ABSTRACT

AIM

To assess the changes in occlusal bite force during the first 6 months of fixed appliance orthodontic treatment in patients with different vertical facial morphology and to compare deviation of bite force in malocclusion patients with different facial types with the optimal bite force value estimated in individuals with acceptable occlusion

METHOD:

30 patients age group of 14-24 yrs, were divided in to 3 groups as hypodivergent, normodivergent and hyperdivergent groups and their OBF was recorded during the study period of six months using strain gauge transducer at eight time intervals (T0 – T7). The repeated measures analysis of variance (within-subjects ANOVA) test with a Greenhouse-Geisser correction and Bonferroni post-hoc comparison test were applied to determine differences at the various time intervals.

RESULT

Occlusal bite force is reduced to 50% of the pretreatment level by the end of the first week of fixed orthodontic treatment. OBF showed a tendency to return to pretreatment levels after second month of orthodontic treatment. OBF is least, average and higher in hyperdivergent, normodivergent and hypodivergent individuals respectively with or without orthodontic treatment. After aligning and leveling stage, OBF reaches the pretreatment level in hyperdivergent treatment group while OBF showed a tendency to reach close to the pretreatment in normodivergent and hypodivergent treatment group.
CONCLUSION:

After aligning and leveling stage, the OBF reaches the baseline level in hyperdivergent treatment group, while it reaches close to pretreatment level in hypodivergent and normodivergent treatment groups.

Key words: bite force; transducer; Malocclusion; Stomatognathic System; facial morphology