Corticotomy Assisted Le Fort I Osteotomy: An Alternative To Segmentation Of The Maxilla

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Airway management in the craniomaxillofacial trauma surgery

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Purpose: We present a surgical technique for maxillary auto-bone grafting complementary and simultaneously to Le Fort I orthognathic surgery that was used on 123 patients. This graft has two main objectives: to reduce the dead space between the two bone parts of the maxilla and increase the volume of the cheeks, para-nasal spaces or cheekbones to improve the aesthetic result of the intervention.

Methods: From 2007 to 2012, 123 patients underwent a Le Fort I surgery with the conventional technique of Bell. Bone debris collected during the intervention were then wrapped in a sheet of Surgicel® and thengrafted at the dead space left in the osteotomy by maxillary movement, or on the anterior maxilla in the paranasal area or on the malar bone. The records of 80 patients were collected to evaluate the postoperative course and 29 postoperative scans were studied to measure the size of the bone pieces.

Results: The postoperative course was uneventful in 93.5% of cases. Seven cases or 8.4% of patients had a postoperative maxillary persistent edema. One case (1.2%) presented a sinus infection without any etiology determined.

Conclusion: This technique, simple and easy, to use allows improved bone healing and cosmetic results without causing excess morbidity. It seems to be a good alternative to bone grafting technique sometimes long and complicated. It can be applied to all Le Fort I osteotomy.

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Comparison of two point versus one point fixation techniques in submentotracheal intubation during craniomaxilofacial surgeries—a pilot study

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Background and objectives: Airway management in the craniomaxilofacial trauma surgery may require some modifications of the standard intubation techniques. Submental endotracheal intubation may serve as an effective and safe alternative route in these conditions. In standard technique of submentotracheal intubation, the tube is fixed extra orally at the submental incision site with sutures. The results of this study were compared with a single point fixed technique.

Methods: The author reviewed 30 cases in which both AOO and orthognathic surgery was utilized. The type of deformity, the treatment time frame, sequencing of surgeries and any complications were analyzed.

Results: A retrospective study of the 30 cases surveyed showed that the average set-up time for orthognathic surgery was 17 weeks. This result in the orthognathic surgery being performed in 1/3 to 1/4 of the time normally required utilizing conventional orthodontia. Furthermore, the average total treatment time for correcting all of the cases was 34 weeks.

Conclusions: Combining AOO with orthognathic surgery results in an exceptionally fast time-frame for correcting dento-facial deformities. The results are stable with a reproducible occlusion and a minimum of post-operative complications. Furthermore, it is advantageous in that pre-treatment bone deficiencies and fenestrations remain covered as confirmed by CT scans. The AOO surgery can be performed as an outpatient (office type) procedure, resulting in a hospital operating time and costs. The need for surgically assisted rapid palatal expansion (SARPE) and multi-piece osteotomies has been eliminated with this approach.

Key words: AOO; Wilckodontics; orthognathic surgery; RAP, dento-facial deformities

References


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