

Bone Allograft Considerations in the Practice of Dentistry

Dan Holtzclaw, DDS, MS

Bone grafting has been an accepted treatment in surgical dentistry for nearly 40 years. Early bone grafting procedures involved using the patient's own bone from locations such as their hip or jaw. For obvious reasons, patients were not fond of these procedures due to their expense and need for a secondary surgical site. This changed with the advent of bone allografts, bone provided by another human. As patients could now be effectively treated with bone grafts that did not require a secondary surgical site, the acceptance of this procedure increased dramatically.

Today, dental providers now use bone allografts for a multitude of procedures including socket preservation following tooth removal, treatment of periodontal intrabony defects, and ridge/sinus augmentation to facilitate the placement of dental implants.

When choosing a bone allograft, dental providers need to consider many things with safety being the number one priority. While the US Food and Drug Administration (FDA) has ultimate authority over all human bone processing facilities, independent non-profit organizations such as the American Association of Tissue Banks (AATB) ensure the safe and ethical use of human donor tissues.¹

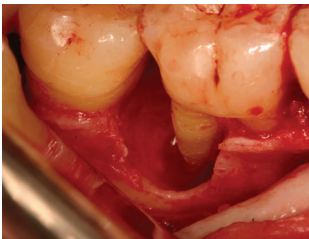
AATB accredited processors, such as Community Tissue Services, adhere to strict ethical and quality control standards in the production of human allograft tissue. In fact, by adhering to AATB standards and employing proprietary processing techniques, the risk of disease transfer with certain human bone allografts is estimated to be one in 2.8 billion.²

A second concern dental providers should consider when choosing a bone allograft is efficacy. For more than 25 years, Community Tissue Services has processed quality human allografts. Maxxeus, provided by Community Tissue Services, produces a full array of bone allografts such as mineralized and demineralized cortical particulate bone, cancellous bone powder, block allografts and resorbable membranes. With more than 355,000 tissue allografts provided annually, Community Tissue Services is one of the nation's largest human tissue processing facilities.

Most dental companies do not produce their own bone allograft but license their allografts from other tissue processing facilities. When you receive bone allograft from Community Tissue Services, you are receiving the allograft direct from the source.

The following photographic case reports depict multiple dental applications for Maxxeus allografts:

Treatment of Periodontal Intrabony Defects (with BioXclude[®] amnion-chorion membrane by Snoasis Medical, LLC.)



Initial Defect



Maxxeus Bone Allograft



Initial Radiograph

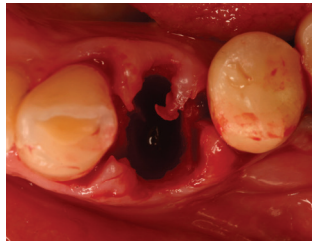


16 Months Healing

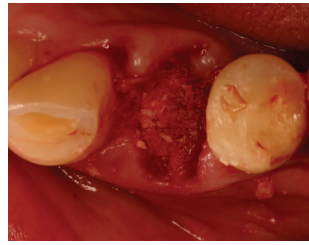
Socket Preservation Following Tooth Removal (with BioXclude® amnion-chorion membrane)



Initial Presentation



Tooth Extraction



Maxxeus Bone Allograft

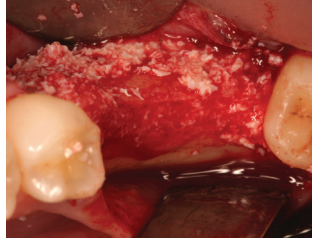


3 Month Healing

Ridge Augmentation (Ridge Split Technique)



Deficient Ridge



Ridge Split + Maxxeus Bone Allograft



4 Month Ridge Healing

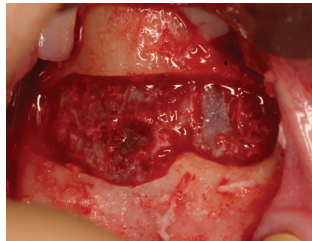


Implant Placement

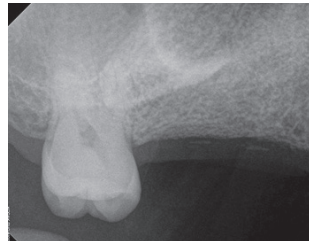
Maxillary Sinus Augmentation



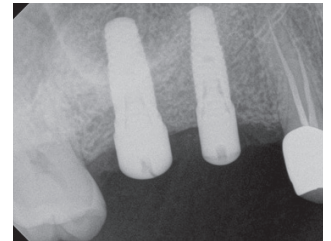
Pneumatized Sinus



Open Sinus Preparation



Maxxeus Bone Allograft



Implant Placement



Dan Holtzclaw, DDS, MS

maintains a private practice limited to periodontics and dental implants in Austin, Texas.

Contact:
info@lonestarprio.com
512-453-1600

References

1. Holtzclaw D, Toscano N, Eisenlohr L, Callan D. The Safety of Bone Allografts Used in Dentistry: A Review. J Amer Dent Assoc 2008;139:1192-1199.
2. Russo R, Scarborough N. Inactivation of viruses in demineralized bone matrix. FDA Workshop on Tissue for Transplantation and Reproductive Tissue; June 20-21, 1995; Bethesda, Md. Cited by: Mellonig JT. Donor selection, testing, and inactivation of the HIV virus in freeze-dried bone allografts. Pract Periodontics Aesthet Dent 1995; 7(6):13-22.

2900 College Dr.
Kettering, OH 45420
800-684-7783
dental@maxxeus.com
www.maxxeusdental.com

