OP08 THE ALVEOLAR BONE AFTER AUTOTRANSPLANTATION OF PREMOLARS TO THE ANTERIOR MAXILLA. A PILOT STUDY USING CONE BEAM COMPUTED TOMOGRAPHY MEASUREMENTS

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AIM: To evaluate the status of the alveolar bone after autotransplantation of developing premolars to replace traumatically lost maxillary incisors.

SUBJECTS AND METHOD: Eleven patients aged 10 to 12 years (mean: 10 years 7 months) with unilateral loss of a maxillary central incisor had autotransplantation of a developing premolar to replace a missing or traumatized maxillary central incisor. Cone beam computed tomography was performed from 1 to 14 years (mean: 4 years) after surgery to evaluate alveolar bone prior to orthodontic treatment. The thickness of the buccal bone and the height and width (marginal and at half of the vertical dimension) of the alveolar process were evaluated at the transplant and control (non-affected contralateral central incisor) sites.

RESULTS: The mean thickness of the buccal bone at the transplant and control sites was 0.78 mm (range: 0.47-1.67) and 0.82 mm (range: 0.61-0.93), respectively. The mean alveolar bone height was 15.15 mm (range: 8.92-21.31) at the transplant and 15.12 mm (range: 9.12-21.41) at the control sites; mean marginal thickness of the alveolus was 7.75 mm (range: 5.87-9.92) at the transplant and 7.98 mm (range: 6.46-8.86) at control sites. The mean thickness of the alveolus at half of its vertical dimension at the transplant and the control sites was 7.54 mm (range: 4.72-10.98) and 8.03 mm (4.63-9.97), respectively.

CONCLUSIONS: Buccal bone thickness, the width and height of alveolar process at the sites of the transplanted premolars replacing traumatized incisors did not significantly differ from the control sites. Transplanted developing premolars can successfully preserve and regenerate the alveolar process in patients with traumatically lost upper incisors.