Original Research Paper

Volume - 7 | Issue - 8 | August - 2017 | ISSN - 2249-555X | IF : 4.894 | IC Value : 79.96

Anatomy

MORPHOMETRIC STUDY OF INFRAORBITAL FORAMEN IN DRY ADULT HUMAN SKULLS AND MAXILLAS IN WEST BENGAL REGION

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ABSTRACT The study aims to shows the morphometric differences of infraorbital foramen (IOF) in Bengal population and differences in different continents. 100 IOF were examined in this study (20 skulls and 60 maxillae) after distinguish of sex in the department of anatomy, IQ City Medical College, Durgapur. The distance from the IOF to infra orbital margin (IOM) and lateral border of piriform aperture were measured by Digital Vernier Calliper. The distance between IOF and IOM was found more on right side in males and on left side in females. But distance between IOF and piriform aperture was more on left side in both the sexes and this measurement was different from other continents. This study gives useful predictor for finding the location of IOF on sides and sexes of Bengal population.

KEYWORDS : infra orbital foramen, infra orbital margin, piriform aperture

INTRODUCTION

One of the most important facial foramen is infraorbital foramen (1). It is located on the anterior surface of body of maxilla (2). IOF generally located one cm below the infraorbital margin (3). Through infraorbital foramen, infraorbital nerve and artery are coming out from infraorbital canal (1, 4).

Detailed knowledge of infraorbital foramen and its morphometric measurements are important for surgeons and anaesthetists whenever surgical procedures of middle one third of face, upper alveolar process and regional block of the infraorbital nerve are performed (5-7, 10).

The present work consisted of a morphometric study of IOF in dry adult skulls and maxilla of Bengal population.

MATERIALS AND METHODS

This study included a total of 20 skulls and 60 maxillas without any damage and deformity. Skulls and maxillas were taken from the Department of Anatomy and first year students (individual bone sets) of IQ City Medical College, Durgapur, West Bengal. Also we took the help from the forensic department for the determination of sex of the skull and maxillas. We measured the distance from IOF to infra orbital margin and lateral border of piriform aperture by Digital Vernier calliper. Data as analysed and results reported in the form of mean.

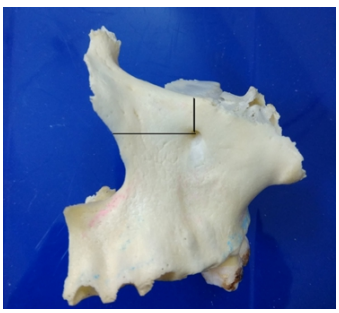

Figure no. 1: Showing the distances of IOF to IOM (vertical black line) and lateral border of piriform aperture (horizontal black line)

RESULTS

TABLE 1: Distance of site of IOF from the infraorbital margin

	RIGHT	LEFT
MALE	6.453 mm *	6.312 mm
FEMALE	6.216 mm	6.614 mm *

* In males, right side the distance was more and in females, it was left side.

Table 2: Distance of site of IOF from the lateral border of piriform aperture

	RIGHT	LEFT
MALE	15.167 mm	16.238 mm *
FEMALE	14.813 mm	15.312 mm *

* In males as well as females, the distance was more on left side then right side.

DISCUSSION

Lopes et al (8) reported that measurement of the mean distance from the IOF to IOM was more on left side than right side in the both the sexes. But our study showing on right side distance was more in males and on left side it was in females.

Hindy AM et al (9) said that the distance between the IOF to lateral border of piriform aperture was more on left side in males but females it was more or less same distance on both the sides. Our study also same like Hindy AM et al on left side distance was more in males but in females it was more on left side unlike his report. In the Bengal population, distance between IOF and lateral border of piriform aperture was more on left side in both the sexes.

Here we compared our study with different continental studies. It clearly showed that always there is a difference or variations on distances. So surgeons going for working in different continents should be aware of this kind of variations in the site of infra orbital foramen before going to the surgical procedures to avoid the errors or failures in the procedures.

CONCLUSION

This study provides the details of location of IOF from IOM and lateral border of piriform aperture in Bengal population. The sound knowledge of these distances is helpful to maxillofacial surgeons and plastic surgeons for pre operative procedures.

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