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Model Surgery Technique for Le Fort I Osteotomy -Alteration in Occlusal Plane Associated with Upward Transposition of Posterior Maxilla-

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Abstract: It is difficult to translate analytical values into accurate model surgery by traditional methods, especially when moving the posterior maxilla. This is because cephalometric radiographic analysis generated information on movement of the posterior nasal spine (PNS) can not be recreated in model surgery. Therefore, we propose a method that accurately reflects such analysis and simulation of movement using Quick Ceph® 2000 (Orthodontic Processing Corporation, USA). This will allow the enrichment of model surgery prior to actual surgery in cases where upward movement of the posterior maxilla is involved. All patients who participated in this study had skeletal mandibular prognathism characterized by a small occlusal plane angle in respect to the S-N plane. Cephalometric radiographs were taken and analyzed with the Quick Ceph® 2000. Pre- and post-surgical evaluations were performed using Sassouni arc analysis and Ricketts analysis. Prior to transposition, we then prepared an anterior occlusal bite record on a model mounted on an articulator. This bite was then used as a reference when the molar parts were to be transposed upwards. The use of a occlusal bite permitted an accurate translation of the preoperative computer simulation into model surgery, thus facilitating favorable surgical results.

Key words: [Occlusal alteration](#), [Model surgery](#), [Bimaxillary surgery](#), [Computer simulation](#),



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