

# DENTISTRY & DENTAL MARKETING

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# ORAL CARE & ORAL CANCER

October 24- 25, 2018 | Boston, USA

## The efficiency of orthodontic mini-screw implants during incisors intrusion: A systematic review and meta-analysis

**Ahmed Ibrahim Atalla** and **Mai Hamdy Aboul Fotouh**  
Cairo University, Egypt

**Introduction:** The aim of this systematic review was to compare the effectiveness of temporary anchorage devices (TADs) and conventional segmented arches (CSA) during incisor intrusion in adult patients with a deep bite and their adverse effects.

**Methods:** Four electronic databases were searched. In addition, articles were manually searched for using the reference lists of relevant articles, grey literature and peer-reviewed orthodontic journals. Data from the retrieved articles were selected and evaluated by two independent reviewers using a new systematic review software program, DistillerSR. A meta-analysis of raw mean differences was performed.

**Results:** Initially, we retrieved 9600 articles, but the selection process resulted in 6 articles. The included studies ranged from low to high in quality. Meta-analysis showed that TADs enabled 0.78 mm more upper incisor intrusion than the conventional method (95% CI=0.28 to 1.29). There was no significant anchorage loss difference in the CSA group compared to the TAD group (MD -3.68; 95% CI -7.41 to 0.05). Also, a significant molar tipping of 1.03 degrees was observed in the CSA group (P=0.008) compared to the TAD group (MD -1.03; 95% CI -1.79 to -0.27).

**Conclusions:** The results of this meta-analysis showed that patients receiving TADs had 0.78 mm greater upper incisor intrusion than patients receiving the conventional treatment. This was statistically significant but not clinically relevant. No clinical difference was found between TADs and the conventional method of anchorage loss.

### Biography

Dr. Ahmed is serving as a lecturer at Orthodontic Department, Faculty of Oral and Dental Medicine, Cairo University, Egypt

ahmed.atalla@dentistry.cu.edu.eg

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