

New Horizons in Combined Surgical-Orthodontic Treatment of Dentofacial Deformity Involving Distraction Osteogenesis

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Introduction:

To assess Distraction Osteogenesis treatment protocol for the correction of facial deformity ensuring optimal form, function, aesthetics and stability.

Materials and Method:

2 patients with long standing Temporomandibular Joint ankylosis and Hemi Facial Microsomia respectively resulting in facial asymmetry were managed with distraction osteogenesis protocol followed by comprehensive orthodontic treatment. Treatment involved three phases of treatment with Distraction Osteogenesis phase and comprehensive Orthodontics in preparation for the second stage surgery. Second stage surgery involved orthognathic surgery resulting in correction of the problem three dimensionally. Distraction osteogenesis is an approach to make a more drawn out bone out of a shorter one. After a bone is cut during medical procedure, a gadget called a distractor pulls the 2 bits of bone separated gradually. The moderate extending separated of bone isn't difficult. Comprehensive orthodontic treatment is the most widely recognized sort of treatment that patients get and totally revises nibble issues from beginning to end in one phase. It is fitting for youthful grown-ups and youngsters who have lost all or practically the entirety of their infant teeth.

Results:

The combined orthodontic- surgical treatment conferred good esthetic, functional and occlusal results in a treatment span of under three years. The asymmetry was corrected and the dentition finished in a class I relationship. No major post-operative complication was reported in both cases. The Treatment was perfected in such a manner without any discomfort caused for the patients.

Conclusion:

A multidisciplinary treatment approach involving Distraction Osteogenesis alongside Orthodontics provided means of unique treatment modality that went beyond conventional treatment limits. Based on the achieved outcomes of these cases, distraction osteogenesis displayed enormous potential for facial deformity correction. Compared with conventional orthognathic surgery treatment, this case series presents greater potential for correction and stability. The available results are based on a two case reports and effort needs to be extended in establishing a larger sample size, helping us in exploring great potential that lies in this form of treatment approach.