



Augmentation of the Deficient Anterior Maxillary Ridge with Mandibular Block Graft and Subsequent Implant Placement: A Case Report

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Background

Dental implants have evolved to become a predictable method for the rehabilitation of partially or fully edentulous patients. Placement and success of implants require adequate mesiodistal, buccolingual and corono-apical bone dimensions. Patients with missing maxillary anterior teeth frequently present with buccolingual ridge deficiency. This report presents a case of augmentation of the deficient anterior maxillary ridge with mandibular block graft and subsequent implant placement.

Case



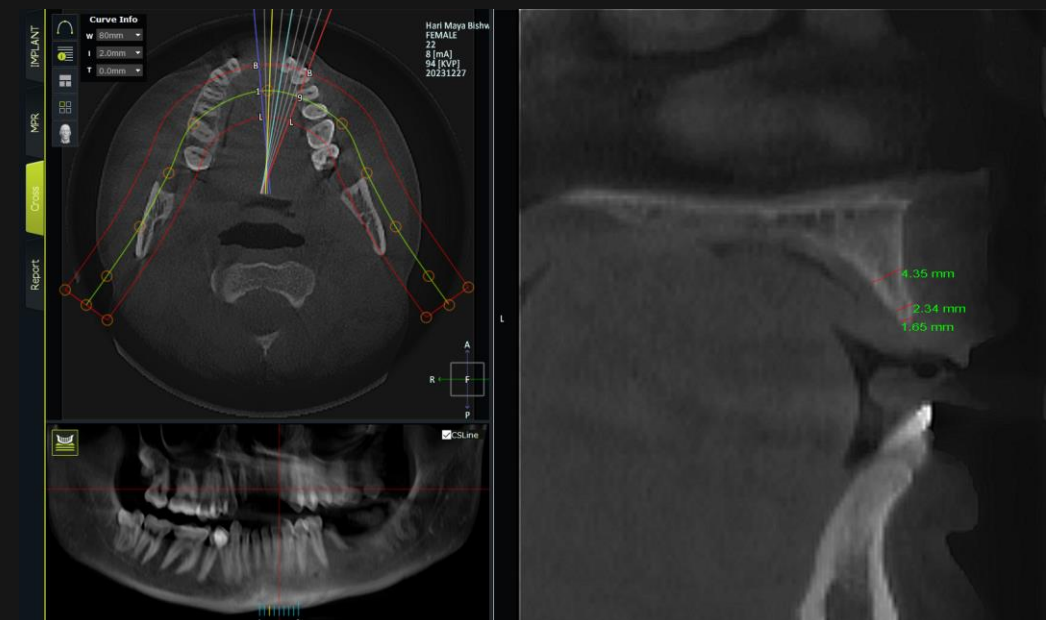
22 years female with missing 11 and 21



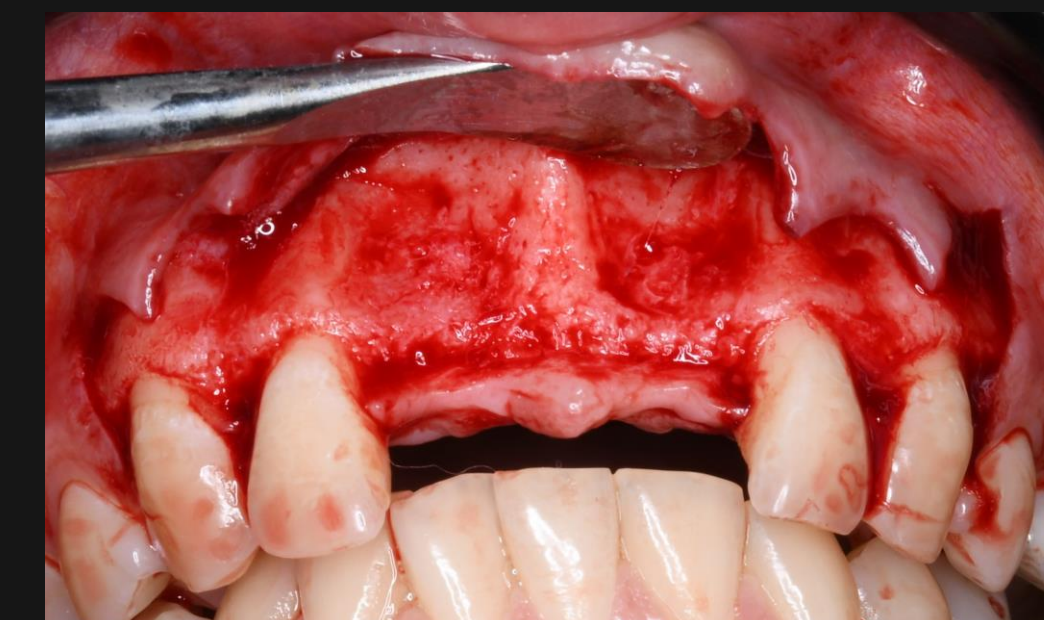
Pre-operative situation



Evident buccal ridge deficiency



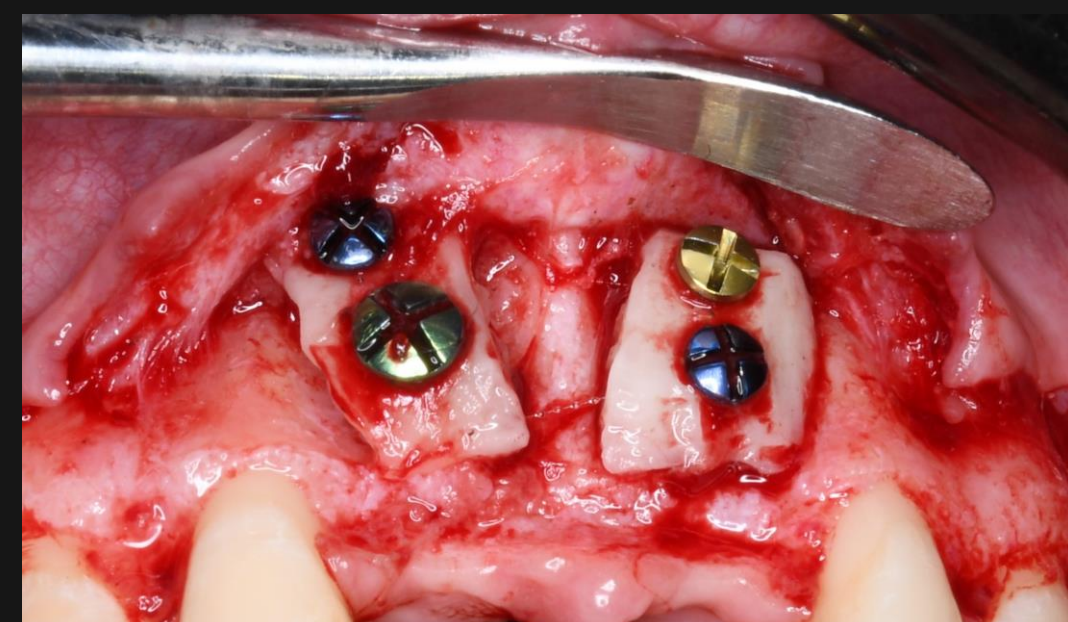
Average crest width – 2.5 mm
Width 6 mm apical to crest – 4.3 mm



