SPECIAL ICOI EDITION

IMPLANT TRIBUNE

The World's Dental Implant Newspaper · U.S. Edition

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AAID in Boston
Organization's annual meeting aims to help you succeed

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AAP scrapbook
Didn't make it to Honolulu? Catch a glimpse anyway

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Lunch-break webinar
Learn about 'Brilliant Implant Aesthetics' on your lunch hour

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Columbia University, ICOI offer 'Innovations'

Organizations host first joint implant symposium

On Dec. 10 and 11, the International Congress of Oral Implantologists (ICOI) will co-host an implant symposium at Columbia University.

The two-day event was designed by Dr. Dennis Tarnow, director of implant education at Columbia University College of Dental Medicine.

This symposium, featuring a cadre of internationally known experts in implant dentistry, will provide you with a comprehensive overview of the most current research, materials and techniques in implant dentistry.

Topics covered will include new and innovative hard- and soft-tissue regenerative techniques, new pharmaceutical approaches aimed at improving bone-quality aspects of the bone-implant interface and updates on tissue engineering, implant surface design and geometry.

The most recent technologies in improved bone anchorage will be discussed, as well as clinical investigations measuring perio-implant osseous and

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Screw-retained, implant-supported fix partial denture (FPD)

By Michael Nawrocki, DMD, MD, MS, and Dov M. Almog, DMD

A screw-retained implant-supported fixed partial denture (FPD) has certain physical advantages. However, according to several studies they require precise positioning of the implant for optimal location of the screw access hole.[1] Also, obtaining passivity of frameworks that are screw-retained is difficult due to dimensional discrepancies inherent in the fabrication process.[2, 3, 4]

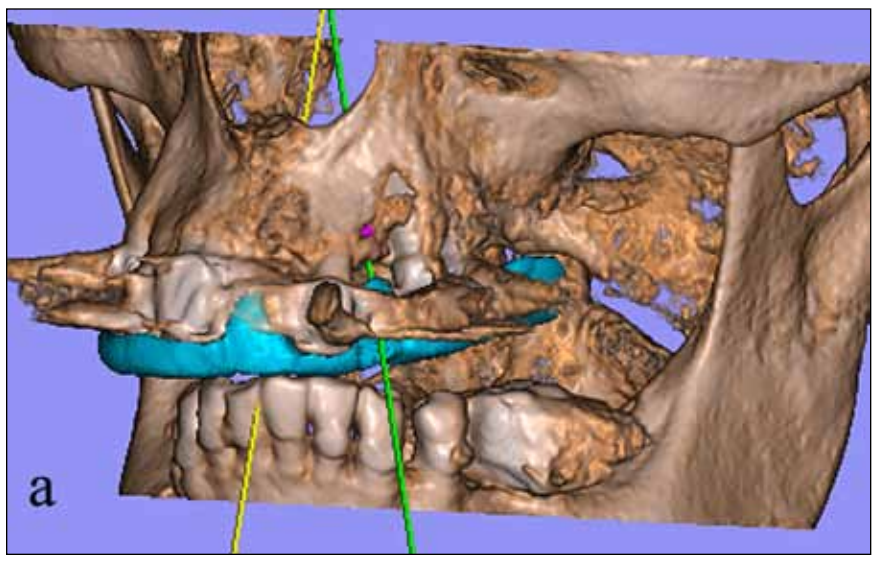
Anchorage of prosthetic fixed partial dentures to implants can be achieved in two ways: some clinicians cement the prosthetic construction to implant abutment, while others suggest that screw retention is preferable.

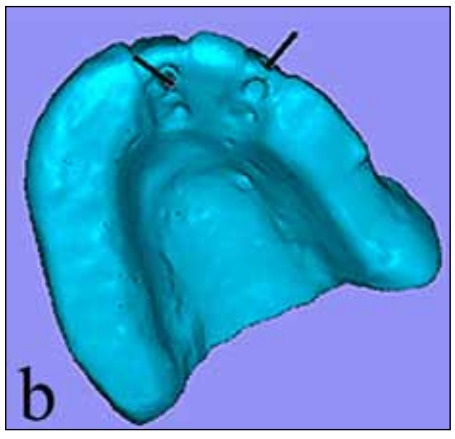
Screw-retained implant restorations have an advantage of predictable retention and retrievability, and the lack of potentially retained excessive sub-gingival cement.

