

OP25 EFFICIENCY OF HERBST-MULTIBRACKET TREATMENT – AN ANALYSIS OF 526 CONSECUTIVE CLASS II, DIVISION 1 PATIENTS

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AIMS: To assess the efficiency and outcome quality of Herbst/Multibracket (MB) treatment (Tx) in all Class II, division 1 patients treated at the study centre until 2013.

MATERIALS AND METHOD: All patients of the Department of Orthodontics, University of Giessen, Germany in which a Herbst appliance and subsequently a MB appliance had been inserted between 1986 and 2013 and active Tx was finished in 12/2014. Study casts from before Tx, after Herbst-MB Tx and (if available) after at least 24 months of retention were evaluated regarding with the Peer Assessment Rating Index (Richmond *et al.*, 1992) and the Ahlgren-Scale (Ahlgren, 1993) as well as standard variables such as overjet, overbite and sagittal molar relationship.

RESULTS: A total of 526 Class II, division 1 patients with a mean pre-Tx age of 14.4 years (range: 9.8-44.4) had received Herbst-MB Tx. In 17 of the 526 patients (3.2%), Tx was discontinued before completion (1.5% during Herbst, 1.7% during MB). In the remaining 509 patients Tx began with a Herbst phase of 8.2 months which was followed by a MB phase of 16.0 months. Two hundred and forty patients had completed a retention phase of at least 24 months (mean 32.6 months). The pre-Tx PAR score was 33.4 ± 9.1 which reduced to 7.8 ± 4.8 post-Tx. This corresponds to an average reduction of 1.5 ± 0.3 points per month. During retention a slight increase to 9.0 ± 5.4 occurred. The percentage of patients that could be assigned to the category 'greatly improved' was 62 per cent after Tx and 57 per cent after retention; only 2-3 per cent had to be assigned to the category 'worse/no different'. The ratings according to the Ahlgren-Scale revealed the following percentages: 17 excellent, 35 good, 42 satisfactory, 1 unsuccessful and 5 not assessable results.

CONCLUSION: Herbst-MB Tx is a very efficient approach in orthodontic care of moderate to severe Class II, division 1 patients. During an active Tx period of on average 2 years high quality results can be obtained in 62 per cent of patients.