

Assessment of Pre-surgical Molding Appliances in Unilateral Cleft Lip and Palate Patients (Clinical Study)



Lecturer. Dr. Younis M.S. Hasan¹, Prof. Dr. Khidair A. Al-Jumaili²

1,2Department of Pedodontics, Orthodontics and Preventive Dentistry, College of Dentistry, University of Mosul, Mosul, Iraq.

Abstract

Objectives: The aim of this study is to assess the efficiency of molding effects of pre-activated appliances developed in this study in comparison with previous appliances developed by Da Silveira et al. (2003).

Methods: The study was carried out on 24 participants, 12 per group, non-syndromic complete unilateral cleft lip and palate, newborn to 1 month infants. The working casts of both groups were scanned using CAD/CAM System and the 3D objects analyzed using Autodesk Inventor Fusion. Six measurements were assessed including cleft (widths & size), incisal point deviation, arch width (anterior & posterior) both mid and posterior palatal heights and total arch depth. Statistical comparison was determined using the SPSS program at $p \leq 0.05$.

Results: The descriptive analyses and comparisons of treated samples with Da Silveira et al. versus Pre-activated technique revealed significant differences for molding effects in all measurements except for (inter-tuberosity distance) at $p \leq 0.05$.

Conclusion: Modifying the molding plate by using Pre-activated appliances may reduce pre-surgical treatment visits and may improve molding effects.