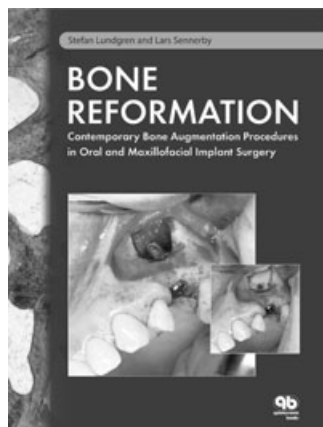


Book Reviews

Bone Reformation: Contemporary Bone Augmentation Procedures in Oral and Maxillofacial Implant Surgery



Editors: Stefan Lundgren and Lars Stennerby.
Quintessence Publishing Co. Inc., Chicago, IL, 2008:
ISBN 978-1-85097-157-3
(134 pages; 299 color photographs, 126 Radiographs/CT images, 49 color light micrographs, 26 color illustrations, and 3 SEMs; three-page surgical instrument appendix; price \$124, hardcover).

This book provides pre-implant bone augmentation procedures to enhance the surgical phase and prosthodontic outcome of implant-supported or implant-borne prostheses. The editors have attempted to communicate the need for prosthodontic outcome not to be determined by a certain type of implant that can fit in the remaining bone. Instead, more important is how bone can be augmented for a more ideal prosthodontic outcome. The book is primarily intended for use by oral and maxillofacial surgeons, but prosthodontists may find it helpful during the treatment planning phases.

This book is divided into four chapters. Chapter 1, "Harvesting of Bone Grafts," is divided into two sections and reviews methods of harvesting autogenous bone grafts. The first section discusses iliac crest bone grafts. This section covers the treatment philosophy and background; harvesting techniques, including surgical technique and flap procedures; donor morbidity and complications; and the patient quality of life assessment for this invasive procedure. The second section discusses intraoral bone harvesting sites and techniques. This section identifies two intraoral graft harvesting sites located at the symphysis and ascending ramus. This section covers the treatment philosophy and background, surgical techniques and flap procedures, donor morbidity, and complications for these two sites. This section briefly discusses other less common areas for autogenous bone harvesting, but does not include any procedures for these less common sites.

Chapter 2, "Reconstruction of the Atrophic Edentulous Jaw," is divided into two sections, "The Maxilla," and "The Mandible." The goals of this chapter are to recreate normal facial morphology to include hard and soft tissues that will allow ideal placement of implants to provide esthetics, phonetics, and function. The editors use a clinical examination with and without prosthesis, and a variety of radiographic methods for diagnosis, treatment planning, and sequencing. The section on the maxilla contains many surgical techniques including: onlay grafting, Le Fort I with interpositional bone grafts, zygomatic implants and regular anterior implants, osteodistraction, combined bone grafting with vertical osteodistraction, combined bone grafting and horizontal osteodistraction, and combined local bone grafts and bone substitutes. Each surgical technique begins with indications and background discussion and continues into the surgical technique and flap design. The editors provide a variety of color photographs, color illustrations, and radiographs of a few clinical maxillary grafting procedures including implant placement and some final prosthodontic outcomes. The section on the mandible contains: onlay grafting, onlay grafting with vertical osteodistraction, and some general postoperative measures including complications and follow-up recommendations. Again, each surgical technique begins with indications and a background discussion and continues into the surgical technique and flap design. The editors again provide a variety of color photographs, color illustrations, and radiographs of a few clinical mandibular grafting procedures including implant placement and final prosthodontic outcomes. The end of the chapter has some discussion of general complications, surgical technique related complications and surgical site-specific complications with clinical and radiographic follow-up recommendations. Unpublished data with Nystrom et al included 348 Branemark implants with a machined surface placed in 44 patients followed for 10 years with maxillary atrophy, reconstructed with iliac crest onlay bone grafts, with a cumulative survival rate (CSR) of 92%, while 167 Branemark implants with a machined surface were placed in 26 patients followed for 10 years with maxillary atrophy, reconstructed with interpositional bone grafts and Le Fort osteotomy with a CSR of 85%.

Chapter 3, "Reconstruction of the Partially Dentate Jaw," is broken into four sections: posterior maxilla, anterior maxilla, posterior mandible, and anterior mandible. Each section begins with a discussion on treatment philosophy and background followed by associated surgical techniques. Some of the surgical techniques described in this chapter are essentially the same as those used in Chapter 2; however, the section on the posterior maxilla describes different methods of sinus grafting procedures not yet previously described. The editors describe autogenous, allogenic, xenogenic and alloplastic

sinus lift procedures and include another novel method. The editors describe a procedure of bone reformation within the sinus by elevation of the membrane without augmentation. This technique may or may not involve suturing of the sinus membrane above the height of implant placement. The editors concluded that bone was formed in 19 implants on 10 patients after 12 months of loading (Lundgren et al 2004). The section on the posterior mandible included another not yet discussed issue related to angulated implants. The editors discuss angled implants to avoid the mental foramen and restore these angled implants to the adjacent anterior teeth. This method was considered more conservative than onlay grafts with some additional osteodistraction. This chapter ends with complications relating to bone graft and fixation screw exposure, wound dehiscence, vector collapse during osteodistraction, maxillary sinus complications, and floor of the mouth hemorrhage. The editors again provide a variety of color photographs, color illustrations, and radiographs of a few clinical grafting procedures, including implant placement, final prosthodontic outcomes, and specific postsurgical complications.

The final chapter, "Biologic Aspects of Reconstruction Surgery and Implant Integration," includes a variety of biologic topics related to osseointegration. This chapter moves from general healing to implant integration and stability. The editors discuss general bone healing, the healing of bone grafts, and the biology of osteodistraction and implant stability within the newly healed or formed bone. The editors discuss the histological analysis of the bone graft/implant interface and include many light micrographs in support of their discussion. Bone reformation and implant integration after sinus membrane elevation with no grafting procedure are included; however, the editors state more research is required on this issue.

This textbook provides a valuable resource for clinicians and educators. The authors present a variety of techniques available for bone augmentation procedures that will assist both the surgical aspects and prosthodontic outcomes of implant dentistry.

Craig M. Neitzke, DDS, MS
Prosthodontic Department Head and Program
Director, Naval Postgraduate Dental School
National Naval Medical Center, Bethesda, MD

Glossary of Oral and Maxillofacial Implants



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Section Editors: N. Broggini,
D. Buser, D.L. Cochran, L.T.
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The editor-in-chief and all contributing editors have attempted to "harmonize the terminology employed worldwide by clinicians, researchers and academics who work in this field and establish a solid basis for mutual understanding." They have selected over 2,000 of the most common terms related to the field.

Unlike most reviews this review will be short, as the nature of the glossary and its layout more than meet the expectations of the authors. The alphabetical listing is current and cross references are detailed without flaw. The illustrations are appropriate and referenced in a way that adds to the educational flow of concepts in implant dentistry. As you progress through the glossary, it is very easy to see the overall development of the field with pertinent references.

In my opinion, this glossary is a must-have in any library both private and educational setting as its completeness and educational potential is far better than any glossary I have ever encountered. In addition, a CD is included for electronic reference. With digital searchability, the CD is an invaluable companion to the text.

Robert M. Taft, DDS
Dean, Naval Postgraduate Dental School
Bethesda, MD

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