AAID: Use of mini dental implants on the rise but questions linger

There is spirited debate in the field of implant dentistry about proper use of mini dental implants.

Proponents are urging wider use of the shorter, less costly procedure while others advocate a more conservative approach until several long-term outcomes studies are published, according to the American Academy of Implant Dentistry (AAID).

Concerns also have been raised about whether general dentists who adopt mini implants receive sufficient implant training. Though mini-implant companies provide weekend training sessions, AAID believes such instruction falls short of what dentists must know before adding implants to their practices.

“Dentists need to be well versed in implant dentistry before using mini implants,” said Kim Gowey, DDS, a past AAID president. “Without extensive implant knowledge, they will not know proper surgical techniques and all the basics about bone healing critical for implant success. If you want to practice implant dentistry, there are no short-cuts for gaining the necessary knowledge and training.”

In a plenary-session presentation at the recent AAID annual scientific meeting in San Diego, Todd Shatkin, DDS, said mini implants are half the diameter of traditional implants — almost toothpick size — and the insertion procedure is less invasive and half the cost of traditional implants.

“Mini implants made from titanium alloys are strong enough to withstand normal chewing force and can be used confidently for immediate-load, long-term restorations,” Shatkin said. He added that he now uses mini implants for stabilizing dentures, single-tooth implants and even full-arch restorations.

“The FDA has approved some mini implant systems for long-term use, and patients can have a denture stabilized in about an hour or get a

Radiographic evaluation of the implant site

By Pankaj Singh, DDS, DICOI, DABOI/ID

Since Dr. Bränemark’s historic lecture at the Toronto symposium in 1981, implant dentistry has not been the same. The biggest challenge in my opinion has not been so much performing the surgical procedure, but in the diagnosis, treatment planning and accurate evaluation of the potential implant site.

Traditional 2-D radiography had been used in dentistry for decades, and is still being used today with great success. The ease of use, interpretation and low cost make it a very affordable and routine diagnostic tool for most general dentistry.

When it comes to advanced dental therapies like implants, 2-D radiographic assessment of the implant site is just not enough as the buccal-lingual (cross section) view of the site is often the missing critical third dimension.

First came spiral CTs and dentists used them sparingly, mostly for oral-maxillofacial procedures or for ruling out pathology that wasn’t visible on the traditional 2-D radiographs. Off site, high radiation dose exposure and high cost and not being insurance reimbursable, these referrals often met with resistance from the patient.

In May 2001, cone beam volumetric tomography (CBVT) imaging specifically for the use in dentistry in the United States was first introduced by QR SRL of Verona, Italy, the manufacturer of Newton (April 2008 CDA Journal). Since then, several different CBVT manufacturers and software developers...
Adult patients with cleft lip or palate often require continuing care

A greater number of specialized or centralized care options may be needed for adults with cleft lip or palate, according to a new study because these patients continue to face health and mental problems that often require the assistance of more than one specialist.

The patients include those continuing their care from childhood and others seeking new advice or intervention, according to authors Cher Bing Chuo, Yvonne Searle, Alison Jeremy, Bruce M. Richard, Ian Sharp and Rona Slato. Their article, “The Continuing Multidisciplinary Needs of Adult Patients with Cleft Lip and/or Palate,” appeared in the October 2008 issue of The Cleft Palate-Craniofacial Journal, published by the American Cleft Palate-Craniofacial Association.

“Some adult patients of all ages and all cleft types continue to have problems related to their cleft lip and/or palate and want intervention for those problems,” according to the authors. The most common problem is persistent nasal deformity. Other issues include problems related to hearing, speech, and social life, plus concerns about social skills and social withdrawal.

The study examined patients who have been treated at adult multidisciplinary cleft clinics in the West Midlands, U.K., since June 2000. The researchers reviewed the number and nature of the patients’ problems and the types of treatment they required in 2004.

A total of 145 patients were seen in the adult cleft clinic. Of those, 55 patients attended as part of their continuing care. Ninety were newly referred as adults to the cleft service. Patients ranged in age from 15 to 70 years and had, on average, three clinical problems each.

According to the authors, “Intervention for the patients reviewed in this study included varied types of surgery, dental rehabilitation, psychological assessment and support, and speech assessment and therapy.”

The authors conclude: “The problems of adults with cleft lip and/or palate may be changing. Our study supports the need for a specialist multidisciplinary cleft clinic to provide continuing care for patients who have a history of cleft lip and/or palate.”

To read the entire study, visit: http://www.allenpress.com/pdf/ and click on cep-45-03-15.pdf.

(Source: The Cleft Palate-Craniofacial Journal is an international, interdisciplinary journal reporting on clinical and research activities in cleft lip/palate and other craniofacial anomalies, together with research in related laboratory sciences. For more information about the journal, see http://cep.allenpress.com/cepjournal/?request-index.html.)
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Orthodontists have been straightening teeth for decades relying on the ancient physics principle “every action has a reaction,” in which tooth displacement in one part of the jaw causes movement on the other as well.

Use of dental implants as orthodontic anchors, however, is changing that principle by expediting treatment times and expanding possibilities for previously unrecoverable cases, according to research presented at the American Academy of Implant Dentistry Annual Scientific Meeting in San Diego.

“Dental implants are changing the way orthodontics is being practiced,” said Frank Celenza, DDS, associate clinical professor, New York University College of Dentistry. “In conventional orthodontics, teeth are moved individually, but implants can serve as excellent anchors from which force is applied to move the targeted teeth without causing shifts in other teeth.”

In his plenary session presentation, Celenza explained that the use of implants as sources of orthodontic anchorage is a powerful technique that has just begun to be explored.

“In our studies, we’re already seeing cases in which implants simplify and streamline orthodontic therapy, decrease treatment times, and eliminate dependence on patient compliance in making adjustments and wearing orthodontic appliances,” Celenza said. “Because the anchor systems are so much more predictable and stronger when implants are incorporated, the temporal sequencing of tooth movements is eliminated and teeth can be moved en masse or all together. Consequently, treatment times can easily be reduced by a third.”

Celenza added implants can be used in any orthodontic case that requires tooth replacement, as well as for fully dentate patients.

“Cases progress faster when implants are used as anchorage but not because teeth are subject to higher force levels. Rather, it is the result of a more efficient appliance design that provides the ability to move multiple teeth simultaneously rather than individually, as is necessary in conventional orthodontics.”

Dental implants also make it possible for some patients to receive orthodontic treatment that previously would not be feasible.

“Patients with severe orthodontic deformities now can be reevaluated to determine if orthodontic dental implants could provide successful outcomes,” Celenza said.

Commenting on the significance of the research, AAI President Jaime Lozada, DDS, said the orthodontic implant application further underscores the versatility of dental implants for both restorative and cosmetic dental procedures.

