Measurements attainment of a typical maxilla of a skeletal Class II malocclusion patient by measurements in CT

Abstract

The evolution of computer science and the interaction with health sciences allowed the simulation of clinical situations in computational models, with high precision, what eliminates most part of the disadvantages of experiments *in vivo*. The objective of this study was to describe and find, by means of tomographic measurements and statistical analysis, measures to create a virtual model of a medium individual, in the universe of patients with features of a skeletal Class II malocclusion. From 2225 assessed TCs, 20 remained belonging to a group of adult patients with ANB angle between 4° e 6° (skeletal Class II) with all superior teeth present. In these, the palatal dimensions were measured, with the Invesalius software, in length, width and depth. The maxilla with the smallest variation of differences to the mean of all measurements was identified in a grouping analysis in the SPSS 18 software. Added to the group of 20 patients, a hypothetical individual with mean values for each variable was included. A hierarchical grouping analysis was generated using the centroid as reference to the group formation, what showed the closest individual to the mean in the three dimensions. It was concluded that it is possible to obtain measurements to a valid virtual model of a human maxilla of a typical skeletal Class II individual from mean values obtained from measurements in tomographic images of a data bank, submitted to a statistical analysis.

Descriptors: Dental Models, Tomography, X-Ray Computed, Statistical analysis.

Dobranszki A, Noritomi PY, Faber J, Barriviera M, Dobranszki NPDC, Toledo AO. Obtenção de medidas de uma maxila típica de um paciente com má-oclusão de Classe II esquelética por meio de mensurações em tomografias computadorizadas. R Odontol Planal Cent. 2013 Jan-Jul; 3(1):2-10.