JOI study: Surgical techniques compared for reconstructing the jaw for dental implants

For a successful dental implant, the first step for some patients is reconstructive surgery of the jaw. A bone graft to augment the upper jaw can now be achieved by several methods. To assess these methods, their risk of sinus perforation and the best evaluation technology, researchers put these procedures to the test on 20 human cadaver specimens.

The Journal of Oral Implantology presented a pilot study comparing transcrestal techniques for maxillary sinus floor elevation. This is a surgical procedure that increases bone volume and prepares the upper jaw for dental implants. The study sought to determine if any of the techniques carried a greater risk of surgical complications.

Perforation of the sinus membrane is the most common surgical complication associated with maxillary sinus floor elevation. Perforations have been linked to acute or chronic sinus infection, edema, bleeding, loss of bone graft material and failure of the implant.

The conventional method for this procedure is the lateral approach, which gains surgical access through the zygomatic bone bordering the maxillary sinus cavity. While this is an invasive technique, there is a low incidence of complications.

A less invasive procedure uses a crestal approach through the osteotomy prepared for dental implant placement. However, this is a sensitive technique that restricts the surgeon’s direct visual examination.

The current study used 20 human cadaver specimens with 40 intact sinuses, as test subjects for three transcrestal surgical techniques. One experimental group used the DASK kit, which features specially designed surgical drills to apply mechanical and hydraulic pressure. Another experimental group received a surgical protocol that permitted entry into the sinus through crestal bone that had been eliminated during site preparation. A control group was treated with the osteotome/crestal sinus membrane elevation, or OCSME, technique.

After each surgical procedure, the cadaver specimens were subjected to postoperative assessment of whether membrane perforation had occurred. Direct visual endoscopy, cone-beam computerized tomography, and periapical radiographs were used. While the study found endoscopy to be the preferred form of detecting membrane perforations, no significant differences were found in the rate of perforations among the surgical techniques used.


ICOI celebrates milestone with a look at implant dentistry’s innovations, complications and controversies

For 40 years, the ICOI has been educating clinicians on implant dentistry, along with all the innovations, complications and controversies that go with it. During its recent ICOI World Congress, the organization honored that history and took a look back at where this once fledgling “study club” came from.

What once was run from the office of ICOI co-chair Dr. Kenneth Judy now occupies an entire floor of an office building in Upper Montclair, N.J. What once started as a small group of clinicians has now grown to encompass more than 13,000 dues-paying members and spans all continents except for Antarctica.

September’s World Congress XXIX was
ITI Congress Canada: Analyzing the risks and benefits of emerging technologies

This year’s International Team for Implantology (ITI) Congress Canada took place in September in Toronto.

Close to 250 professionals in implant dentistry attended the congress that undertook to analyze the risks and benefits of emerging technologies in implant dentistry and scrutinize them against the backdrop of current best practices. The two-day congress included top-class lectures given by specialists from Canada and abroad.

The first day was devoted entirely to Urs Belser and Daniel Buser (Switzerland), who presented an evidence-based rationale for early implant placement and contour augmentation, handling of esthetic failures, fixed implant restorations in the esthetic zone, treatment planning principles for the esthetic zone, the use of provisional implants and more.

The second day brought together Canadian clinicians from across the country and beyond to discuss topics ranging from technology transfer to each and every step along the digital workflow. For the first time, the ITInet Global Forum came into play for the question period after each session.

“We were extremely gratified by the response of the attendees, all of whom were very satisfied knowing that we had provided them with a superb encapsulation of emerging technologies, put them under the microscope and provided the tools to evaluate them,” said Robert Carmichael, education delegate of the ITI section Canada.

The ITI Congress Canada was also the setting for the presentation of the André Schroeder Research Prize 2012 to Dr. Cornelius von Wilmowsky, a PhD dentist, oral surgeon and researcher at Friedrich Alexander University of Erlangen-Nuremberg, Germany. The ITI’s 13,000th member, Dr. Adam Kaplan, was also welcomed during the congress.
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created and prepared by Dr. John Russo and includes a diversified and international faculty. Some of the topics covered included cone-beam CT diagnosis and treatment planning, the use of growth factors including stem cells; digital impressions from the perspectives of the clinician and the laboratory; and diagnosis, prevention and treatment of soft-tissue esthetic complications.

