Augmentation exposure of grafting material and tissue closure

Park Dong Won
New York University, USA

Horizontal ridge augmentation is a very challenging procedure which requires primary closure to prevent early exposure of grafting material and membrane. To accomplish soft tissue closure, adjunct procedures such as releasing incisions, advancement of flaps, periosteal release or scoring of the periostium, are often required. These adjunctive procedures can compromise blood supply to the grafting site and eliminate keratinized tissue which is of great importance in implant survival. In this case series, a technique will be introduced which can achieve successful horizontal bone augmentation with simultaneous keratinized tissue widening by open membrane treatment modality. In this presentation, rh-BMP2 was used with non-porous Teflon sheet to cover graft material with intentional open membrane technique. Basic surgical procedure is as follows: Full thickness flap was elevated (split keratinized tissue if possible); decortication of recipient site was performed with round bur; Teflon sheet was trimmed to cover grafting material; implant was placed based on prosthetically favorable position when primary stability can be achieved; graft material is placed with gentle pressure (Autograft or Xenograft alone or mixed with allograft); short healing abutment (<2mm) is connected to implant to reserve space for soft tissue; PRF is placed and Teflon sheet is covered; 4-0 nylon suture is used without primary closure; inject rh-BMP2 in augmented site; suture was removed 1 week after surgery and Teflon sheet was removed 3 weeks after surgery. 14 cases had successful result without any complication. 1 case failed due to heavy smoking. Autogenous bone harvested from chin or ramus showed more dense regeneration of cortical and cancellous bone according to cone beam CT evaluation than Xenograft and Allograft material. This case series suggested that the open membrane technique utilizing rh-BMP2 and Teflon sheet can be used to recover horizontal bone defect with simultaneous keratinized tissue widening without primary closure.

Biography

Park Dong Won has completed his Advanced Education Program in Prosthodontics at University College of Dentistry and New York University College of Dentistry Fellowship in Ashman Department of Implant Dentistry. He worked as Associate Professor in Prosthodontic Department at New York University College of Dentistry and is Associate Member of Mok-dong Hospital Ewha Womans University. He is the Director of Korean Academy of Oral & Maxillofacial Implant and is a part of Central Seoul ITI study club maintaining private practice in Seoul: Park Avenue Dental Clinic.

dentbud@hotmail.com