(Source: American Academy of Implant Dentistry)

**Inflammation: Connecting the mouth and body?**

Research suggests chronic inflammation links gum disease to other disease states

Brush after every meal. Floss daily. See your dentist to help you sustain your oral health. But now not only dentists, but also many physicians, are stressing the importance of maintaining oral health in an effort to keep the rest of the body healthy.

Research has long suggested an association between gum disease and other health issues, including heart disease, stroke and diabetes, but now scientists are beginning to shift their focus to understanding why these connections exist. An emerging theory, and one gaining support from researchers worldwide, is that inflammation may link the mouth to the body.

Inflammation is the body’s instinctive reaction to fight off infection, guard against injury or shield against irritation. Inflammation initially intends to heal the body, over time, chronic inflammation can lead to dysfunction of the affected tissues, and therefore more severe health complications.

According to Dr. Susan Karabin, past president of the American Academy of Periodontology (AAP) and a practicing periodontist in New York City, periodontal disease is a textbook example of an inflammatory disorder.

“For many years, dental professionals believed that gum disease was solely the result of a bacterial infection caused by a build-up of plaque between the teeth and under the gums. While plaque accumulation is still a factor in the development and progression of gum disease, researchers now suspect that the more severe symptoms, namely swollen, bleeding gums; recession around the gum line, and loss of the bone that holds the teeth in place, may be caused by the chronic inflammatory response to the bacterial infection, rather than the bacteria itself.”

Periodontists hypothesize that this inflammatory response to bacteria in the mouth may be the cause behind the periodontal-systemic health link. Many of the diseases associated with periodontal disease are also considered to be systemic inflammatory disorders, including cardiovascular disease, diabetes, rheumatoid arthritis, chronic kidney disease and even certain forms of cancer, suggesting that inflammation itself may be the basis for the connection.

“More research is needed to pinpoint the precise biological mechanisms responsible for the relationship between gum disease and other disease states,” Karabin said. “However, previous findings have indicated that gum disease sufferers are at a higher risk for other diseases, making it more critical than ever to maintain periodontal health in order to achieve overall health.”

To avoid gum disease, Karabin recommends comprehensive daily oral care, including regular brushing and flossing, and routine visits to the dentist. If gum disease develops, a consultation with a dental professional, such as a periodontist, can lead to effective treatment. Patients diagnosed with gum disease should also disclose all health conditions to their dental professionals, and be sure to update other health care professionals on their periodontal health.

A recent supplement to the Journal of Periodontology highlighted current discussions between dental professionals and health care professionals on the role of oral inflammation in the progression of other disease states. As research continues to emerge that supports the mouth-body connection, the more vital it becomes that both dentists and physicians work together to ensure the most comprehensive wellbeing for their patients.

(Source: American Academy of Periodontology)

**AAID: Implants effective for orthodontic treatment**

New Solutions for Enhanced Aesthetic Restorations will present clinical solutions to meet aesthetic demands including soft tissue management, the utilization of transitional abutments to achieve non-surgical tissue sculpting, final abutment selection, and fabrication to customized and the selection of ideal abutment materials to achieve enhanced aesthetics and long-term function.

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have significantly contributed to the advancement and adoption of the technologies (see references 1 and 2 of the April 2008 CDA Journal), allowing clinicians to practice prosthetic-driven implant dentistry.

The ever so important and multifaceted task of determining the accurate placement of implants and assessing bone-grafting procedures (guided bone regeneration) prior to surgery is paramount.

Two-dimensional images such as a pantograph and periapical (PA) films have inherent shape and size distortion, along with changes in magnification. In order to minimize potential surgical complications, one of the most important steps is obtaining appropriate radiographs utilizing the data from a CBVT and combining the images with an interactive 3-D implant treatment planning software, which can significantly increase the accuracy of the implant placement for an ideal prosthetic result.

The accuracy of the CBVT results from the size of a voxel, which is short for volume pixel. The smaller the voxel size, the more accurate the resulting scan, and the better the resolution. A voxel is to a CBVT as a pixel is to a digital PA. The ability to assess an area of interest in three dimensions can benefit both novice and experienced clinicians alike.

High resolution limited CBVTs have been designed for dental applications, as opposed to sliced-image data of conventional CT imaging. CBVT captures a cylindrical volume of data that offers advantages over CT that include increased accuracy, higher resolution and decreased radiation dose exposure.

I will try to illustrate through the report of a case involving a missing maxillary central incisor that this concept can also be applied for multiple implants. The use of planning tools allows the clinician to effectively communicate the plan with the other members of the implant team as well as with the patient.

Case study

A 38-year-old male presented as a new patient to our office. His chief complaint was he was unhappy with the esthetics and the stability of the three-unit Maryland bridge that was constructed to replace a maxillary right central incisor (tooth #8) that was extract-ed secondary to sustaining a fractured root during post and core insertion after endodontic therapy approximately 20 years ago.

Since then he has had to have the bridge recemented numerous times. His medical history revealed no significance findings. The retracted antero-posterior (frontal)
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view shows the prosthesis in place and the gingival recession corono-apically as compared to the adjacent natural teeth, resulting from years of absence of a root and a resorbed socket supporting the overlying soft tissue. The axial (occlusal) view shows the severe buccal recession resulting in a concavity and an inadequately contoured buccal plate in the area of tooth #8.

The 2-D PA of tooth #8 revealed adequate interdental space needed to place a wide enough diameter that would provide for a properly contoured crown with the appropriate amount of interproximal emergence profile.

It also provided us with the height of the alveolar crest in the implant site and the amount of corono-apical resorption of the alveolar crest, allowing us to plan for a straight-walled implant long enough to provide enough osseointegrated surface area to resist and allow for the long-term loading effects on the implant.

From the PA we weren’t able to determine the buccal-palatal dimension of the alveolus or do an accurate virtual implant planning, so after explaining the limitations of the PA to the patient and receiving his consent, we scanned him using our in-office Galileos CBVT (Sirona Dental Systems GmbH).

Utilizing the highly interactive viewing software (Galaxis [SiCal]), which is the software component of Galileos, not only visualization of the proposed implant site simultaneousness in all three dimensions was possible, but also ruling out any pathology in the general vicinity that might affect the prognosis of the initial healing process or osseointegration.

It’s also possible to import from a library of implants in the implant planning module that is native in Galaxis and virtually place the appropriately sized implant (Certain straight walled, internal hex implant [BIOMET 3I]) using the existing pontic as a guide that would result in an ideal prosthetic result and conservatively manageable periodontal sulcus depth.

We were also able to determine the need for implant site development at the time of the implant placement, which included an internal socket ridge expansion with bone grafting and coronal advancement of the gingival margin along with a sub-epithelial connective tissue graft to increase the zone of keratinized tissue.

