

## **ASYMMETRY AND INFRAZYGOMATIC CREST ASSESSMENT BY CONE-BEAM COMPUTED TOMOGRAPHY**

This study aimed to determine the asymmetry degree between the left and right sides of 57 Class I skeletal pattern adult patients through cephalometric analysis performed in cone-beam computed tomography (CBCT) in the multiplanar reconstruction (MPR) to measure six cephalometric variables. Two angular (FMA, SN.GoGn) and four linear (Co-A, Co-Gn, Co-Go, Go-Me). Sex dimorphism and absolute asymmetry degree was evaluated with t-test. Left and right asymmetry degree was obtained by absolute values assessment and categorized by slight (0 to 2mm), moderate (2 to 5 mm), and severe (>5mm). There was no statistically significant difference between the left and right sides. Absolute asymmetry values showed no significant differences between males and females. The prevalence of slight, moderate, and severe asymmetries was 78.42%, 18.55%, and 3.03% for males and 76.74%, 13.58%, 9.68% for females, associated with mandibular variables. The second study aimed to measure the infrazygomatic crest (IZC) thickness from the distal aspect from second premolars to mesial aspect of second maxillary molars to determine safe regions for Temporary Anchorage Devices (TADs) placement. The influence of sides and sex were also examined. CBCT images of 50 adults (25 males, 25 females) were measured. The IZC thickness was measured bilaterally at the coronal planes of maxillary second premolar labial cusp (2PMBC), first molar mesial and distal labial cusps (1MMBC, 1MDBC), and second molar mesial root (2MMBC) at four different heights. A significantly increasing thickness of the IZC from anterior to posterior and from apical to the bottom regions was observed. The IZC thickness was not influenced by sex nor by the side. These findings might be clinically helpful in TADs planning placement in the IZC.

**Keywords:** Facial asymmetry; Orthodontic Anchorage Procedures; Zygoma, Cone Beam Computed Tomography, Cephalometry.