

# ***Adjunctive orthodontic treatment of pathologically migrated incisors in periodontitis patients***

[A.Y.J. CHIEN](#)<sup>1</sup>, L.J. JIN<sup>1</sup>, E.F. CORBET<sup>2</sup>, T.T. SHE<sup>1</sup>, and A.B. RABIE<sup>1</sup>, <sup>1</sup>University of Hong Kong, China, <sup>2</sup>University of Hong Kong, Hong Kong SAR, China

Objective: This study aimed to investigate the clinical effects of adjunctive orthodontic treatment of pathologically migrated incisors in adults with chronic periodontitis in the maintenance phase following periodontal treatment. Methods: 16 adult patients with chronic periodontitis were recruited, aged from 27 to 52 years. A total of 21 maxillary incisors as test teeth were investigated. A light orthodontic intrusive force, with splinted posterior teeth as anchors, was applied at least three month after conclusion of non-surgical periodontal therapy. The following clinical parameters were assessed before and after orthodontic intrusion, full mouth plaque index (PI%), probing attachment level with the use of an occlusal stent on test teeth, gingival recession and pulp vitality. Results: There was significant mean gain in probing attachment level for test teeth of 0.66°"1.42 mm, range from -2.2 to 6.2mm (P<0.001). 30% of sites showed a gain of probing attachment level greater than 1mm. There was a significant mean reduction of recession of 0.60°"0.99 mm, range from -2 to 3mm (P<0.001). 47.6% of sites showed a reduction in gingival recession. 20 test teeth (93.7%) remained responsive to pulp vitality test. Mean intrusion duration was 96°"47 days, with wide variation. Full mouth PI% increased from 17.4% to 29.1% (p<0.05) but 13 patients (81%) showed PI% < 35% after intrusion. Conclusion: This study showed that adjunctive orthodontic treatment to individual pathologically migrated incisors generally improved the periodontal conditions and enhanced aesthetics.

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