



Comparison of the Effects of Different Fixed Lingual Retainers on Tooth Stability: A Pilot Study

Hatice Kubra Eren, Eyup Burak Kucuk, Osman Fatih Arpag

Hatay Mustafa Kemal University, Turkey

Abstract:

This study was designed to investigate the alteration of tooth mobility in the retention phase of orthodontic treatment using Periotest device. Fifty-seven patients who were treated with fixed orthodontic mechanics were included. For each subject, the mobility of the lower central, lateral incisors and lower canine Periotest values was measured, before fixed lingual bonded retainer application (T0), immediately after the application (T1), and ten months after the application (T2) on both sides. The study groups were composed of 3 groups with; Stainless Steel OrthoFlex-Tech (Reliance Ortodontic Products, West Thorndale Ave Itasca, USA), dead soft 8-braided wire (Bond a Braid, Reliance Ortodontic Products, West Thorndale Ave Itasca, USA) and 0.0215-inch five-stranded retention wire (Penta-One, Masel Orthodontics, Carlsbad, Calif) applied. When the measurements of mobility were evaluated, right canine tooth values showed statistically significant decrease from T0 to T1 and from T1 to T2. Left central incisor values showed decrease from T0 to T1 and showed an increase at T1 to T2 time lines for all experimental groups. Additionally all of the experimental teeth values showed decrease from T0 to T1. Intragroup comparisons showed that values of mobility decrease in Penta-One and Bond a Braid groups whereas



increase in Stainless Steel OrthoFlex-Tech group from T1 to T2. The change of mobility at T1 to T2 timeline was not statistically significant for study groups. This in vivo study showed that dental mobility in all study groups decreased immediately after the application of fixed lingual retainers and did not change in ten-month period. It is recommended to choose the retainer wire, which is easy to apply and economical.

Biography:

Hatice Kubra Eren has completed her undergraduate education at the Faculty of Dentistry, University of Marmara. She is currently continuing her orthodontic specialization training at Hatay Mustafa Kemal University, Faculty of Dentistry.

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