Occlusal stability after orthodontic treatment in patients with UCLP: 3D analysis

Objective: To evaluate the occlusal stability after orthodontic treatment in patients with unilateral cleft lip and palate (UCLP). **Methods:** The sample comprised 28 patients with non-syndromic UCLP (11 women, 17 men) orthodontically treated at the Hospital for Rehabilitation of Craniofacial Anomalies, University of São Paulo. Digital dental models were obtained before orthodontic treatment (T0, mean age 10.3 years), posttreatment (T1, mean age 18.7 years) and post-retention (T2, mean age 21.6 years). The following variables were measured at the three time-points using the Orthoanalyzer software: arch widths, arch length, arch perimeter, palatal depth, incisor irregularity index, overjet and overbite at cleft and non-cleft sides. Interphase changes were evaluated using ANOVA and Turkey tests ($P<0.05$). **Results:** In the maxillary arch, intercanine width, interpremolar width and palatal depth increased during treatment. In the mandibular arch, interpremolar width increased and arch perimeter and length decreased during treatment. Dimensional changes of maxillary and mandibular arches were stable after treatment. Maxillary and mandibular incisor irregularity decreased after treatment remaining stable in the long-term. During treatment, the overjet increased and the overbite decreased with an adequate stability after treatment. **Conclusion:** The occlusal changes of orthodontic treatment in patients with UCLP was stable approximately 3 years after debonding.

Key words: stability, relapse; orthodontics, corrective; cleft lip and cleft palate.