

# **Orthodontic Management of the Alveolar Clef in Patients with Cleft Lip and Palate**

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Presurgical orthodontic treatment is often needed for better access & easy management in the surgical procedure of alveolar repair. After alveolar repair at 9-11 years of age, the following orthodontic treatment can facilitate canine eruption and help to bring bone into the previous cleft alveolus. In adult patients with wide residual alveolar cleft, Le Fort I segmental osteotomy can narrow the cleft gap and simultaneous gingivoperiosteoplasty can be performed to create bone formation across the previous cleft alveolus. However, presurgical orthodontic treatment or the segmental osteotomy should be designed properly to make bone approximation as close as possible to achieve good outcome of gingivoperiosteoplasty and oronasal fistula closure.

## **Timing of Management of Alveolar Clefs**

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Alveolar cleft is often seen in the patients with cleft lip and palate. It causes discontinuity of maxillary arch, food impaction, irregularity of cleft-adjacent teeth and is usually combined with oronasal fistula and nasal leakage. The timing of management of alveolar cleft is decided by high success rate of repair without severe inhibition on maxillary growth. In our center, the standard protocol for alveolar cleft repair is alveolar bone grafting or gingivoperiosteoplasty performed at 9-11 years of age before canine eruption. Adult cleft patients who have large residual alveolar cleft because of failed previous alveolar repair or no treatment performed before can be managed with Le Fort I segmental osteotomy together with gingivoperiosteoplasty.