Mandibular advancement with monodirectional intraoral device, and contemporary floating bone technique - Case report

INTRODUCTION

Osteogenesis distraction and Orthodontics always present major indications in the treatment of class II dentofacial deformities, especially when the mandibular hypoplasia is superior to 10 mm (fig. 8, 12). One of the greatest problems to be encountered when using intraoral device is the impossibility of moving skeletal segments in the three dimensions of space, movements that are indispensable if one is to obtain a correct dental occlusion.

The use of multidirectional intraoral device currently presents problems of encumbrance, and for this reason they are very often not tolerated by the patients. An interesting technique, The Floating Bone Concept, has demonstrated the possibility following the elastic traction method, of modeling and orientating bone which still has not mineralised.

This technique however envisages the removal of the bilateral distraction device applied to the jaw only two to three weeks from the conclusion of the movement of the jaw. Although the author refers to the complete lack of complications and in a particular way to pseudo-arthritis, we know from the llizarov’s studies, that a surgical intervention in the bone regeneration zone, which is still in the phase of consolidation, could damage neo-vasculation with the consequent risks of infection, pseudo artherosisis, or anomalies in the form of bone calluses. The consequences in time could be at the expense of functional stability of the bone stumps.

RESULTS

The method presented, and followed by us, has the following advantages:
- Optimum stability of the bone stumps, for the wholeperiod of treatment;
- The possibility of mandibular movement in three dimensions of space;
- The minimum risk of complications to the regenerated bone, undisturbed in its natural process of healing.

SUMMARY

Mandibular advancement with monodirectional intraoral device using the contemporary floating bone technique permit three dimensional movement of the inferior jaw with an excellent functional and aesthetic result. (Fig. 1, 2, 3, 4, 12, 14).