JOI: Bone augmentation procedure successful for challenging cases

**Fig. 1:** Autologous fibrin matrix platelet rich fibrin after centrifugation and subsequent compression. Figs. 2, 3: Radiographic (Fig. 2) and clinical (Fig. 3) baseline situations after tumor therapy and before reconstruction. Fig. 4: Three-dimensional design of the titanium mesh according to the ideal anatomy of the mandible and the position of the foramen mentale. Figs. 5, 6: Augmentation process with the titanium mesh, a combination of the xenogeneic Bio-Oss, advanced platelet rich fibrin and injectable platelet rich fibrin. Photos/Provided by JOI.

By JOI Staff

Dental implants have become a reliable, long-term treatment option for restoring proper speech, function and aesthetics of the oral cavity and facial features. However, despite the effectiveness of conventional augmentation procedures, complex cases, such as tumor resections or extreme atrophy, result in considerable patient pain and other comorbidities from slow or incomplete healing. To address this challenge, different bone substitution materials are currently being investigated.

Researchers from the Medical Center of the Goethe University Frankfurt (Germany) recently published a case study in the Journal of Oral Implantology that evaluates the use of a novel augmentation alternative in a former.

- See JOI, page B2

AAP installs new officers, president

By AAP Staff

The American Academy of Periodontology installed Richard T. Kao, DDS, PhD, as its president during its 104th annual meeting in Vancouver, British Columbia, held Oct. 27-30. Other newly appointed officers are President-Elect Bryan J. Frantz, DMD, MS, of Scranton, Pa; Vice President James G. Wilson, DMD, of Tampa, Fla; as well as Secretary and Treasurer Christopher Richardson, DMD, MS, of Richmond, Va.

In addition to maintaining a private practice in Cupertino, Calif., Kao is a clinical professor in the department of orofacial sciences at the University of California San Francisco and an adjunct clinical professor of periodontology at the University of the Pacific. Kao obtained his doctor of dental surgery degree, certificate in periodontics and PhD from the University of California.

About other installed officers:
- Bryan J. Frantz, DMD, MS, president-elect: Certified by the American Board of Periodontology, Frantz is in full-time private practice in Scranton, Pa.
- James G. Wilson, DMD, vice president: A two-term AAP trustee, Wilson is also a past president of the Florida Association of Periodontists, and he currently serves as the president of the Florida Academy of Dental Practice Administration.
- Christopher Richardson, DMD, MS, secretary/treasurer: Currently in private practice in Richmond, Va., Richardson is also a clinical professor at the Virginia Commonwealth University School of Dentistry.
- Steven R. Daniel, DDS, immediate past president: Daniel has been a practicing periodontist for more than 35 years. He completed his doctor of dental surgery degree and certificate in periodontics at the University of Tennessee School of Dentistry. He also earned his board certification and became a diplomate of the American Board of Periodontology in 2005.

These executives will serve a one-year term ending with the installation of a new team of officers at the AAP 105th Annual Meeting in Chicago, to be held Nov 2-5, 2019.
head and neck cancer patient. By using a combination of a xenogenic bone substitute (BO) and platelet-rich fibrin (PRF), they were able to successfully perform an implantation in a severely compromised mandible.

A 61-year-old female with cancer in her mandible was treated by a tumor resection in her jaw as well as neck dissection on both sides, resulting in disfiguration to the lower jaw. After enduring a painful cancer treatment, the patient did not desire another surgery to harvest bone for dental implants and opted instead for using the BO and PRF alternative. The patient’s blood was drawn, centrifuged and combined with the BO to fill an anatomy-specific three-dimensional titanium mesh. The titanium “cage” was designed and made from a CT scan generated model of the patient’s mandible. The mesh was placed at the involved surgical site, and then covered with collagen matrix (that had previously been shown to aid in tissue regeneration) plus a final layer of PRF clots were used to cover the matrix.

No complications were observed during the 16-month, full implantation procedure in which six implants were successfully integrated into the mandible. From bone biopsies taken during the implantation procedure, researchers were able to histologically confirm that the combination of BO and PRF created a successful augmentation and is a strong alternative to direct bone harvesting from the patient. The histology also revealed an increased blood flow of the connective tissue, which aided tissue regeneration and new bone formation during augmentation healing phase.

In this case study, researchers introduce an extremely promising new method of dental reconstruction in treating a severely compromised mandible in a patient recovering from head and neck cancer. More research is necessary to examine the longer-term effects of this procedure on bone regeneration.

Let our new products tackle your toughest **SURGICAL** procedures

For Oral Surgery and Implantology

**IA-400**
Digital torque wrench

Surgical straight and contra-angle handpieces with or without Mini LED+

**Implantmed SI-1015** with wireless foot pedal option, Ostell ISO option and LED powered motor option

Please visit us at the AAOMS DIC Meeting in booth # 900 to experience the latest in W&H surgical products!
You can also go to www.wh.com/na for more information.
**Simplifying the art of regenerative science**

The **Newport Biologics** line of bone grafting materials and resorbable barrier membranes represents one of the highest quality collections of regenerative products available. By assembling some of the most versatile and frequently used regenerative materials the industry has to offer, we provide clinicians a simplified buying experience, unparalleled value, and the confidence to efficiently and reliably treat the majority of grafting indications.

| Mineralized Cortico/Cancellous Allograft Blend 0.5 cc | $79 | $63.20 |
| Mineralized Cortico/Cancellous Allograft Blend 1.0 cc | $109 | $87.20 |
| Mineralized Cortico/Cancellous Allograft Blend 2.0 cc | $179 | $143.20 |
| Bone Graft Putty Mineral-Collagen Composite 0.5 cc | $99 | $79.20 |
| Bone Graft Putty Mineral-Collagen Composite 1.0 cc | $149 | $119.20 |
| Bone Graft Putty Mineral-Collagen Composite 2.0 cc | $219 | $175.20 |

**Introductory Offer**

**Buy 5 or More and Get 20% Off***

To receive discount, apply coupon code **PJ5198** during checkout. Exp. 11/30/18

| Resorbable Collagen Plug (1 cm x 2 cm), 10 per box | $89 | $71.20 |
| Resorbable Collagen Membrane 3-4 (15 mm x 20 mm) | $109 | $87.20 |
| Resorbable Collagen Membrane 3-4 (20 mm x 30 mm) | $129 | $103.20 |
| Resorbable Collagen Membrane 3-4 (30 mm x 40 mm) | $189 | $151.20 |
| Resorbable Collagen Membrane 4-6 (15 mm x 20 mm) | $99 | $79.20 |
| Resorbable Collagen Membrane 4-6 (20 mm x 30 mm) | $119 | $95.20 |
| Resorbable Collagen Membrane 4-6 (30 mm x 40 mm) | $169 | $135.20 |

*Buy 5 or more of any mix of products and get 20% off entire order

Order by phone: **888-786-2177**  
Order online:  
newportbiologics.com

---

*MKT 10002_1.0  GD-77188-101618*