OP3   FACIAL SOFT TISSUE RESPONSE TO BIMAXILLARY ORTHOGNATHIC SURGERY IN CLASS III PATIENTS

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AIMS: To evaluate the facial soft tissue profile changes after bimaxillary orthognathic surgery in skeletal Class III patients.

SUBJECTS AND METHOD: Twenty skeletal Class III patients (10 females, 10 males) with a mean age of 23.68 ± 7.14 years. All measurements were achieved on pre- (T0) and post- (T1) operative cephalometric films taken at least 6 months after surgery. Forty-eight soft tissue measurements were used to evaluate the facial profile changes after bimaxillary surgery and nine ratios were calculated to determine the relationship of linear changes in soft tissue variables following the skeletal landmarks. Linear regression analysis was applied to obtain a mathematical model for soft tissue movement. A dependent two-sample t-test, one-way variance analysis and Bonferroni test were used for statistical analysis. Method error was determined by the intraclass correlation coefficient (ICC).

RESULTS: No gender difference was found after bimaxillary surgery. In the sagittal plane, the soft to hard tissue ratio for the maxilla was 45 per cent for Sn, 70 per cent for soft tissue A (A*) and 60 per cent for Ls. In the mandible, the soft to hard tissue ratios in sagittal plane were 77 per cent for Li, 83 per cent for Pog*, 81 per cent for Gn* and 95 per cent for Me*. The tip of the nose (Pn) was affected less by the movement of the underlying skeletal structure (23%), while the point B* moved equally with skeletal point B (101%).

CONCLUSION: The correlation between soft and hard tissue movement in the maxilla was less than in the mandible. The significant improvement in the facial profile of these bimaxillary surgery patients was primarily related to the backward movement of the mandible.