

Morphometric characterization of anterior maxillary alveolar ridge by cone-beam computed tomography [Caracterización morfométrica del reborde anterior de la maxila mediante tomografía computarizada cone-beam]

Fuentes R.

Navarro P.

Salamanca C.

Cantín M.

Garay I.

Flores T.

The images obtained by Cone -Beam Computed Tomography (CBCT) allow the determination of threedimensional relationships of anatomical structures and overcome limitations of conventional radiography. The aim of this study was to describe the morphometric characteristics of the anterior maxilla and its relation to canine and premolars by CBCT exams. A descriptive study on 50 CBCT images was made, following a systematic observation of three-dimensional anatomical points between teeth and maxillary sinus walls, they were located and plotted tangent for measurement. The Mean and SD was calculated for each parameter, and the normality of distribution was tested by Kolmogorov -Smirnov test. Data were compared by ANOVA test, with a p value <0.05 as significant. The analysis of the relationship between the teeth and the anterior wall of the maxillary sinus, showed that in 80% of cases are associated with the canine and in 20% to first molar. The lower height between the alveolar ridge and the inferior wall of the maxillary sinus was observed at the second premolar with 13.54 ± 0.30 mm on the right side and 14.65 ± 0.30 mm on the left. Significant differences were recorded in relation to morphometric measurements and age range variable. The data obtained in this study complement the morphometric characteristics of the anterior maxilla, allowing implant treatments in a scientific morphological basis and minimizing the level of risk of failure or damage to the anatomical structures related.

Dental implants

Maxillary first premolar

Maxillary sinus

Tooth canine