When planning for an implant, it is important to consider the available bone volume, bone density, proximity to vital anatomic structures like roots of adjacent teeth, in the mandible the mental foramen and its anterior loop and inferior
alveolar nerve canal, in the maxilla and the nasal and sinus floor. The cross-sectional views are the most critical as they show the available bone area and aid in determining the available bone volume, the ratio of cortical bone vs. medullary bone and the thickness and integrity and continuity of the cortical plates surrounding the trabecular bone.

As we were keeping the implant prosthetic position the same as the existing pontic and not changing the occlusion, from the initial study model a vacuum-formed surgical guide was fabricated and used at the time of the surgery.

The 3-D model can be rotated in any position, allowing for the ultimate inspection and appreciation of the implant site.

The body and thread design of the implant was fully visualized and an accurate assessment of apical and implant body proximity to vital anatomic structures was determined to be non-critical.

The images from the scan and implant planning were incorporated into a CASEY (Patterson Dental) presentation helping the patient understand the recommended treatment.

**Conclusion**

In the past, 2-D imaging was the only way to help diagnose a potential implant site, especially for a single tooth replacement. However, the acceptance and utilization of CT and CBVT have helped clinicians expand beyond their conventional imaging modalities to understanding the 3-D anatomic presentations and the importance of this technology.
‘Diagnosis is at the heart of successful treatment’

Dr. David DiGiallorenzo talks about his Dental Tribune Symposia session held during the Greater New York Dental Meeting

By Kristine Galker
Managing Editor, Ortho Tribune

Your session for the Greater New York Dental Meeting’s Dental Tribune Symposia was “Tissue Care in the Maxillary Anterior: Ankylos — A New Paradigm.” Please give us a general overview of the presentation and what attendees took away from it.

Long-term success in the maxillary anterior region requires an understanding of the patient biotype. Diagnosis remains at the heart of successful treatment strategies. The thin scalloped periodontal architecture is characterized by short contacts and pronounced interdental papilla and is prone to recession. Biofilm accumulation will cause recession if and when the disease process initiates. This is the “proceed with caution” implant case.

Consequently, results may look good at one to five years, but as time proceeds, things are not what they seem. This lecture clarified diagnosis and surgical and prosthetic treatment options available to manage this most delicate situation in the class I case where hard and soft tissue architecture is healthy and intact.

Immediate and single tooth replacement was demonstrated with an emphasis on hard and soft tissue overcorrection using advanced periodontal plastics and bone grafting using PRGF. Implant and abutment selection become a critical piece of the puzzle for long-term tissue care.

A bone preserving implant, such as the Ankylos Implant, will provide a unique surgical placement paradigm and biologic response, which will provide a supra-crescent bone response, consequently stabilizing the tissue. As well, a “negative contour” abutment interface design will not adversely affect the innate response of this periodontal biotype. Finally, crowns contours remain the final piece of the puzzle for long-term success!

You spoke about a number of different concepts in your presentation. Could you briefly touch on a few of them and why they are important to learn about?

Maxillary anterior tooth replacement continues to represent a major-ity of implant restorations. In particular, central incisors are being replaced frequently as a result of long-term trauma and bio-mechanical failure. Immediately is a hot topic, and everyone wants to provide this approach. There is only one correct diagnosis; however, there are many treatment options. If we miss the diagnosis, then all of the treatment we provide will not address the desired therapeutic outcome.

We have a dynamic biologic response. Through precise diagnostics, we can predict patient outcomes more precisely and avoid potential esthetic problems long term. With this understanding, our desired treatment protocol is more biologic and provides the long-term stability and set the stage we desire for success.

Learning why the “thin scalloped periodontium” requires a different approach is crucial for long-term success.

Please tell us a little about your background. How did you get involved in implant-supported restorations and in teaching others about it?

I was blessed with a very unique, multi-disciplinary specialty dental education. My training at the University of Pennsylvania in the early 90s in the Department of Periodontics and Periodontal Prosthesis included multifaceted training in prosthodontics, orthodontics, periodontics and advanced oral reconstructive techniques including oral implantology.

We had an implant center, which was well supported by the leading implant manufacturers. In addition, we hosted one of the only ortho-perio, prosthesis programs in the world. So our educational arena was diverse and challenging.

I was fortunate enough to learn from the world’s leaders in all of these areas, all of whom were educators as well as clinicians. You were trained not only to be a clinician but also to be educators and academics! At the end of our education we were periodontists, the basis for all we do in dentistry! At the University of Pennsylvania, part of our mission was and is to carry the baton, to speak the language, to share knowledge and continuing the educational process in both the clinical and university sector, if you so choose!

Dr. David P. DiGiallorenzo

Do you think it’s important for dentists to incorporate different specialties into their practices? What are some of the advantages of doing this?

I do think it is important for dentists to become multidisciplinary, at least, from a diagnostic point of view. Now whether they provide the actual therapy will depend on them. Success in dentistry depends on education, diagnostic acumen, clinical skill and reduction of error.

Obviously, all dentists are practicing utilizing a multi-disciplinary approach as their practices provide varying services. However, practitioners must not stand alone as an island trying to provide simple and complex case care. There is no simple case! This is a misnomer! It can become frustrating individually and create a negative buzz in patient population, particularly regarding tooth replacement therapy. And this we do not! So proper education, not corporate-driven education, is paramount.

The most successful and happy practitioners I know are niche oriented. They make their living on perhaps five procedures. Repetition creates excellence, and in excellence there is growth.

If someone is interested in learning more about the Ankylos tissue care concept or implant-supported restorations in general, what would you recommend the first steps be?

Dental implant education is diverse. The “Tissue Care Concept” is both exciting and unique! With a 20-year history, it is not new. So the data is mature and relevant. The first step is to develop a “tissue care” mentor in your community to help you, immediately, with the Monday morning cases. Understand that there is no endpoint to education. It is a process, and the process begins with you.

Now more and more dental education is being brought right into the back yard of practitioners nationwide, creating a unique opportunity to foster one-on-one communication and substantive learning. And we have plenty of education centers geared toward optimizing the learning experience.

Seeing is great, but dentists learn by doing, and unfortunately, we learn the most through our failures. This is why there is no replacement for mentors blending experience with literature, academics and education. Most dentists prefer to learn as they go, and the best way to learn implant restorative dentistry is on the job. So this is a great place to start. But be sure to create a collaborative educational environment for ongoing learning.

How did you get involved with working with DENTSPLY Tulsa, and what do you feel are the advantages of this relationship?

I began utilizing the DENTSPLY Tulsa implant product line many years ago, beginning with the Xive implant system, a phenomenal, restoratively based implant system. I was exposed to the product in Europe.

