

## ABSTRACT

**Aim:** To assess the variation and location of the infra orbital foramen with its neighbouring structures using CBCT.

**Material and methods:** The present study was an attempt to assess the variation in the location of the infra orbital foramen with respect to various anatomical landmarks among different age groups and gender using CBCT. The CBCT volumes were categorised based on gender into two groups, and based on age into three groups as group 1(0-30years), group 2(30-60years) and group 3 (above 60years).Four parameters were assessed namely, the distance of infra orbital foramen from the mid sagittal plane to the centre of the foramen on both right and left side (parameter 1), the distance of infra orbital foramen from the infra orbital rim to the centre of the foramen on both right and left side (parameter 2) and the distance of infra orbital foramen from the zygomatic buttress to the centre of the foramen on both right and left side(parameter 3). Assess for the presence of accessory infra orbital foramen (parameter4).

### Results:

- All four parameters were assessed and compared among different age groups and gender.
- With respect to age, significant difference were found among **group 3 (age above 60 years)** with **parameter 2**(distance of infra orbital

foramen from the infra orbital rim to the centre of the foramen) on **right side** with **p-value** of **0.02**.

- With respect to gender, significant difference were found among **group 2 (30-60years) with parameter 3** (distance of infra orbital foramen from the zygomatic buttress to the centre of the foramen) on both **right and left side** with **p- value of 0.04 and 0.03**.

**Conclusion:** This study presented a radiological evaluation of the variations in the location of infra orbital foramen with respect to different anatomical landmarks. Anatomical knowledge about the location of infra orbital foramen is crucial for maxillofacial surgeons both during anaesthesia and various surgical procedures. Complications due to iatrogenic injuries to the nerve can be resolved with detailed information about the location of the foramen. Further studies in the variation of the infra orbital foramen with different ethnic groups and gender are recommended.

**Key words:** **Infra orbital foramen, infra orbital rim, zygomatic buttress, CBCT**