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## Miniplates with a new design as skeletal anchorage for intrusion of posterior maxillary segment during correction of skeletal anterior open bite (a cohort clinical study)

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This study aimed to evaluate the effect of newly designed miniplates that used as skeletal anchorage for maxillary molars' intrusion during correction of skeletal anterior open bite. A sample of 22 patients with an age range from 14 to 22 years, suffering from skeletal anterior open bite with increased posterior maxillary vertical height. A new designed custom-made miniplate used after adaptation on 3D model of maxilla for every patient. They were used as buccal skeletal anchorage for maxillary molars' intrusion. Measurements, including maxillary dento-alveolar heights (mm), buccal crestal alveolar bone heights (mm), bucco-palatal angulations (B-P°) of right and left maxillary first permanent molars, 3 months after intrusion commencement. The dento-alveolar height as well as the buccal crestal alveolar height decreased significantly ( $p \leq 0.001$  and  $p \leq 0.05$ , respectively) after intrusion. Similarly, the B-P angulations increased significantly ( $p \leq 0.01$ ) after intrusion. New custom-made pre-adapted miniplates' designs were effective for posterior maxillary molar intrusion in cases of SAOB. Both the posterior maxillary dento-alveolar and buccal crestal alveolar bone heights diminished significantly.

### Recent Publication

1. Ross VA, Isaacson RJ, Germane N, and Rubenstein LK. Influence of vertical growth pattern on faciolingual inclination and treatment mechanics. *Am J Orthod.* 1990; 98: 422 – 9.
2. Sankey WL, Buschang PH, English J, and Owen AH. Early treatment of vertical skeletal dysplasia: the hyperdivergent phenotype. *Am J Orthod Dentofacial Orthop.* 2000; 118: 317 - 27.
3. Baccetti T, Franchi L, Schulz SO, and McNamara JA. Treatment timing for an orthopedic approach to patients with increased vertical dimension. *Am J Orthod Dentofacial Orthop.* 2008; 133: 58 – 64.

### Biography

Maha Mostafa is working as professor in Al-Azhar University, Egypt and also continues in the dental research in the field of orthodontics. She currently pursues dental practice in Cairo.

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