On the other hand, a few disadvantages exist: obtaining passivity of screw-retained framework that is difficult due to dimensional discrepancies inherent in the fabrication process. Screw-retained units generally have screw access openings, which can compromise esthetics, weaken the porcelain around the openings and at cusp tips, and establish unstable occlusal contacts.

Cementation of implant restorations eliminates unaesthetic screw access holes. Cemented restorations also have the potential to compensate for any minor dimensional discrepancies in the fit of restorations to abutments, which can contribute to a lack of passivity.

It has the potential to reduce stress to splinted implants because the effects of minor misfit of the framework are not transferred directly to the implants, as is the case with prosthesis-retaining screws. In addition, the exposure of screw access holes in esthetic areas of the mouth can be avoided. On the other hand, any excess retained cement extruding from the prosthesis/abutment interface, especially when located subgingivally, can cause inflammation, infection and periodontal complications.





Figs. 1a, 1b: CBCT study was performed with the iCAT CBCT machine (Imaging Sciences International, Hatfield, Pa.). By utilizing ImplantMaster™ software (iDent Imaging, Inc., Foster City, Calif.), it was noted in the 3DVR (a) and virtual surgical template (b) that the residual bone trajectory and the planned prosthetic trajectory were in conflict, projecting compromised restorative trajectory lingually in implant site #9 and buccally in implant site #11.

As more and more dental practitioners are focusing on implant-supported fixed partial dentures, restoring dentists need to understand the restorative options they may have. Many dental practitioners and dental labs will persistently use a screw-retained implant-supported fixed partial denture, and thereby promote choices that offer the utmost in serviceability, cosmetic result and maintenance of optimized bite possible.[5]

At the same time, in recent years, the utilization of adjunctive state-of-the-art cone-beam CT and technologies and 3-D derived virtual planning software solutions altered the manner in which we pulled together diagnostic data, planned and executed both simple and complex implant cases.

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Ethics and Legal Aspects conference planned for February

The third Annual Ethics and Legal Aspects of Dentistry Conference sponsored by the American College of Legal Medicine will be held Feb. 25 and 26, at the Planet Hollywood Resort in Las Vegas.

Seminars will include legal issues in dentistry and understanding the government's role and the role of dental education, describe ethical, moral and diagnostic issues as they relate to the dental practice, evaluate risk management considerations, identify issues relating to patient care, learn more about mid-level care, issues about access to care and dental health care coverage, electronic record keeping and more.

For further information and registration, visit the ACLM website at *www.aclm.org*.

Tell us what you think!

Do you have general comments or criticism you would like to share? Is there a particular topic you would like to see more articles about? Let us know by e-mailing us at ***feedback@dental-tribune.com***. If you would like to make any change to your subscription (name, address or to opt out) please send us an e-mail at ***database@dental-tribune.com*** and be sure to include which publication you are referring to. Also, please note that subscription changes can take up to 6 weeks to process.

IT Corrections

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Publisher & Chairman
Torsten Oemus
t.oemus@dental-tribune.com

Vice President Global Sales
Peter Witteczek
p.witteczek@dental-tribune.com

Chief Operating Officer
Eric Seid
e.seid@dental-tribune.com

Group Editor & Designer
Robin Goodman
r.goodman@dental-tribune.com

Editor in Chief
Sascha A. Jovanovic, DDS, MS
sascha@jovanoviconline.com

Managing Editor/Designer
Implant & Endo Tribunes
Sierra Rendon
s.rendon@dental-tribune.com

Managing Editor/Designer
Ortho Tribune & Show Dailies
Kristine Colker
k.colker@dental-tribune.com

