INTERNATIONAL CONFERENCE ON

DENTISTRY AND INTEGRATED MEDICINE

MAY 07-08, 2018   TOKYO, JAPAN

Correlation between the atlas morphology and the maxillo-mandibular divergence pattern

Hafiz Taha Mahmood and Mubassar Fida
Bahria University, Pakistan

Introduction & Aim: Early identification of the maxillo-mandibular divergence pattern of patients allows orthodontists to attain maximum improvement in skeletal relationships through growth modification and avoid orthognathic surgery. Therefore, the aim of this study was to evaluate the correlation between atlas morphology and maxillo-mandibular divergence.

Material & Methods: A cross-sectional study was conducted on the pretreatment lateral cephalograms of 208 subjects aged 18 to 25 years. The atlas parameters were categorized into atlas dorsum, antero-posterior and ventrum and measured on View Pro-X software. Various maxillary (FPPP, SNPP and FHPP angles) and mandibular (SNGoGn, saddle, articulare, gonial, sum of posterior and Y-axis angles) parameters were used to evaluate the divergence pattern of the individual. The Mann-Whitney U test was used to compare atlas and maxillo-mandibular parameters between genders. Spearman correlation was used to correlate atlas and maxillo-mandibular parameters across genders. A p-value≤0.05 was considered as statistically significant.

Results: Statistically significant differences were found between various atlas and maxillo-mandibular parameters between genders. With atlas dorsum, the saddle angle (r=-0.3) in males whereas gonial (r=-0.2), Y-axis (r=0.1) and SNPP (r=-0.2) angles in females showed significant weak correlation. With atlas antero-posterior, saddle (r=-0.2), articulare, (r=0.2), SNPP (r=-0.2) and FHPP (r=-0.3) angles in males showed significant weak correlation. However, only the SNPP angle (r=-0.2) in females showed a significant weak correlation with atlas ventrum.

Conclusions: A weak correlation was found between atlas parameters and various maxillo-mandibular angular parameters in both genders. Therefore, atlas morphology cannot be regarded as a good predictor of future maxillo-mandibular divergence pattern.

taha.mahmood@aku.edu