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Three-dimensional analysis of the temporomandibular joint in patients who underwent orthognatic surgery

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Aim: To analyze the cortical integrity, volume, morphology of the head of the condyle and the volume of the joint space by cone beam computed tomography (CBCT) in patients who have undergone orthognathic surgery.

Methods & Materials: Twenty four patients were separated in two groups: group 1 - patients those who have undergone maxillary advancement and mandibular setback (n=12) and group 2 - patients undergone maxillomandibular advancement (n=12). CBCT scans were taken in three phases: T0 (before surgery), T1 (short term after surgery), and T2 (long term after surgery) and analyzed with Dolphin Imaging & Management Solutions® 11.7 version 3D software. Statistical analysis was conducted with ANOVA, Tukey test and Chi-square test.

Results: Changes in joint surface and condylar volume were not found, independently of the kind of surgery. However, there was alteration in condylar surface, which was higher in the right side in group 1. The most common finding of condylar position was concentric, regardless of the analyzed time. Even that didn't demonstrate any changes in the head of the condyle and joint space, the orthognathic surgery was effective and stable in patients class II and class III through one year of observation.

Biography

Luiza Roberta Bin is studying at Western Kentucky University through the Brazilian Scientific Mobility Program for three semesters. She has obtained Bachelors in Dentistry from State University of Maringa. She has presented at Congresses and Conferences at multiple universities in Brazil. In addition to her public speaking experience, she also has developed scientific research, specifically in Oral Radiology.

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