Online Editor
Fred Michmershuizen
f.michmershuizen@dental-tribune.com

Account Manager
Humberto Estrada
h.estrada@dental-tribune.com

Marketing Manager
Anna Wlodarczyk
a.wlodarczyk@dental-tribune.com

Marketing & Sales Assistant
Lorrie Young
l.young@dental-tribune.com

C.E. Manager
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j.wehkamp@dental-tribune.com

Dental Tribune America, LLC
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As a result, more and more implant trajectories are consistent with the planned prosthetic trajectories. Yet, some cases are still driven by the residual bone trajectories and are left to the restoring dentists' decision as far as the final restorative option.

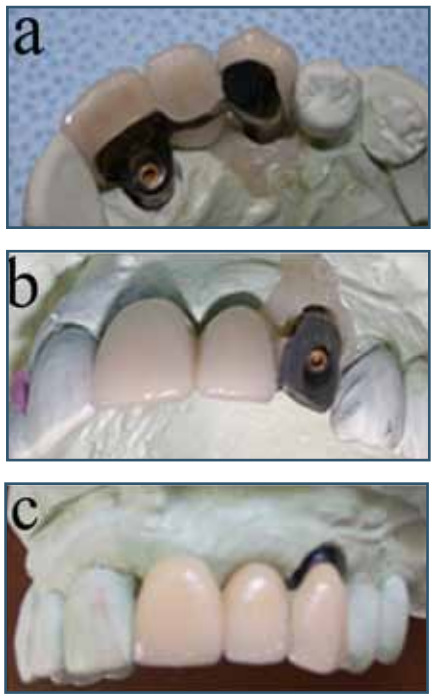
In other words, when the implant trajectories are inconsistent with the planned prosthetic trajectories, the screw-retained implant-supported fixed partial denture systems offer an opportunity to minimize any controversy between the surgeons, restorative dentists and the labs, creating greater understanding, appreciation and professional camaraderie.

Case report

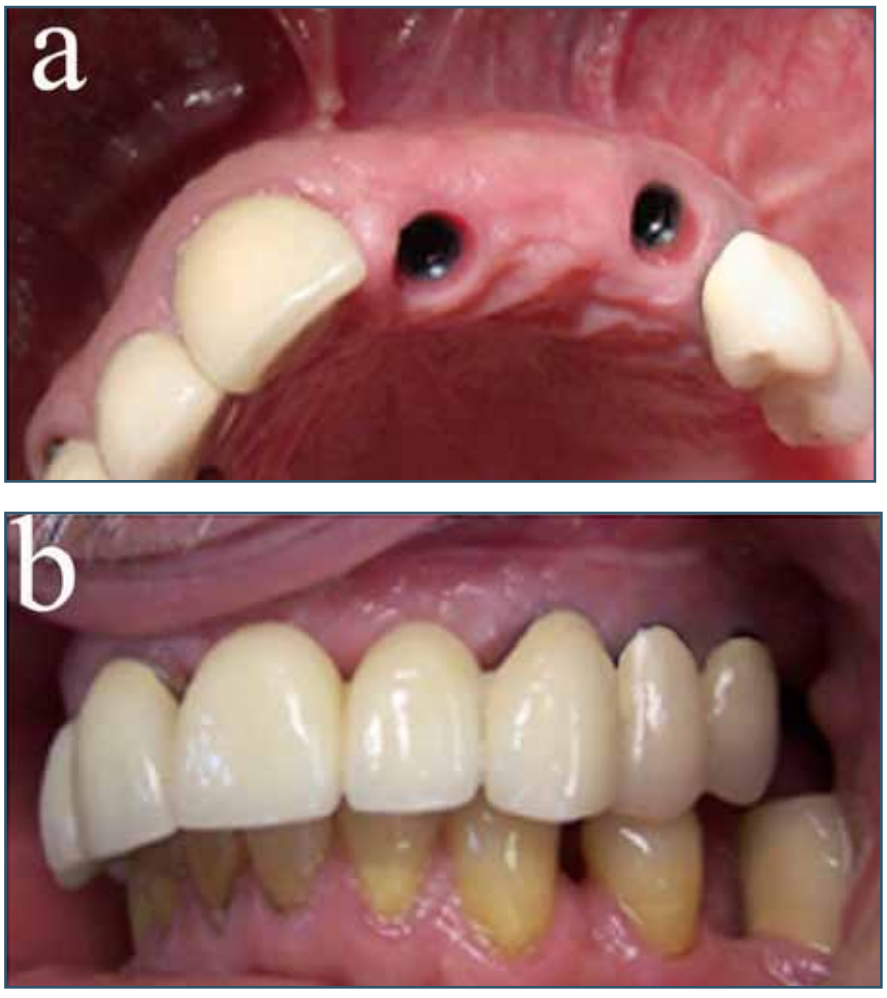
Patient presented for implant-supported FPD after having teeth #8, 9 and 10 extracted with socket preservation.

