Esthetic implant Restoration in Anterior Maxilla with Custom Alveolar Ridge Splitting Technique

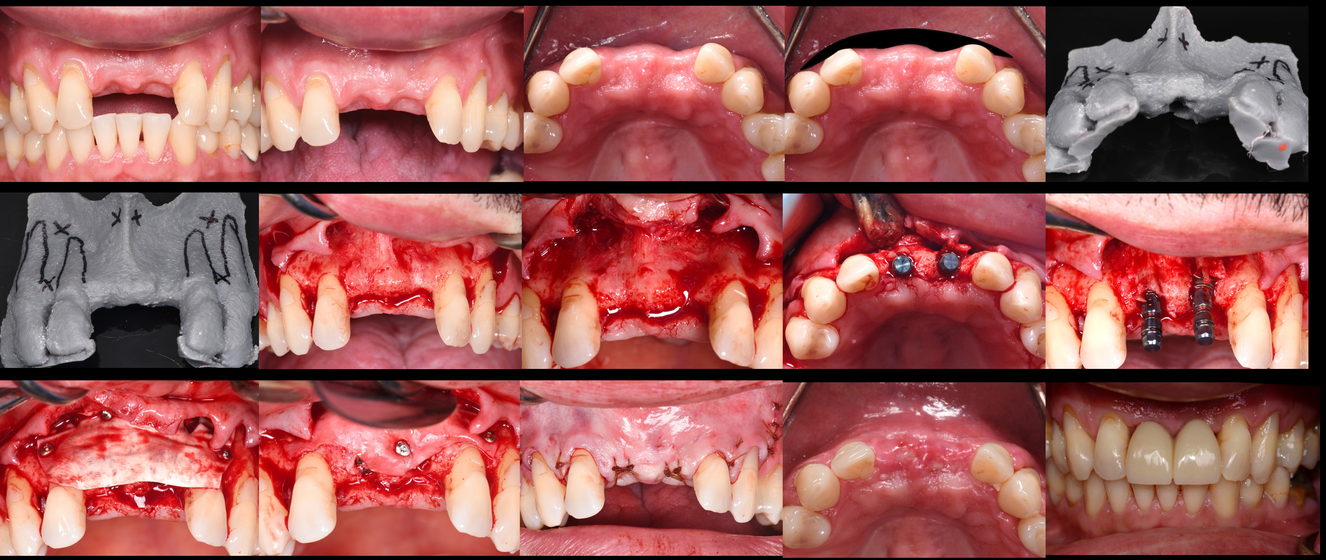
Rodriguez Fernandez, Macarena; Sawada, Mitsuhiro; Natour, Mazen; Cho, Sang-Choon.
Ashman Department of Periodontology and Implant Dentistry New York University College of Dentistry

INTRODUCTION

Implant therapy has become an important option for the restoration of edentulous areas of maxilla and mandible. Successful placement of a dental implant requires adequate surrounding bone. In cases where there is an inadequate quantity of bone for implant placement, the bone volume can be increased by bone augmentation. Despite all the advancements in bone regeneration techniques the outcome in many cases is not highly predictable. Similar to an extraction socket or maxillary sinus cavity, a defect surrounded by bony walls is called an intra-osseous defect. This type of defect is known to yield highly successful regeneration due to good blood supply and the graft being well contained. In contrast, an extra-osseous defect with less bony walls is known to be less predictable for bone augmentation. The Custom Alveolar Ridge Splitting (CARS) technique converts an extra-osseous defect into an intra-osseous defect. The purpose of this case series is to document the surgical steps of this technique leading to a successful and esthetic implant outcome.

CASE PRESENTATION

Case 1



Case 2



DISCUSSION

	ARS (Alveolar Ridge Splitting)	CARS (Customized Alveolar Ridge Splitting)
Size of site	2-3	1
Stage	2 mos (splitting) + 2 mos (osseointegration) + 1 mo (restoration)	3 wks + 2 mos + 1 mo
Time	5-6 months	3-4 months
Neighboring tooth sensitivity	Sensitive, need be careful not to damage	No, trephine is very precise
Learning curve/Technique sensitivity	Moderate/sensitive	Steep/easy
Natural bone around implant	yes	yes
Ridge expansion	yes	yes
Predictability	Yes	Yes

CONCLUSION

CARS procedures may be used as a viable option for horizontal alveolar ridge augmentation in the anterior maxilla because it is simple, successful, predictable, minimizes patient morbidity and is more comfortable to the patient.

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