

MUSCLE ACTIVITY OF MANDIBULAR UNILATERAL DISTAL EXTENSION RPDS WEARERS WITH TWO DIRECT RETAINERS

Fahad H.Banasr* and Nadia A. Abbas**

ABSTRACT

The aim of the present study was to evaluate and investigate the activity of masticatory muscles (Masseter and Anterior fibers of Temporalis) in ten male patients wearing mandibular distal extension removable partial denture with two different direct retainers. They were divided into two groups. RPI clasp assembly was used for group I and combination clasp assembly (Modified T or half T buccally and half Aker's lingually) for group II. Computerized Electromyography (Cad Wel Execl high power EMG/EP instrument U.S.A.) recorded the activity of Masseter and Temporalis muscles during maximum clenching before denture insertion and six times after insertion with an interval of one month each.

Results showed a jaw jerk reflex was recorded in all patients wearing RPD with RPI clasp in the second month of follow up, which was not recorded with the group II. Jaw jerk reflex is typical a reaction of periodontal receptor with orthodontic movement which occurs when load is not regular. In the second month a significance in Mean Voltage Amplitude, Root Mean Square (RMS) and Power at (P-value <0.001) was found. There was a significant difference in the muscle activity between the IWO types of retainers used for this study.

It could be concluded that EMG instrument can be used as a diagnostic aid to record and detect a jaw jerk reflex with different types of prostheses and to select the proper direct retainer for RPD.

Combination clasp assembly is superior to RPI assembly as direct retainer for unilateral distal extension RPD.