No	39	88.6	88.6	100.0
Total	44	100.0	100.0	



DISCUSSION

The frequency of AIOF was reported as 5.7% by Kazkayasi, Ergin, Ersoy *et al.* (2001), 10% by Kadanoff, Mutanoff and Jordanov (1970), 10% by Hindy and Abdel-Raouf (1993), 12.78% by Saylam, Asim, Okan *et al.* (1999), 14% by Elias, Silva, Pimentel *et al.* (2004) and 15% by Aziz, Marchena and Puran (2000).

The frequency of AIOF shows change with respect to race. Berry and Berry (1967) reported the frequency of AIOF as 4.7% in Egyptians, 6.4% in Nigerian, 6.4% in Palestinian, 6.7% in Indians, 6% in North Americans, 13.2% in South Americans.

The frequency of AIOF was reported to be 6.4% in Burmese males, 8.7% in females; 12.5% in North American males, 7.9% in females; 18.2% in Mexican males, 12.5% in females, 2.2% in English males, 4.8% in females (BERRY and BERRY, 1967; FINNEGAN, 1972; GUADARRAMA, 1973; BERRY, 1975).

The frequency of AIOF may change in terms of sides (right-left). In the study of Bresnan *et al.* (2004), the frequency of AIOF was identified to be 4.7%. It was reported that the identified AIOF located more often on the left side (2.16%) than on the right side (1.22%). In the present study the percentage of occurrence of accessory infraorbital foramen in the ridge side is 9.09% and in the left side is 18.18%. The accessory infraorbital foramen is unilateral.



CONCLUSION

In order to protect the accessory infraorbital nerve in maxillo facial surgery the occurrence and possible position of the accessory infraorbital foramen should be taken into consideration.

References

1. Anatomic and morphometric features of the accessory infraorbital foramen Tezer, M.1, Öztürk, A.2, Akgül, M.3, Gayretli, Ö.2 and Kale, A.2
2. AccessoryInfraorbital Foramen And Morphometric Localization Of Infraorbital Foramen In North Indian Region Alok Kumar Singh, Preeti Agarwal, Nishtha Singh, SoubhikDebberma
3. Descriptive and topographic anatomy of infraorbital foramen and its clinical implication in nerve block Kopal Saini
4. Morphometric analysis of the infraorbital foramen and accessories foraminas in brazilian skulls análisis morfométrico de los agujeros infraorbitales y supranumerarios en cráneos de individuos brasileños M. G. Elias; R. B. Silva; M. L. Pimentel; V. T. S. Cardoso; T. Rivello & M. A. Babinski
5. Anatomical and morphometric analysis of accessory infraorbital foramen. Rai AR1, Rai R, Vadgaonkar R, Madhyastha S, Rai RK, Alva D.

How to cite this article:

R.Keerthana and Thenmozhi (2017) 'To Study The Occurrence, Side And Laterality Of The Accessory Infraorbital Foramen In The Dry Skulls Among South Indians ', *International Journal of Current Advanced Research*, 06(10), pp. 6631-6632. DOI: <http://dx.doi.org/10.24327/ijcar.2017.6632.0982>