A CBCT study was performed with the iCAT CBCT machine (Imaging Sciences International, Hatfield, Pa.) and revealed reasonable alveolar dimensions, both vertical and horizontal.

However, by utilizing ImplantMaster™ software (iDent Imaging, Inc., Foster City, Calif.), it was discovered that the residual bone trajectory and the planned prosthetic trajectory were in conflict, that is, projecting a compromised restorative trajectory lingually in implant site #9 and buccally in implant site #11 (Fig. 1).



Figs. 2a–2c: The screw-retained restoration was made by CQC a DTI Dental lab in Rochester, N.Y. Different views of final screw-retained restoration emphasize the extreme lingual trajectory of implant #9 (2a) and extreme buccal trajectory of implant #11 (2b). Note telescopic design crown on #11 (2b and 2c).



Figs. 3a, 3b: Intraoral views of the screw-retained restoration. Note the implants' prosthetic platforms (3a) emphasizing the actual trajectories of implants #9 and #11 in the patient's maxillary ridge. Note telescopic design crown on #11 (3b).

Nevertheless, following a treatment planning conference, rather than considering bone grafting, a decision was made to proceed with these angulations and a 3-D reconstruction of the patient's anatomy was attained and a virtual surgical guidance template was designed and computer-manufactured with precise drilling holes' distribution and trajectory for implants #9 & 11.

The palatal trajectory of the implant in tooth position #9, the patient's deep bite which resulted in severely limited space for prosthetic components, dictated a screw-retained prosthetic FPD construction solution for the case.

The extremely buccal angulation of the implant replacing tooth #11 resulted in a buccaly located screw access opening, which compromised esthetics and potentially weakened the porcelain around the screw opening in the proposed screw-retained three-unit FPD.

The esthetic dilemma could be solved by either gold plating of the metal portion of the screw chamber, which can reduce the need for opaque composite material, or by metal cut back to hide the non-esthetic metal. We chose to overcome this esthetic and structural obstacle by using a separate telescopic crown design to cover the metal substructure of the screw-retained in #11 location.

Conclusion

As more and more dental practitioners are focusing on implant-supported fixed restorations, restoring dentists need to understand the restorative options they may have to deal with.

Dental practitioners and dental labs need to be prepared to use a screw-retained implant-supported fixed partial denture, and thereby promote choices that offer the utmost in serviceability, cosmetic result and maintenance of optimized bite. IT

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About the authors

• Michael Nawrocki, DMD, MD, MS, prosthodontist, VA New Jersey Health Care System.

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The California Implant Institute was developed in 2001 by Dr. Louie Al-Faraje to provide quality continuing education on the subject of dental implants and related topics using a hands-on approach.

As director, Al-Faraje has trained more than 1,000 clinicians in a hands-on, yearly forum of education in implant dentistry. Al-Faraje holds diplomate status at the American Board of Oral Implantology, fellowship status at the American Academy of Implant Dentistry and fellowship status at the International Congress of Oral Implantologists.