As a result of long-term clinical challenges in the anterior segment, I then started looking at the unique biologic design aspects of the Ankylos implant system, which was originally owned and manufactured by Degusa Dental. This implant had a long history in Europe.

When it was released in the United States under the DENTSPLY brand, I started looking at the unique biologic design aspects and how these characteristics could improve my outcomes. These characteristics make the implant system clinically and scientifically relevant. Having a company like DENTSPLY providing world-class support and education is even more important. Patient education options, diagnostic technologies and lab interface technology like Cercan Coach and machining such as radica and cercan provide restorative solutions. In the end, isn’t that what life is all about — solutions? DENTSPLY is capable of providing this system for clinically based practitioners!
New product delivers non-invasive assistance for implant restorations

By Marc Liechtung, DMD

Most dental professionals have had patients who clearly need restorative treatment yet, for clinical, emotional or financial reasons, are unwilling or unable to immediately undergo the necessary work for permanent restoration.

That’s why I created Snap-On Smile®, a multipurpose restorative appliance that is strong yet flexible, has retention that is completely tooth-borne and can be used in a wide range of clinical modalities for temporary relief (including the patient’s aesthetic appearance), in advance of further treatment or as an end product for a cosmetic removable partial denture.

I’ve seen significant value for both patients and periodontists in using the Snap-On Smile appliance with implant restorations, too. The appliance can help shape the pontic space as it offers improved aesthetic appearance and easier hygiene maintenance during a lengthy course of treatment and healing. Here’s an example from my own practice.

A healthy 22-year-old woman was complaining of persistent discomfort in tooth #9. Another dentist performed root canal therapy in an effort to alleviate her discomfort. A Sirona digital intraoral system X-ray revealed she was experiencing internal resorption. It was clear that neither root canal therapy nor a crown would alleviate her discomfort.

Together, the periodontist in my practice and I recommended a treatment plan that included the extraction of tooth #9. The patient wanted to avoid the stigma of wearing a denture, but didn’t want anyone to notice her missing tooth. We assured her the Snap-On Smile appliance could address all of her concerns, could be inserted immediately following the extraction and that she could continue to wear the appliance throughout the entire healing process. She approved the treatment plan.

Several weeks after the initial procedure, the patient returned so we could monitor her healing progress and make plans for placing the implant. The socket was healing beautifully with no signs of impingement, which is often present when the same condition is treated with a traditional acrylic temporary or a flexite flipper. The tissue looked perfect, and she was extremely happy with her smile — so much so that she expressed concern about her post-implant smile looking and feeling as good.

From the periodontist’s perspective, there was concern that the appliance would not offer enough necessary protection to expedite the healing of the implant site and papilla formation.

Following the placement of the implant, it became clear that Snap-On Smile was an extremely valuable interim appliance, completely addressing the concerns of both the patient and the periododontist. Besides allowing the gingiva to heal without impingement, it also is more hygienic, esthetically pleasing and can be made in full arch or quadrant appliances.

The greatest advantage we’ve seen, though, is patients treated with Snap-On Smile are extremely happy and comfortable with the entire process.

Before and after shots of an implant temporary restoration modality.

About the author

Dr. Marc Liechtung, inventor of Snap-On Smile®, is a cosmetic and restorative dentist in New York City and the owner of the dental practice Manhattan Dental Arts (MDA), which provides the latest dental techniques and services to its patients. He has been in practice for more than 18 years. In addition to Snap-On Smile, the practice offers services such as dental implants, porcelain laminates, tooth whitening, periodontal treatments, preventive care, crowns and reconstructive bridgework. After graduating from the University of Pennsylvania, he received an advanced restorative and implant fellowship there. He can be reached at (877) 7-SNAPON (76-2706) or by e-mail at mliechtung@snaponsmile.com.

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CEREC CAD/CAM — the power of technology in restorative dentistry

By Eugene Antenucci, DDS, FAGD

Over the past few years, a revolution has quietly occurred in restorative dentistry. What began as a passionate pursuit at the University of Zurich in 1980 by Drs. Werner Momm and Marco Brandestini has pioneered what is literally the explosive growth of CAD/CAM in dentistry.

The first CEREC patient was treated at the University of Zurich in 1985, and by 2007, CEREC has grown to more than 27,000 users. CEREC technology paved the way for dental CAD/CAM, powered by Sirona’s vision for imaging in dentistry.

Chairside CAD/CAM no longer stands alone — computer-aided design and/or computer-aided machining technologies have infiltrated every aspect of dentistry. Dental laboratories have embraced the technology and have made computerized automation an integral part of fabricating and delivering dental restorations, as exemplified by CEREC InLab’s milled zirconia restorations.

In orthodontics, Invisalign, e-Mod, Lingual Care iBraces and SureSmile are working examples of the integration of CAD/CAM. The arrival of 3-D cone beam imaging technology is powered by software that allows for not only image manipulation, but also for the production of accurate stereolithographic models and surgical guides.

The list goes on, but the unprecedented nature of this technology’s growth is easily understood by examining the experience of CEREC in dentistry. In the early 1980s through the early 1990s, clinical and laboratory standards of impressions, wax-ups, castings and ceramic buildup of restorations were well accepted by dentists and technicians. That fact, together with the state of computers that were available to the dental profession — costly and slow with poor memory capacity and limited graphic capabilities — made CAD/CAM’s acceptance by dentists and laboratories very slow.

Over the past decade, the exponential improvement of computer technology has changed the entire paradigm. Higher speed and increased computer memory, as well as enhanced graphics at affordable cost, allowed dentists and laboratories to give CAD/CAM serious consideration.

Early CEREC software was two-dimensional — current software is highly intuitive, with three-dimensional displays. During this same time, dental practices’ focus shifted from repair and functionality to a high demand for esthetic restorations. Laboratory costs for dentists are escalating rapidly, partially due to the staffing and cost challenges that commercial dental laboratories are facing.

Dentists and laboratories have been faced with higher production costs, and recent developments have brought to light the trend of laboratories to outsource work to other countries where inexpensive labor becomes the deciding factor.

The explosion of CAD/CAM has come at a time when both the conditions are ripe and the technology is ready. The driving forces are easily understood:

• computers are widely used in dental practices in numerous applications, with increasing numbers of dentists using computers in the operatories;
• learning curves have been dramatically reduced;
• digital camera imaging is commonplace;
• the public is placing a high value on esthetics and is demanding esthetic restorations anteriorly and posteriorly;
• continued controversy regarding amalgam restorations has led to legislation that limits the use of mercury in several states, and the overwhelming public perception is mercury in fillings is not desirable;
• and adhesive technology has matured to the point where restorations can be bonded to teeth rapidly, predictably and with an expectation for long-term viability.

