

**Success Rate of Self-Drilling Orthodontic
Mini - Implants used as Temporary Skeletal
Anchorage Devices (TSADs)
A Prospective Clinical Study**

A Thesis

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By

Malick Hashim Ja'far Al-Hasani

B.D.S., H.D.D.

Supervised by

Prof. Dr. Fakhri Abid Ali

B.D.S., M.Sc.

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ABSTRACT

The aim of this prospective clinical study was to evaluate the success rate of micro-implants used for orthodontic anchorage. Evaluate the clinical factors that influence the success rate of mini-implants used as an orthodontic anchorage by measuring and evaluating the effectiveness and the rates of canine retraction with titanium micro-implant anchorage.

The sample comprised 9 patients (3 male; 6 female, mean age, 18.8 years; standard deviation SD 3.3; range of age 15-25 years) A total of 18 Orthodontic Mini-Implants (OMIs) (Aarhus) placed symmetrically in both sides to support orthodontic tooth movements. Patients were scheduled for extraction of all first premolars. Bilateral maxillary canine retraction into first premolar extraction space was examined in the study. The implants were inserted in the Buccal-attached gingiva of the posterior region of the maxilla between 2nd premolar and the 1st molar.

Overall, success rate was 83.3%, (100% Males & 50% Females) with a mean period of force application of four months. The success rate was more on the right than on the left side and it was more pronounced in the males than females. The result in this study also showed that there was a statistically significant difference in success rates between “young (<18 years) and adult (>18 years)” patients. Age group (<18 years) is more prone to failure.

The present results confirm the effectiveness of orthodontic micro-implants used as anchorage elements for upper canine retraction.