Maxillary growth of adult patients with unoperated cleft: answers to the debates

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Summary

Maxillary growth of adult patients with unoperated cleft has long been studied, but results varied between different studies. The objectives of this study were to determine the growth potential of adult patients with unoperated clefts compared to the normal population and to differentiate the growth potential among types of clefts.

Methods

Subjects were from the same ethnic group, were more than 16 years of age with non-syndromic cleft and no associated anomalies. The types of cleft included unilateral complete cleft lip and palate (UCLP), bilateral complete cleft lip and palate (BCLP), unilateral cleft lip (UCL) and isolated cleft palate (CP). The sella-nasion-A point (SNA) angle from the cephalometry was measured, and a dental cast study using a three-dimensional imaging system was performed.

Results

SNA measurements showed significant differences among different groups, the BCLP group having larger values and the CP group having smaller values when compared with normal values. Dental cast analysis measuring palatal surface area showed a significantly smaller area in patients with cleft as compared to normal controls, but no difference among the different types of cleft. From the linear measurement it was found that the interdental distance was significantly
more narrow in the anterior part up to the first premolar region as compared to the control group, especially in the complete cleft groups (UCLP and BCLP). Dentoalveolar arch was also deeper and longer in these complete cleft groups.

**Conclusion**

There is an intrinsic tissue deficiency in all groups of patients with cleft; however, the sagittal development is still comparable to that of a normal population. Tissue deficiency mostly occurs in the anterior part. There is no difference in terms of the deficiencies among the different groups of cleft.

**Keywords:** Maxillary growth; Adult patients; Unoperated cleft; Tissue deficiency; Three-dimensional imaging

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