Occlusal contacts with different retention procedures in 1-year follow-up period

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Introduction: The aim of this follow-up study was to evaluate the number of contacts in centric occlusion during a 1-year retention period in patients treated with 2 retention procedures and in a control sample.

Methods: Twenty patients received modified wraparound Hawley retainers, and 20 received maxillary Jensen plates with mandibular fixed retainers. These retention patients were compared with a control group of 20 subjects with normal occlusions. Silicone-based impression bites were used to record occlusal contacts. Paired and independent-sample t tests were used to evaluate intragroup and intergroup differences.

Results: Contacts increased in the total arch and the posterior combined (actual/near) during the retention period compared with the control group. In the Hawley retainer group, actual contacts on the second molars (P<.05), near contacts on the premolars (P<.05), and total contacts on the first molars (P<.05) and premolars (P<.01) had statistically significant increases. In the maxillary Jensen plate and mandibular fixed lingual retainer group, the number of actual contacts on the posterior segment increased. Actual contacts on the first molars (P<.01), second molars (P<.01), premolars (P<.05), and canines (P<.05), and total contacts on the first (P<.05) and second (P<.05) molars had statistically significant increases. During the observation period, some slight occlusal changes were seen in the control sample, presumably from growth and development. At the end of the study, during the 1-year follow-up period, no statistically significant occlusal contact differences were observed in the 3 groups.

Conclusions: Retention procedures carried out in this study allowed relative vertical movement of the posterior teeth. (Am J Orthod Dentofacial Orthop 2007;131:357-62)