CAD/CAM is filling a void in dentistry today, and CEREC by Sirona has been at the forefront by providing dentists with the ability to deliver optimally fitting, highly esthetic restorations at a significant cost savings within a single appointment visit. With chairside design and in-office fabrication of restorations, dentists are free to enjoy complete control over the quality of their restorations as well as over the entire laboratory process.

At the heart of the CEREC process is a highly advanced imaging system. The camera takes a 3-D image, either intraorally or indirectly on a model, of a tooth preparation. CEREC’s camera is light, compact and ergonomic. It uses infrared waves, which are directed at the preparation. This information is returned back to the camera and is processed by CEREC’s computer to accurately measure the heights of the tooth structure, the adjacent teeth and the surrounding soft tissue.

Using complex algorithms, the preparations are displayed three-dimensionally on the monitor. A simple set of tools allows for the rapid virtual design of a restoration that will fit with the same degree of accuracy as laboratory castings, with complete control over occlusal morphology and proximal and occlusal contacts.

The benefits of CEREC are numerous to dentists and patients. Cost savings in the production of restorations are high. CEREC ceramic restorations are highly esthetic and made of superior materials. CEREC can create inlay, onlay single unit crowns and veneers, providing a consistently effective approach to conservative dental care.

With CEREC, dentists are able, for the first time, to take full control of esthetic crown, veneer, inlay and onlay restorations in their own offices. Dental laboratories, both large and small, can fully automate their processes, saving time and money while delivering high quality, highly esthetic and long-lasting restorations.

About the author

Dr. Eugene L. Antenucci is a 1985 graduate of New York University College of Dentistry. He was awarded a fellowship in the Academy of General Dentistry, the American College of Dentists and the International College of Dentists. Antenucci maintains a full-time private practice in Huntington, N.Y., and is an attending dentist at Montefiore Hospital and Medical Center. He is a certified CEREC basic and advanced training instructor and has conducted training seminars throughout the United States. Antenucci lectures internationally, conducting seminars in the clinical utilization of advanced technology in dentistry, as well as seminars in cosmetic dentistry and practice management. Antenucci and his wife, an orthodontist, reside in Laurel Hollow, N.Y.
Increasing implant production through an implant treatment coordinator

By Roger P. Levin, DDS

The success of your implant practice heavily depends on one individual — an implant treatment coordinator (ITC). Your practice may not be ready for one yet, but the ITC is the cornerstone of true implant growth.

How will you know when your practice is ready for an ITC? The path toward needing an ITC begins with a growth plateau, something that occurs in thousands of implant practices.

While there are many causes for a lack of growth, one key reason is that practices simply run out of doctor time. Face it — you can be at only one place at a time. And the best place to be is chairside, providing optimal patient care and producing revenue.

Unfortunately, that’s a hard lesson to learn for some implant doctors who try to do a little bit of everything (scheduling, marketing, referring office communication) and then wonder why their implant production is flat. This is the very reason why Levin Group recommends that implant practices use an ITC, so that the implant doctor has the time and energy to place more implants.

Are you ready for an ITC?

How do you evaluate doctor time to determine if an ITC is needed? Follow these steps to ascertain the situation:

• Evaluate the schedule to determine if higher levels of efficiency can be achieved by replacing the schedule with one that focuses more on what Levin Group calls Production Power Cells™.

• Evaluate the staff from a training standpoint to determine if they are able to take on greater responsibility to free time in the doctor’s schedule.

• Determine the amount of time that the doctor is spending in non-treatment implant activities.

The ITC’s role explained

The ITC’s main function is to manage 95 percent of all implant patient-related activities with the exception of final diagnosis and treatment. Can an ITC really handle all of these areas? Absolutely! Remember that hundreds of practices throughout the United States are currently using an ITC.

The ITC manages patient interactions during the entire implant process from the first confirmation call to the implant placement to postsurgical follow-up.

From a patient’s standpoint, the ITC will create a high level of comfort while building tremendous value for implant treatment. Consequently, the role of the ITC has a significant impact on increasing case acceptance.

When Levin Group added the training of the ITC in its one-year Total Implant Success™ Management and Marketing consulting program, implant production for our clients increased dramatically. This was due to two reasons:

• The ITC was trained on advanced interpersonal and motivational skills, which ensured a positive experience for patients throughout the entire implant process.

• The doctor had more time to focus on clinical diagnosis and treatment, which are the main drivers of practice production.

The philosophy of the ITC

The philosophy is that one person, the ITC, handles the patient from initial contact with the office all the way through until completion of the case.

The ITC will be the individual who performs consults and arranges confirmation calls, follow-ups and scheduling for patients. Rest assured, the doctor still has time to meet with patients for both the diagnostic and case presentation phases, but it requires 90 percent less time per patient than without an ITC. This significantly increases the amount of time doctors can spend in treatment.

The advantage of a quality ITC is not only about time savings — it’s also about an improved patient experience. The ITC often relates to the patient in a different way than the doctor.

As a non-clinical staff member, the ITC has much more in common with the patient than the implant doctor. An effective ITC takes advantage of this circumstance. In fact, this individual has specific guidelines for working with patients and presenting treatment to achieve high levels of case acceptance. As an example, the ITC will focus on:

• Creating value by transferring trust to the doctor.

• Educating and motivating the patient on why implants are the best choice.

• Spending time to work through all patient issues to achieve the best result.

Doctors may be reluctant to admit it, but they simply do not have the time (and often not the temperament) to work with patients at this level.

Conclusion

The position of the ITC can have a powerful impact on a practice. Too many practices wait far too long and find themselves stuck in a plateau losing production that will never be recovered.

The implementation and training of an ITC is not a difficult process, and with the proper training program, you can quickly reap the benefits. ITCs should have high close rates and be measured on a daily and/or weekly basis to determine how they are performing. Just like sports, the ITC should have a regular score and understand how she is doing and when it is time to reevaluate her success and augment skills with additional training.

Perhaps most importantly, the ITC can allow the doctor to significantly increase both clinical treatment time and practice profitability.

Implant Tribune readers are entitled to receive a 20 percent courtesy on Dr. Levin’s latest Total Implant Success™ Seminar being held Feb. 18-19 in Las Vegas. To receive this courtesy, call (888) 973-0000 and mention “Implant Tribune” or email customerservice@levingroup.com with “Implant Tribune” in the subject line. For more information, please visit www.levingroupimplant.com.
New York University College of Dentistry, Ashman Department of Implant Dentistry and the International Congress of Oral Implantologists co-hosted their 19th Annual Implant Symposium at NYU.

This event, which always attracts a large international contingency, especially did so, as this symposium was co-hosted by ICOI. Members from Germany, the DGOI, and from Korea, the KSOI. More than 500 doctors attended the conference.

