



Impact of Orthodontic Gap Closure versus Prosthetic Replacement of Missing Maxillary Lateral Incisor on Dental Arch Relationships and Symmetry in 212 Patients with Cleft Palate: Retrospective Study

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Abstract :

Maxillary lateral incisors are frequently missing in patients with cleft lip and/or palate. The aim of the study was to assess how orthodontic gap closure or prosthetic rehabilitation of the missing maxillary lateral incisor affected dental arch relationships and symmetry at the end of treatment.

A descriptive, retrospective cohort study including all patients with cleft lip and/or palate born between 1980 and 1999 and treated at Nantes Cleft Center was performed. Patients presenting unilateral or bilateral missing maxillary lateral incisors were reviewed. Data on management of the missing incisor gap, dental arch relationships, symmetry, and level of oral hygiene were collected.

A total of 486 patients with cleft lip and/or palate were reviewed, including 212 patients with unilateral or bilateral missing maxillary lateral incisors. When compared with orthodontic gap closure, prosthetic replacement of the gap was associated with better final dental arch relationships (59.8 percent versus 10.3 percent; $p < 0.01$) and better dental arch symmetry (88.1 percent versus 44.0 percent; $p < 0.01$) for patients with unilateral missing incisors but not for patients with bilateral missing incisors.

Prosthetic replacement of the missing maxillary lateral incisor gap provided better functional and aesthetic results for patients with cleft lip and/ or palate presenting with unilateral missing maxillary lateral incisor.