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Tooth agenesis patterns in unilateral and bilateral cleft lip and palate – a retrospective study

By

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ABSTRACT

BACKGROUND AND OBJECTIVES – Cleft Lip and Cleft Palate (CLCP) has remained a challenge to orthodontists in terms of treatment planning and rendition, from infancy, until adulthood. Hypodontia in CLCP, is a major presenting dental feature of interest to orthodontist, pose a problem as they result in malocclusion that requires detailed evaluation. Using observational studies, the prolonged treatment protocol may be addressed for better definitive outcome as normal occlusion. The aim of this retrospective study is to interpret the prevalence and comparison of permanent tooth agenesis patterns in unilateral and bilateral CLCP

METHODOLOGY – Orthopantomographs of 199 patients with unilateral (157) or bilateral (41) CLCP were scored for missing teeth. The prevalence of agenesis was compared between unilateral and bilateral groups. The prevalence of agenesis patterns were obtained by allotting whole number or decimal values to each tooth in all quadrant. The sum total calculated was characteristic of a certain pattern.

RESULTS – The most prevalent tooth agenesis patterns are of maxillary lateral incisor (22.2%) followed by both the maxillary laterals (10.1%) and maxillary right lateral (8.6%). The absence of right maxillary lateral (26, 63.4%), maxillary central (19, 46.3%), left maxillary central incisor(16, 39.0%) and second premolar(14, 34.1%) were significantly higher in the bilateral CLCP cases than in unilateral CLCP with $p < 0.05$ considering the significantly higher mean number of missing teeth in BCLP

CONCLUSION – The agenesis patterns involved teeth within the cleft area more than the non-cleft one. Bilateral CLCP predominated with higher mean number of missing teeth. Significant absence of left centrals in this study is a unique finding.

KEYWORDS – tooth agenesis, prevalence, cleft lip and palate

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