Dr. Dennis Tarnow and DGOI President Ady Palti arranged the scientific program. ICOI President Dong-Seok Sohn was a main podium speaker.

Several ICOI members were awarded their advanced credentials at the meeting. Receiving their diplomate certificates and medallions were the following dentists:

- Dr. Shahrez Ahmed, Baltimore, Md.; Dr. Linus P. Chong, San Marino, Calif.; Dr. Woojae Chong, Quakertown, Pa.; Dr. William T. Conklin, Windsor, Calif.; Dr. Jordan K. Grant, Aston, Pa.; Dr. Miguel R. Grillo, Wellington, Fla.; Dr. Ravichandra Juluri, Nashville; Dr. Mark N. Neale, West Point, Va.; Dr. Eric S. Weiner, Fresh Meadows, N.Y.; and Dr. Hugo F. Vasquez, Woodside, N.Y.

The following doctors received their mastership at the awards ceremony:

- Dr. Robert Korwin, Red Bank, N.J.; and Dr. Edmond M. Kotary, State College, Penn.

The newest fellows who received their certificates were:

- Dr. Anoosh A. Affifi, Seattle; Dr. Sasha Baldeo, Chaguanas, Trinidad; Dr. Joseph H. Blum, Flushing, N.Y.; Dr. David J. Chong, Flushing, N.Y.; Dr. Linus P. Chong, San Marino, Calif.; Dr. Woojae Chong, Quakertown, Pa.; Dr. Anne Delisle, Quebec City, Quebec, Canada; Dr. Joseph Diacovo, Kingston, N.Y.; Dr. Nisie Dolly, Port of Spain, Trinidad; Dr. Evelina T. Dragneva, Stanford, Conn.; Dr. Michael B. Faktur, Crested Butte, Colo.; Dr. Levitia N. Franco, Chaguanas, Trinidad; Dr. Margaret M. Fusina, Bronx, N.Y.; and Dr. Alexander Gerskovitz, Wayne, N.J.; Dr. Michael Heylmann, Brooklyn, N.Y.; Dr. Janineen E. Hosta, Tampa, Fla.; Dr. Luis F. Gutierrez, Sarasota, Fla.; Dr. Umar Haque, Oakbrook Terrace, Ill.; Dr. Sharde Harvey, New York, N.Y.; Dr. Kenneth V. Hoang, San Jose, Calif.; Dr. Jarrard A. Hubke, New York, N.Y.; Dr. Paul V. Iaropoli, Fairfield, Conn.; Dr. Ryszard B. Jennings, Diego Martin, Trinidad; Dr. Ravichandra Juluri, Nashville, Tenn.; Dr. Michael J. Kandel, Huntington Station, New York; Dr. Abraham A. Katz, Herndon, Va.; Dr. Dion Koomoulal, Carepe, Trinidad; Dr. Robert Korwin, Red Bank, N.J.; Dr. Edmond M. Kotary, State College, Pa.; Dr. Jason K. Lee, Dover, N.J.; Dr. Fredrick R. Lewcock, Round Rock, Tex.; Dr. Richard J. Lewenson, New York, N.Y.; Dr. Jing Jing Li, Ann Arbor, Mich.; Dr. Nancy Nehawandian, Los Gatos, Calif.; Dr. Benjamin Nidnam, Madrid, Spain; Dr. Frank Orlando, New York, N.Y.; Dr. Michael J. Orrico, Michigan City, Ind.; Dr. Mark Allan Padowsky, Atlanta, Ga.; Dr. Mark E. Raider, Cornwall, N.Y.; Dr. Claire Rousseau, Quebec, Quebec, Canada; Dr. Len A. Schwarzbau, New York, N.Y.; Dr. Rishad Seecheran, Chaguanas, Trinidad; Dr. Nancy Shahreissi-Oryani, Yonkers, N.Y.; Dr. Eiman A. Shirazi, Lake in the Hills, Ill.; Dr. Grace A. Thomas, South Portland, Me.; Dr. Anthony J. Tisoncik, Hickory Hills, Ill.; Dr. Hugo F. Vasquez, Woodside, N.Y.; Dr. Joyce K. Warwick, Pittsburgh, Pa.

Two other noteworthy presentations were made at the meeting.

The 2008 Kenneth W. M. Judy International Education Award was presented to Dr. Dennis Tarnow, chairman of the Periodontal and Implant Department at NYU.

This award was established to recognize global education in the worldwide scope of implant dentistry. Tarnow, head of the world’s largest implant department, is responsible for numerous programs, directly and indirectly, that have significant impact on dental implant education around the globe.

Dr. Racquel Z. LeGeros, professor and associate chair, department of biomaterials and biomimetics, College of Dentistry New York University, and her team, Drs. Alex H.K. Chou, Zhou Chen and Yihoung Li (all of New York University’s College of Dentistry), received the 2007 Ralph V. Mckinney Jr. Award for excellence in Basic and Clinical Research, as published in the ICOI journal, Implant Dentistry. Their article was entitled, “Antibacterial effect of zinc phosphate mineralized guided bone regeneration membranes.”

LeGeros has also just received a five-year, $5.25 million grant from the National Institutes of Health (NIH) to continue her study of innovative compounds that will be safe, affordable and effective for the prevention and reversal of bone loss caused by osteoporosis.

(Source: ICOI)
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Imaging Sciences International (ISI), a leader in cone beam 3-D dental imaging, is dedicated to providing dentists with the foremost 3-D products as well as offering education on this powerful and valuable technology that raises the level of patient care.

In response to this commitment, ISI developed the i-CAT Imaging Institute in Raleigh, N.C., one of the country’s most prestigious learning centers to meet the demand for knowledge in the rapidly growing area of 3-D imaging.

Since its opening in February 2008, the Institute’s focus has been education of ISI i-CAT® and Gendex GXCB-500™ owners. This unique center has now expanded its program to offer continuing education courses to dental professionals nationwide.

The i-CAT® Imaging Institute, located in Raleigh, N.C., offers year-round 3-D continuing education courses to dental professionals nationwide.

Since its opening in February 2008, the Institute’s focus has been education of ISI i-CAT® and Gendex GXCB-500™ owners. This unique center has now expanded its program to offer continuing education courses for both dentists interested in the technology, as well as those who have invested in it.

The Institute’s highly skilled educators include W. Bruce Howerton Jr., DDS, MS, board-certified oral and maxillofacial radiologist; Maria Mora, DDS, MS, board-certified oral and maxillofacial radiologist; and Laura Jansen Howerton, RDH, MS, director of the institute, as well as guest lecturers in dental and medical fields.

