

Objectives: To evaluate the standard of care given by an in-house multidisciplinary team by measuring occlusal outcomes.

Methods: We compared PAR outcomes of close to 200 patients who had received consecutive orthodontic and orthognathic treatment over a period of 48 months from 2012 to 2016. 162 cases commenced treatment and 121 were debonded and placed in retention in this period.

Results: Class II mean PAR score before treatment was 39 (10–68), after treatment was 3 (0–8), with a mean improvement of 91%. Class III mean PAR score before treatment was 42 (16–54), after treatment was 3 (1–7), with a mean improvement of 92%. Total PAR scores improved by a mean of 91.5% after treatment, indicating that results are above those in the published literature.

Conclusions: Most orthognathic patients reported improvements in their dental and facial appearance and thought that the treatment had been beneficial. Stability of the improvement was not measured in subsequent annual reviews which would prove of greater value and is now an ongoing project combining PAR and standardised cephalometric assessment.

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Three-dimensional airway changes after subcranial Le Fort III osteotomy combined with Le Fort I osteotomy

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The purpose of this report was to describe changes of airway volume in nonsyndromic patients after simultaneous subcranial Le Fort III and Le Fort I osteotomy for midface advancement associated with bilateral sagittal split osteotomy.

11 consecutive patients were studied comparing the airway volume, area and minimum cross-sectional area by using Dolphin Software, before, immediately after and 18 months after surgery. The airway space was divided in nasopharynx, oropharynx and hypopharynx. There was an increase in the three variables analysed, but statistical differences were observed in the increase of the minimal cross-sectional area after surgery. There were no differences between male and female patients.

In conclusion, although mandible setback should be avoided because it has a negative effect on the airway, the midface advancement compensates this narrowing by maintaining or increasing the airway volume, by advancing the palatopharyngeal arch. Linear midface and maxillary advancement will have positive effects on the airway volume and patency.

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Stability of the subcranial Le Fort III osteotomy associated with Le Fort I osteotomy for nonsyndromic patients

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Objectives: The purpose of this study was to evaluate post treatment skeletal stability of a sequence of eleven nonsyndromic patients who underwent subcranial Le Fort III and Le Fort I osteotomy.

Methods: To test if the long-term stability was satisfactory, the authors compared cephalometric changes from immediately after surgery to 18 months follow-up taken from multislice computed tomography using two different software.

Findings: All patients were submitted to a final advancement of upper incisor of at least 10 mm. There was no statistical difference between the measures taken from the two different software and interclass correlation was at least good for each cephalometric variable. The advancement of the upper incisor, A-point, posterior nasal spine and nasion was highly stable, presenting less than 01 mm of relapse after 18 months in vertical and horizontal analysis. No statistical difference was seen between short- and long-term follow-up. Infraorbital also showed a highly stable result, without significant differences after 18 months.

Conclusion: Subcranial Le Fort III midface advancement combined with Le Fort I is an effective surgical technique to correct malocclusion and midface hypoplasia with excellent postsurgical stability. Both software showed similar results and proved to be an efficient clinical tool to study stability.

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Risk factors involved in reabsorption condylar in patients undergoing orthognathic surgery: systematic review

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The purpose of this systematic review was to seek uniformity of information, based on existing scientific evidence, establishing the risk factors involved in postsurgical condylar resorption of patients undergoing orthognathic surgery. A search of the journals was done using the following keywords: condylar resorption, progressive condylar resorption, idiopathic resorption, condylar atrophy, dysfunctional remodelling, avascular necrosis, osteonecrosis and condylitis and also these descriptors were used in combination with the term orthognathic surgery, Le Fort I osteotomy and split sagittal osteotomy.

The study included only articles published in English, using the databases of MEDLINE (PubMed and Ovid), Web of Science, Scopus and Cochrane Library, the January 1978 period to February 2015. The search strategy selected 56 articles dealing with postsurgical condylar resorption in patients undergoing orthognathic surgery; of these 20 articles were selected according to the inclusion criteria. It concludes that the main risk factors involved are: Class II patients with high mandibular plane angles preoperatively, combined osteotomies and female patients. In relation to age, could not objectively conclude the relationship between age and the involvement of condylar resorption due to lack of consistent data. It is necessary to conduct more studies to justify the existence of these risk factors, so that we can minimise the damage of this phenomenon to patients eligible for this type of procedure.

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