

Anterior Maxillary Distraction

Anterior maxillary distraction is a very useful technique for correcting cleft related maxillary hypoplasia





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Usually, patients with cleft lip and palate deformity have many other associated problems. One of the major problems is Cleft Maxillary Hypoplasia. This condition affects the normal symmetric arrangement of the maxilla and mandible, resulting in reverse overjet.

The restricted growth of maxilla due to cleft palate causes Cleft Maxillary Hypoplasia. Apart from functional problems, this condition causes aesthetic issues, due to the deficiency of the midface.

Traditionally, techniques like **LeFort 1 Osteotomy** and **LeFort 1 Distraction** (to correct midface deformities) were used for the correction of Cleft Maxillary Hypoplasia. But, these treatment modalities may have a slight impediment on the patient's speech, due to worsening effect on velopharyngeal closure.

Anterior maxillary distraction is a very useful technique for correcting cleft related maxillary hypoplasia. Its greatest advantage is that there is no worsening effect on velopharyngeal closure, since only the anterior portion of the maxilla is being moved forward. The appliance can be placed intraoperatively or prior to operation.

Osteotomy cuts are made between the premolars and molar teeth, usually on both buccal and palatal sides. The completion of osteotomy cut is confirmed by the activation of distractor screw intraoperatively, after ensuring symmetrical movement on both sides.

Activation of the screw starts typically on the fifth postoperative day, at the rate of four turns twice a day. After the completion of distraction, maxilla is left for consolidation for 12-14 weeks. Thereafter, the appliance is removed and prosthetic

rehabilitation for the gap created is done with a fixed partial denture (FPD) / dental implant.

To find out the efficacy and stability of tooth-borne anterior maxillary distraction, four-year long follow-up study was done in 147 patients with Cleft Maxillary Hypoplasia. After the study, it was found that very few patients showed relapse and that speech defects among these patients were very low.

Conclusion

Anterior maxillary distraction can be considered a suitable treatment option for the management of mild to moderate Cleft Maxillary Hypoplasia, as anteroposterior deficiency can be addressed at a younger age.

Stable long-term results with negligible skeletal relapse are possible with this technique, with an added advantage of unhampered or even improved speech. ☑

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Before

After



Before

After