Their goal is to provide attendees with insightful information on the benefits and applications of 3-D imaging.

“With any new technology, the right training makes all the difference in the effective and efficient delivery of quality patient care,” Howerton said. “Here at the institute, we strive to give dental professionals the tools to help grow their 3-D aspirations into practicing reality. We urge dentists who are interested in or using 3-D to visit us to increase their knowledge and gain the most from this powerful tool.”

Seminar subjects range from fundamental information designed to aid dentists in the decision to move forward with 3-D imaging to more advanced courses that include radiation biology and physics, oral and maxillofacial anatomy and pathology, treatment planning, developing relationships between dental and medical professionals, and an introduction into 3-D imaging software programs.

ISI, along with Gendex, is passionate about the education of 3-D imaging. “Since we lead the industry in dental cone beam 3-D technology, as represented in our i-CAT and GXCB-500 systems, we are proud to also take the lead in 3-D education,” said Chuck Ravetto, vice president of global marketing for Danaher’s imaging companies. “As the need for this type of training increases and evolves, we are poised to further expand our programs at the i-CAT Imaging Institute.”

Dental professionals are welcome to visit www.i-CAT3D.com or contact Laura Howerton at (919) 571-1404 or laura.howerton@imagingsciences.com to gain more information about courses offered at the i-CAT Imaging Institute.

(Source: Imaging Sciences International)
These are exciting times to be working with dental implants. Advances continue to be made at places such as the Ashman Department of Periodontology and Implant Dentistry at New York University’s College of Dentistry.

At the same time, companies like Dentatus facilitate these advances with new products that are smaller, less expensive and more efficient. As a result, options are increased for practitioners, and results are improved for patients.

Among recent advances is the Anew implant system, a narrow-bodied, screw-attached restoration developed by Dentatus. This new implant is ideal for placement in slim, limiting spaces, and it can also be used for “first-visit” replacement of missing teeth.

Anew implant restorative protocol was developed by Bernard Weissman in conjunction with the Department of Implant Dentistry, NYU College of Dentistry. To help explain and demonstrate, Sang-Choon Cho, DDS, an assistant clinical professor and associate director of clinical research at NYU, recently offered a hands-on workshop for dentists. The title of the workshop, which was conducted at the NYU College of Dentistry Department of Continuing Education on Oct. 31, was “Advanced Narrow Diameter Implant Technologies for Replacement of Patients’ Missing Teeth in Narrow Bone and Limiting Spaces.”

During the lecture portion of the workshop, Cho explained how Anew implants can be used for patients with thin bone, limiting inter-root spaces or narrow teeth. Special characteristics of Anew implants make them ideal for physically compromised patients, or for those with systemic problems. They provide an immediate, economical interim and customized restoration. They can also be used for ridge augmentation procedures.

Cho also explained the osseointegration process of immediate loaded narrow-bodied implants and identified the non-invasive, cost-saving procedures and benefits to patients.

In the hands-on portion of the course, Cho took attendees, using hard plastic models, through the sequential steps involved in placing Anew implants. Each participant fabricated a single tooth and a three-unit posterior bridge. Participants were able to keep their models with constructed restorations for use in training assisting staff in their practices.

Dentatus regularly offers similar educational events throughout the country. For more information, visit www.dentatus.com or call (800) 523-5136.
Extraction technique with immediate placement of implants

By Dr. Andrei Mark

One day a 50-year-old patient and dentist friend of mine (who already has multiple dental implants) came to my office and presented with a non-restorable fractured tooth #8 (see Fig. 1).

As you can see from the photograph, this looked to be a complicated extraction. As always, my treatment plan consists of proper imaging. With dental implant cases, it usually involves the i-CAT (Pre-op i-CAT image).

The primary challenge was to remove tooth #8, while maintaining the soft tissue and bone intact.

As I have mentioned in previous articles, I will strategically plan out the entire case before beginning any procedures. The plan was to extract tooth #8 and place an immediate implant. Because there was no root to grab on to, and lifting a flap would compromise the buccal bone, I decided to utilize a new instrument on the market called the Tooth Extractor by Meisinger.

I feel one has to have state-of-the-art tools and technology at his or her disposal for just the right application. This case was an ideal case for the Extractor. This device works like magic for removing single roots without lifting a flap or cutting bone.

The specific technique involves drilling a hole in the pulp chamber and threading a post with an anchor. A pulley system rests on the adjacent teeth and is attached to the anchor with a cable mechanism.

By rotating a knob at the end of the cable, pressure is applied in the vertical axis of the root. As you gently increase the pressure to the cable, it allows the periodontal ligament to stretch. The root is extracted from the socket when sufficient pressure is applied, making a popping noise (Fig. 5).

When this works, it feels like magic. Left behind is an intact socket with the soft tissue and bone preserved and ready for immediate placement of a dental implant.

The implant osteotomy is performed slightly palatal to allow a minimal gap between the future implant and the buccal bone. The pilot drill with the MIS implant system is used to start the osteotomy. Then the next two larger drill sizes are used to enlarge the osteotomy site further.

The implant I chose was a tapered implant with aggressive threads that find its way by self-tapping into the osteotomy. (MIS 7 implant 3.75 x 11.5 mm)

After placing the implant and filling the small buccal gap between the implant and the bone with a bone graft, I placed a 5 mm healing screw to maintain the gingival anatomy.

As you can see (Fig. 4), the soft tissue anatomy is identical to the pre-op photo. The patient will wear her temporary bridge for the next three months, at which point a final prosthesis, including the implant in position #8, will be fabricated.

Having the right tool at the right time can make all the difference in the patient’s final treatment outcome. I strive to have the latest technology and techniques available at my fingertips. This way, I have greater predictability of the results of my treatment plan each and every time.

With more than 20 years of experience in oral surgery and more than 5,000 successful implant procedures to his credit, Dr. Andrei Mark is no newcomer to the field. Mark is a board-certified oral and maxillofacial surgeon in midtown Manhattan. Accepted from high school into the seven-year, combination undergraduate and graduate dentistry program at NYU, Mark completed college in three years and transferred to the prestigious SUNY at Stony Brook School of Dental Medicine where he completed a hospital-based four-year residency. He served as chief resident from 1987 to 1988. At a time when more and more general dentists are venturing into implant dentistry, Mark is regarded by many of his peers as an expert in the field. In addition to his private practice, Mark is the also president of the Central Park Oral Surgery Study Club, an organization dedicated to educating dentists on implant dentistry with lectures and hands-on workshops. His passion for research and development has helped him to enhance and perfect many of the latest developments in bone grafting, bone reconstruction and complex implant dentistry. Mark is one of only a few oral surgeons in New York City using bone morphogenetic protein-2 (eBMP-2) for sinus augmentations and alveolar ridge procedures.
Robert Graham, founder and owner of RG Capital, had a vision: to create an atmosphere where businesses and individuals would be able to prosper in the financial arena. To date, the company has distinguished itself as one that also specializes in working with dentists and dental specialists. As such, the company has worked with practice management firms for four and a half years and been an official Levin Group Alliance Partner for the last two and a half years.