In addition, more than 100 implant dentistry-related exhibitors brought to the ICOI exhibit hall the newest and most advanced products and technology available on the market.
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**Shawn P. Lottier, DDS, MAGD, DICOI**  
Shawn P. Lottier is a graduate of the Baltimore College of Dental Surgery. He maintains a private practice in Atlanta, GA where he provides cosmetic, implant, comprehensive and sedation dentistry along with orthodontics. Dr. Lottier has designed and taught numerous implant and bone grafting classes for dentists.

**Andrew W. Kelly, DDS, FAGD, FAAID, DABOI**  
Dr. Kelly is a graduate of Howard University College of Dentistry. He maintains a private practice in Clemmons, NC where he provides cosmetic, implant, comprehensive and sedation dentistry. Dr. Kelly is an accomplished educator, mentor, and author. He has been placing and restoring implant since 1988 and continues to inspire dentists.

**Duanne W. Jones, DDS, MICOI, BADIA**  
Duanne W. Jones is a graduate of the Baltimore College of Dental Surgery. He practices in St. Thomas & St. Croix, U.S. Virgin Islands and in St. Kitts.

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More than 4,000 dental professionals gather in Las Vegas for Sirona’s CEREC celebration

Company launches new CEREC Omnicam 3-D intraoral camera and Schick 33 intraoral sensor

A record number of dental professionals gathered in Las Vegas this August at the Venetian Resort Hotel Casino for Sirona’s CEREC 27 and a half year anniversary celebration where attendees witnessed the launch of two major products: the new CEREC Omnicam 3-D intraoral camera and Schick 33 intraoral sensor.

Sirona Chairman and CEO Jost Fischer launched the CEREC Omnicam and new Schick 33 sensor by unveiling the products center-stage in front of thousands of clients and dental professionals. Attendees were then treated to detailed clinical presentations of the products from Sirona advocates Dr. Sameer Puri and Dr. Andreas Bindl and dozens of other speakers and educators.

“The CEREC 27 and a half anniversary celebration is another milestone event for Sirona,” Fischer said. “With the launch of two key new products, Sirona has once again demonstrated its commitment to investing in research and development in an effort to improve patient care and our customers’ practice lifestyle.”

In addition, more than 600 dental professionals arrived a day early on Aug. 15 for Sirona’s CEREC Discovery and 3-D Summit sales events. These peer-to-peer events provide a first-class educational experience, according to the company, giving dentists the information they need to make informed decisions about incorporating in-office CAD/CAM and 3-D cone-beam technology into their own practices.

Other highlights of CEREC 27 and a half included:

- Friday evening after the education program, comedy icons Steve Martin and Martin Short performed their unique live show, “A Very Stupid Conversation.”
- To wrap up the three-day anniversary, Sirona hosted a VIP party on Saturday night. The “Red Carpet Bash and a half” was a celebrity/VIP-themed party at Las Vegas’s famous TAO Nightclub.
- For more information, visit www.CEREC27andahalf.com, or visit www.sirona.com or www.cereconline.com.

About Sirona Dental Systems

Sirona, a dental technology leader, has served dealers and dentists worldwide for more than 130 years. Sirona develops, manufactures and markets a complete line of dental products, including CAD/CAM restoration systems (CEREC), digital intra-oral, panoramic and 3-D imaging systems; dental treatment centers and handpieces. Visit www.sirona.com for more information about Sirona and its products.

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Zimmer Dental’s Trabecular Metal Implant makes ‘osseoincorporation’ possible

Zimmer Dental Inc., a leading provider of dental oral rehabilitation products and a subsidiary of Zimmer Holdings, Inc., is pleased to announce that it has received FDA approval to use the term “osseoincorporation” in describing the unique bone healing process made possible with its revolutionary Zimmer® Trabecular Metal™ Dental Implant.

