

## 3-D airway analysis related to facial morphology [Análisis 3-D de la vía aérea relacionado con la morfología facial]

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The aim of this investigation was to define the volume and area of the airway in subjects with Class II and Class III skeletal deformity. A cross-sectional study was designed including subjects with facial deformity defined by Steiner's analysis in subjects with indication of orthognathic surgery who presented diagnosis by cone beam computerised tomography. We determined the measurements of maximum area, minimum area and volume of the airway. The data were compared using Spearman's test, with statistical significance defined as  $p < 0.05$ . 115 subjects were included: 61.7 % Class II and 38.3 % Class III, mean age 27.8 years ( $\pm 11.6$ ). A significant difference was observed in the area and volume measurements in the groups studied, with significantly smaller measurements found in Class II ( $p = 0.034$ ). The minimum area was 10.4 mm<sup>2</sup> smaller in Class II patients than in Class III, while the general volume of the airway was 4.1 mm<sup>3</sup> smaller in Class II than in Class III. We may conclude that Class II subjects present a smaller airway volume than Class III subjects. © 2020, Universidad de la Frontera. All rights reserved.

Airway

Facial deformity

Orthognathic surgery

OSAHS