Founded in May 2004 in Scottsdale, Ariz., RG Capital has a team of 10 advisors. These advisors, Graham included, provide wealth management services with the goal of focusing not only on the process of wealth accumulation, but also informing and educating clients about every step used to reach that goal.

This relatively young company now boasts a management portfolio of more than $450 million and numbers some 1,800 clients spread throughout 50 states. Graham attributes RG Capital's most recent success to its growing client base within the dental industry. Although it specializes in advising dental professionals, its clients range across a broad spectrum — from professional athletes, such as star defense Adrian Wilson of the Arizona Cardinals, to large corporations and middle income individuals and families.

RG Capital's clients benefit from working with a company that maintains the variety of resources one would generally expect from a very large institution. The first step in the company's personalized service entails identifying a client's visions and goals. Once the RG Capital advisor understands the client's visions and goals, the advisor will implement the best strategies, tactics and tools to help accomplish the best possible outcome.

Dental clients experience the RG Capital SmartPlan approach. The RG SmartPlan centers on tax avoidance strategies, practice tax savings, income tax savings, efficient investing, investment cost efficiency, accumulation strategies, estate planning and asset protection. This holistic approach has given rise to RG Capital's rapid growth within dentistry. RG Capital was ranked No. 3 within the Top Ten Fastest Growing Advisory Firms.

Player of the Year

Whether one has vast sums to work with or a more modest amount, the key to wealth management is to differentiate between what you want and what you need. Whether you own your practice or not, planning your wealth management strategy can be a daunting task.

RG Capital has the unique experience and insight you can rely on to help guide you down the path of wealth management that allows you to achieve your short-term and long-term goals.

Nobody cares for your money like you and RG Capital
New KOMET USA bur kits designed to work on zirconium abutments

The esthetic bar is constantly rising, and dentists are using zirconium abutments for their implant restorations. That's why KOMET USA has developed a new bur kit for dentists and laboratory technicians who work with this quality material.

Developed in conjunction with Dr. George Priest of Hilton Head, S.C., the ZAPD (Zirconium Abutment Preparation Diamond) Kit LD 0118 was designed to specifically prepare zirconium implant abutments. Because margins in some selected zirconium-cust om abutments do not have enough incisal or occlusal clearance, a techni
cian or dentist can now easily modify the abutments themselves with the burs provided in this easy-to-use kit. This is a far cry from sending the abutments back to the laboratory or accepting a compromised abutment.

The kit contains a series of five burs. There are two tapered burs (ZRP850.314.016 medium grit and ZRP8850.314.016 fine grit) for refining axial walls. Two other burs (ZRP6881.314.016 and ZRP6881.314.012) are wide and narrow coarse grit diamonds for establishing a chamfer margin that follows the soft-tissue scallop.

The ZRP6379.314.023 football-shaped diamond bur is used for palatal or lingual reduction for occlusal clearance. Please note that these burs should be used with water coolant, either on an implant lab holder or intraorally.

By using these burs the lab tech or dentist can feel the impact by refining these abutments themselves, thus mak ing the procedure more cost efficient. These burs are also useful for removing zirconium core crowns, such as Procera® (Procera is a registered trademark of Nobel Biocare).

KOMET operates in the United States under the name KOMET USA, and sells directly to practitioners and dental laboratories. For more information about KOMET USA or ZAPD Kit LD 0118, call (888) 566-3887 or visit www.komet-usa.com.

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Dolphin demonstrated the new Volume Stitching feature of its 5-D module at the annual meeting of the American Dental Association in San Antonio in October. Offering the ability to "stitch" together two separate volumetric datasets to construct a larger view, this new feature brings the full view of 5-D technology to a larger demographic of practitioners.

"Not all dental specialists have access to large field of view (FOV) cone beam CT devices," said Ken Gladstone, manager of imaging software products. "But, there are times these doctors want a larger view, for example both condyles or the entire arch."

The new Volume Stitching feature allows the practitioner to import two separate, smaller scans and "stitch" them together to create a single, larger FOV volume DICOM dataset. "Volume Stitching is the perfect tool for smaller field of view systems to generate larger and more useful volumes," he added.

Dolphin Imaging & Management Solutions provides high-quality imaging, diagnostic and case presentation software for dental specialty professionals worldwide. Dolphin products tightly integrate with digital X-ray units, CBCT systems, telephonic solutions and Web-enabled applications, and are compatible with the latest operating systems. Headquartered in Southern California, the company currently supports thousands of specialty practices worldwide, and has an active academic program whereby selected products are donated to selected educational programs. Presently, hundreds of dental schools and specialty departments are utilizing Dolphin Imaging & Management Solutions software on a daily basis. For more information, visit www.dolphinimaging.com.

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New KOMET USA bur kits designed to work on zirconium abutments

The esthetic bar is constantly rising, and dentists are using zirconium abutments for their implant restorations. That's why KOMET USA has developed a new bur kit for dentists and laboratory technicians who work with this quality material.

Developed in conjunction with Dr. George Priest of Hilton Head, S.C., the ZAPD (Zirconium Abutment Preparation Diamond) Kit LD 0118 was designed to specifically prepare zirconium implant abutments. Because margins in some selected zirconium-cust om abutments do not have enough incisal or occlusal clearance, a techni
cian or dentist can now easily modify the abutments themselves with the burs provided in this easy-to-use kit. This is a far cry from sending the abutments back to the laboratory or accepting a compromised abutment.

The kit contains a series of five burs. There are two tapered burs (ZRP850.314.016 medium grit and ZRP8850.314.016 fine grit) for refining axial walls. Two other burs (ZRP6881.314.016 and ZRP6881.314.012) are wide and narrow coarse grit diamonds for establishing a chamfer margin that follows the soft-tissue scallop.

The ZRP6379.314.023 football-shaped diamond bur is used for palatal or lingual reduction for occlusal clearance. Please note that these burs should be used with water coolant, either on an implant lab holder or intraorally.

By using these burs the lab tech or dentist can feel the impact by refining these abutments themselves, thus mak ing the procedure more cost efficient. These burs are also useful for removing zirconium core crowns, such as Procera® (Procera is a registered trademark of Nobel Biocare).

KOMET operates in the United States under the name KOMET USA, and sells directly to practitioners and dental laboratories. For more information about KOMET USA or ZAPD Kit LD 0118, call (888) 566-3887 or visit www.komet-usa.com.
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