The California Implant Institute offers a one-year comprehensive fellowship program in implant dentistry. This program is made of four sessions designed to provide dentists with practical information that is immediately useful to them, their staff and their patients. The four sessions combined offer more than 160 hours of lectures, laboratory sessions and live surgical demonstrations.

The goal of the faculty team, which is composed of some of the most respected instructors from the United States and around the world, is to provide you with comprehensive knowledge that will enrich your practice and improve your clinical skills so you can confidently perform predictable, prosthetically driven implant dentistry.

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Session two topics

During session two, computer-guided implant placement and restoration using SimPlan® software, immediate-load techniques for single and full-arch cases, biology of osseointegration, mini implants, bone grafting before, during and after implant placement and pharmacology will be discussed. Implant prosthodontics for fully edentulous patients, high-water design, bar-overdenture, CAD/CAM designs, etc., will highlight the prosthetic portion of this session.

Session three topics

Advanced implant surgical techniques such as alveolar ridge expansion with split cortical technique, guided bone regeneration, sinus lift through the osteotomy site and more are covered in this session. Hands-on pig jaw workshops using regenerative materials are performed by the class, and there are live surgery demonstrations by faculty.

Session four topics

This session will focus on sinus lift through the lateral window, ramus block graft and chin block graft as well as the J-Block grafting procedures. There will also be a focus on PRP and other advanced bone grafting materials, such as rh-BMP2/ACS grafts with titanium mesh. The final graduation examination and certification ceremony will conclude this comprehensive implant training program.

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Botox can optimize the cosmetic appeal of dental implant surgery, says AAID speaker

A significant majority of dental implant patients are older with facial aging and their dentists may need to consider the benefits of rejuvenation techniques, such as Botox, for maximizing the cosmetic outcomes of the procedure, according to a leading cosmetic surgeon speaking at the American Academy of Implant Dentistry annual meeting in October.

Joseph Niamtu III, DMD, is an oral and maxillofacial surgeon who transformed the main focus of his Virgina-based practice to cosmetic facial surgery.

He told the AAID audience that for many dental implant patients, restoring facial volume is as critical as the dental restoration for achieving optimal cosmetic outcomes.

"The face is the frame for cosmetic dentistry, and dentists should consider the benefits of facial volume restoration when performing implant surgery on older patients with facial aging," Niamtu said. "The standard today requires consideration of facial structures and volume restoration to maximize patient satisfaction with cosmetic and restorative dental procedures."

Naimtu said all states allow dentists to give Botox injections for purely dental reasons, such as relieving temporomanidibular (TMJ) pain but not for cosmetic purposes. He added that approximately 8 percent of dentists in North America now provide Botox cosmetic treatment for patients, and the number is growing as state dental boards lobby to allow dentists to use the agent for cosmetic dentistry.

Most dentists, however, still are not aware of the considerable benefits Botox offers for cosmetic dental treatment, according to Niamtu.

"How often do we see perfectly restored teeth framed by thin or wrinkled lips?" he asked. "Soft tissues around the mouth are just as important as nicely restored white teeth in creating an attractive smile."

Also, for older dental implant patients with facial aging, the corners of the mouth begin to turn down and wrinkles appear around the lips.

Niamtu advised that Botox can be used by dentists to relax affected muscles to raise mouth corners and smooth wrinkles to assure successful and satisfying outcomes.

Niamtu said Botox therapy is a natural and logical expansion for dental practices.

"Dentists have as much training and knowledge in the oral and maxillofacial area as dermatologists and other providers, so they, with proper training, can be as proficient in administering Botox, Restylane and other filling agents. This clearly is the new future for the achieving optimal esthetic outcomes in the delivery of cosmetic and restorative dental care."

About AAID

Based in Chicago, AAID is the first organization dedicated to maintaining the highest standards of implant dentistry by supporting research and education to advance comprehensive implant knowledge. IT

Dr. Joseph Niamtu III speaks at the AAID's annual meeting in Boston.(Photo/ Sierra Rendon, Managing Editor)