Osseoincorporation refers to the healing potential of bone onto an implant surface and into an implant structure.

The Trabecular Metal Dental Implant features an osteoconductive mid-section, formed from Trabecular Metal material, designed for ingrowth as well as ongrowth in a process new to implant dentistry — osseoincorporation.

Human studies of the Trabecular Metal Dental Implant started in 2010. In a study of Trabecular Metal Dental Implants in canine mandibular models, evidence of ingrowth by maturing bone was documented as early as two weeks after implantation. In a human proof-of-principle study, survival rates have been strong with implants restored at two weeks. Immediate loading is indicated when there is good primary stability and an appropriate occlusal load.

Manufactured at Zimmer’s TMT facility in Parsippany, N.J., and used in Zimmer’s cutting-edge orthopaedic devices for more than a decade, Trabecular Metal material is a three-dimensional, highly bio compatible material — not an implant surface or coating — with up to 80 percent porosity for bone ingrowth and a structure comparable to cancellous bone.

The interconnected porosity is designed to enhance secondary stability through a high volume of ingrowth.

Combining the popular features of the Tapered Screw-Vent® Implant with the unique properties of Trabecular Metal material, the Trabecular Metal Dental Implant is compatible with the Tapered Screw-Vent Surgical Kit and prosthetics for easy incorporation into treatment plans.

For decades, Zimmer Dental has gained the trust of thousands of clinicians worldwide who count on its comprehensive line of products to deliver successful patient outcomes. By looking to new and innovative technologies and leveraging its relationship with its parent company, Zimmer Holdings, Zimmer Dental continues to reinforce its commitment to offering state-of-the-art dental solutions.

For more information, contact a Zimmer Dental sales consultant or customer service at (800) 854-7019 or (760) 929-4300, or visit www.trabecularmetal.zimmer-dental.com for more information.
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Materialise Dental just launched a new user-friendly implant planning solution. With SimPlant GO, there are no surprises during surgery because you have optimally planned the implants in the bone — and with SurgiGuide, this planning is then transferred into a fully predictable surgery.

SimPlant GO’s intuitive navigation, 3-D images and simple four-step process is so straightforward that you can learn it over lunchtime, during a break or in-between appointments, the company said.

This software is made for dentists who have only a few minutes to become familiar with this easy 3-D implant-planning software. SimPlant has been hugely successful during the past 20 years in addressing the needs of the implant specialists, the company said. However, some dentists who were placing implants less frequently felt overwhelmed by the amount of flexibility that SimPlant has offered. SimPlant GO has been designed to specifically address their needs.

The solution has been specifically designed for dentists without a cone-beam scanner in their office. “Although cone beam is the way of the future, not everybody is willing to invest in it yet. And now dentists have a great, low-threshold solution to start with computer-guided implantology,” said Bert Van Roie, SimPlant product manager for Materialise Dental.

“We strongly believe there is a place for our earlier products, so we will continue to invest in their future, and new versions of SimPlant Planner, Pro and Master will be released this fall,” said Bart Swaelens, CEO at Materialise Dental.

“Expanding our portfolio is our way of ensuring that the best implant planning software and surgical guides on the market reach the widest audience possible.” Part of the scan-plan-guide process, SimPlant GO is more than just a fancy new computer software program; it’s part of a full solution for your cases.

“On top of this, the process is a cool and smooth user experience,” he added.

Find out more by visiting www.simplantgo.com.

Z zest Anchors, a leading manufacturer of innovative products for overdentures, including the world-renowned LOCATOR® Attachment, recently launched its new website www.zestanchors.com, the company has announced.

The new, intuitive and easy-to-navigate website features information on all of Zest’s products. A key section to the website is the improved e-commerce portion featuring Shop Assistant.

Shop Assistant helps clinicians, staff members and technicians quickly and accurately select the items needed to restore overdenture patients on a variety of different implant systems.

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