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**CERVICAL VERTEBRAL MATURATION IN PATIENTS WITH COMPLETE UNILATERAL CLEFT LIP AND PALATE**

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**Background:** It is well known that the lateral view of cervical bodies changes with growth. The cervical vertebral maturation (CVM) method has been proposed as a diagnostic factor for assessing skeletal maturation in orthodontic patients. In addition, cephalometric studies have shown that there are facial differences in populations with and without clefts suggesting that the presence of cleft lip/or palate is associated with other physical developmental anomalies. This study is the first to investigate skeletal maturation using the CVM method in children with complete unilateral cleft lip and palate.

**Objective:** The study was designed to evaluate the skeletal maturation associated with children with non-syndromic unilateral cleft lip and palate as compared to non-cleft individuals using the cervical maturation (CVM) method.

**Material and Methods:** This retrospective cohort study included 336 lateral cephalometric radiographs from 62 children (34 boys and 28 girls) with non-syndromic complete unilateral cleft lip and palate from the Hospital for Sick Children and from 50 non-cleft children (25 girls and 25 boys) from the Burlington Growth Centre were included to assess cervical stage (CS) at age 10, 12 and 14. The CVM was assessed using the 6-stage method described by Baccetti and coworkers. One investigator performed all the CVM classifications for both groups and data for males and females were assessed separately.

**Results:** The reproducibility of classifying CVM stages was high, with an inter-rater reliability (ICC) with the gold standard (Baccetti and coworkers) = 0.85 and intra-rater reliability = 0.8. Overall, CVM stage for that boys and girls with UCLP were significantly lower than their peers without a cleft at age 10, 12 and 14.

**Conclusion:** The results suggest that in patients with UCLP will show delayed skeletal maturation in comparison to non-cleft patients.