ABSTRACT

Maxillary molar distalization is one of the treatments of class II malocclusion. The purpose of this clinical study was to compare the effectiveness of pendulum appliance and miniscrew supported open coil spring after maxillary molar distalization. Subjects were collected from patients who underwent for orthodontic treatment at Department of Orthodontics, University of Dental Medicine, Mandalay. Total sample size of the study was 12 patients with each group consisting of 6 patients. Patients were selected according to the inclusion criteria and age range which was 18 to 25 years. Measurement on lateral cephalographs, printed images of dental casts and measurement of arch perimeter on dental casts were done before and after 16 weeks of study period. A Mann-Whitney U test was used for statistical comparisons of the two groups between T0 and T1. Pendulum appliance showed distalization amount of 1.25 mm of crown movement and 0.79 mm of root movement with 6.79˚ tipping and 0.5 mm extrusion. Miniscrew supported coil spring group resulted in 1.5 mm crown movement and 0.79 mm root movement with 4.88˚ tipping, and 0.63 mm intrusion. Tipping and extrusion of second premolar and arch perimeter were statistically significant between the two groups ($p<0.05$). As the distal molar movement was not clinically and statistically significant difference between the two appliances, miniscrew supported distalization appliance limit the tipping effect. And the result data showed the vertical extrusion effect in the pendulum group and intrusion effect in miniscrew supported distalization group.

Keywords: Molar Distalization, Pendulum Appliance, Miniscrew Supported Open Coil Spring