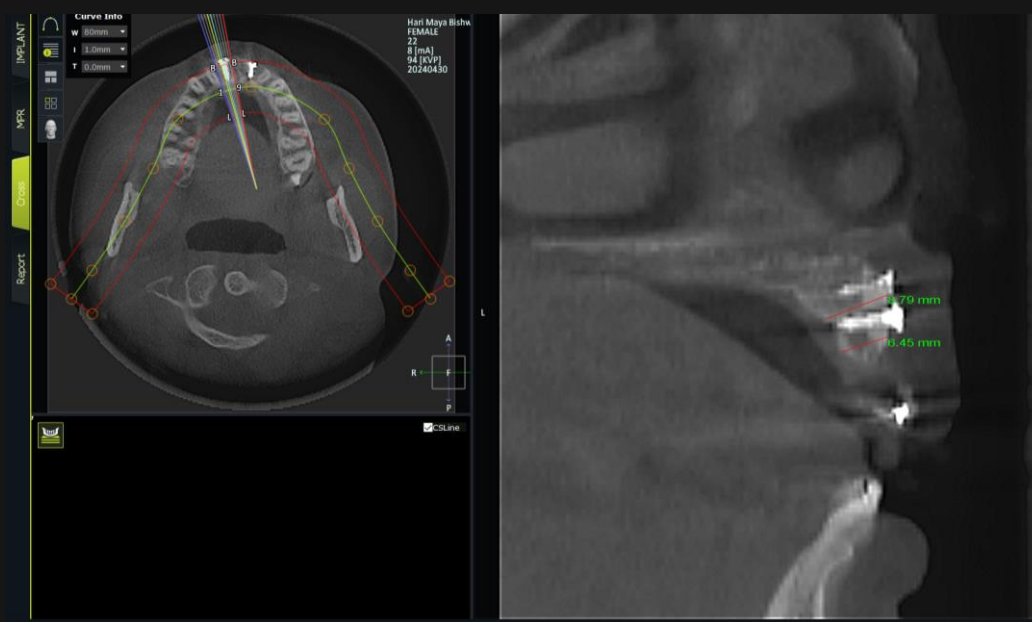
Recipient bed



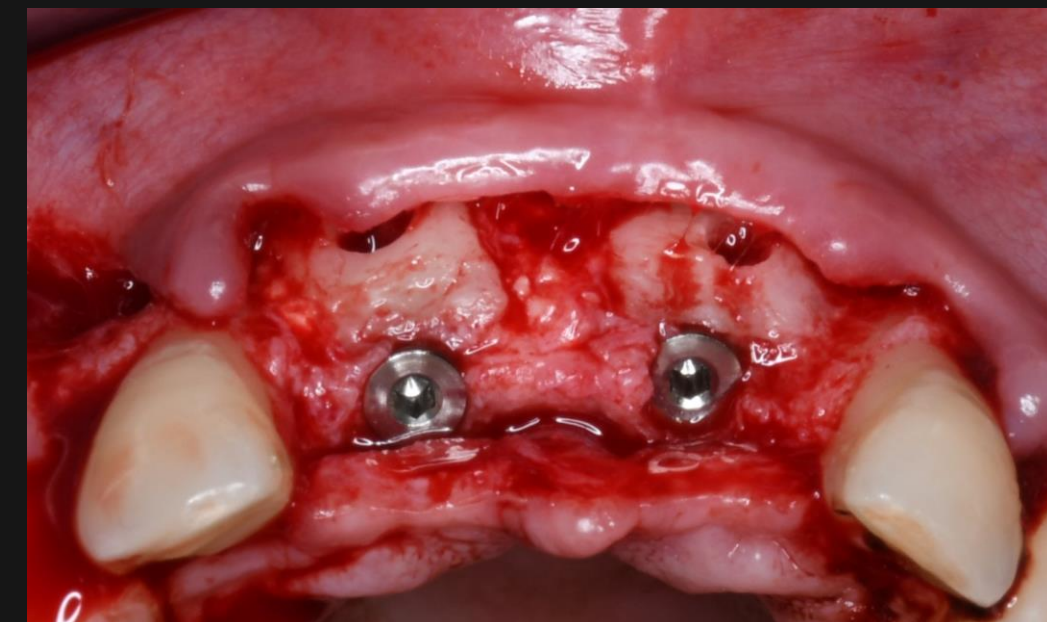
Donor site (posterior mandible of third quadrant)



Graft split and secured with fixation screws



CBCT after 4 months
Average gain in width – 4 mm



Removal of fixation screws and implant placement



Provisionalization after 4 months of implant placement



At prosthesis delivery



Post-operative satisfied smile

Results

Block graft from posterior mandible did not result in significant morbidity. The graft size obtained was of dimensions 15 mm x 10 mm x 4 mm and was cortico-cancellous. The average gain of ridge width after 4 months was in average 4 mm. The lip support transformed the smile to become more pleasant. The patient was satisfied with the outcome at prosthesis delivery.



References

1. Misch CM. Ridge augmentation using mandibular ramus bone grafts for the placement of dental implants: presentation of a technique. *Prac Periodont Aesth Dent*. 1996;8:127–135
2. Misch CM. Comparison of intraoral donor sites for onlay grafting prior to implant placement. *Int J Oral Maxillofac Implants*. 1997;12:767–776.
3. Raghoobar GM, Batenburg RHK, Vissink A, et al. Augmentation of localized defects of the anterior maxillary ridge with autogenous bone before insertion of implants. *J Oral Maxillofac Surg*. 1996;54:1180–1185.