AO puts ‘Focus on South Korea’ at its annual meeting

Symposium will feature AO members from across the globe

By Academy of Osseointegration Staff

South Korea has the world’s highest per capita use of dental implants, and the Asia Pacific area is projected to witness the implant industry’s fastest growth during the next five years. Last year, the Ministry of Health and Welfare announced dental implants for patients ages 75 and older would be covered by South Korea’s national health insurance. “South Korea is not only a highly developed implant market but also a leader in clinical research in the dental implant industry,” says Dr. David M. Kim, explaining why the Academy of Osseointegration (AO) has dedicated a symposium to South Korea at its 30th annual meeting, to be held in San Francisco in March. “It’s both important and refreshing to see and hear how dentistry is practiced in different countries.”

With 6,000 members from 70 countries, AO is truly an organization with global influence and reach. With that in mind, AO began a new tradition last year by hosting a symposium dedicated to a single country: AO members Drs. David M. Kim and Brian M. Chang will moderate this year’s Focus on South Korea Symposium.

“This symposium is an excellent opportunity for AO members from across the globe to hear and learn from top-notch speakers — all of whom have a university affiliation, conduct research and see patients on a daily basis,” Kim said. “These presentations will address clinically relevant information that can be applied in the clinic the following Monday.”

All three organizations specializing in implant dentistry in South Korea — the Korean Academy of Oral & Maxillofacial Implantology (KAO), the Korean Academy of Implant Dentistry (KAID), and the Korean Academy of Osseointegration (KAOMI) — have provided speakers for this symposium.

A group of renowned experts from South Korea will address this symposium, in English, and a wide range of clinically relevant topics.

“This symposium will not just be one-way. We’re going to encourage a lively discussion and interaction both during and after the programming,” Kim said.

The Focus on South Korea Symposium will be held from 1:30 to 5 p.m. on Friday, March 13, at the Moscone Convention Center in San Francisco during the AO Annual Meeting.

For more information and to register, visit www.osseo.org/events/ meetings/2015/index.html. To stay up-to-date on the academy’s news, follow the AO on Facebook and Twitter.

Kim is an associate professor at the Harvard School of Dental Medicine, as well as the school’s director of the post-graduate program in periodontology and continuing education.

Study measures micromotion at implant-abutment interface

This study was published in the November/December issue of The International Journal of Oral and Maxillofacial Implants (IOMI), the official journal of the Academy of Osseointegration (AO).

Background

Micromotion at the implant-abutment interface has been identified as a major determinant of long-term implant success. Technical problems ranging from screw loosening to screw fracture may occur as a consequence of excessive micromotion. Different concepts for the design of the implant-abutment connection have been proposed in the past. These affect micromotion at the restorative interface as well as the stability of the abutments used.

While initial micromotion depends predominantly on the fabrication accuracy achieved, long-term micromotion appears to be related primarily to wear phenomena at the implant-abutment interface. Despite the clinical importance of micromotion phenomena at the implant-abutment interface, no universally valid method for quantifying this phenomenon has been described.

Key point

It cannot be predicted that a certain type of abutment will always lead to a certain level of micromotion. Relative displacement of components occurs at varying magnitudes. However, strict adherence to manufacturers’ guidelines with respect to tightening torque may help reduce implant-abutment micromotion. Because micromovement occurs during the initial phase of loading, it may be prudent to routinely tighten the abutment screws, which might have lost preload.

Authors

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I attended the AO 2014 Annual Meeting as a second year graduate prosthodontic resident, and it was an enriching experience. The comprehensive accumulation of lectures by specialists in the field of prosthodontics, oral surgery and periodontology elevated my clinical and academic benchmark.

I had the opportunity to present a table clinic, which gave me a chance to interact with other residents and colleagues who were engaged in the same training as myself. It was a great educational experience, and an environment in which to share new thoughts and ideas about what’s up and coming in our respective fields. The AO meeting also had the perfect circumstances for me to connect with eminent members of our field, like Dr. Steve Eckert and Dr. Dennis Tarnow, and to talk about future professional goals and tips on how to achieve them.

As a graduate resident, my aim was to collect maximum information for my master’s thesis, and the various lectures on CBCT scanning and virtual treatment planning of implants were of immense value. The most comprehensive and up-to-date data provided on these subjects greatly helped my research. My keen interest in being immediately loaded and virtual planning of implants, I found it beneficial to interpret the long-term follow up of experienced professionals in this discipline.

Vrinda Mohunta, BDS graduate resident advanced prosthodontic program Ohio State University, College of Dentistry

I attended the AO 2014 Annual Meeting as an advanced surgical implant trainee at UCLA. It was my third time attending, and I consider it to have been the most profitable in all aspects regarding education, experience and networking.

I used the meeting to make new contacts with other residents and colleagues from other programs, as well as have fun and relax at the social events with my friends. I also did an oral presentation at the meeting, and my advice to students and residents is to attend these presentations and visit the posters. Do not be shy of asking questions and discussing them with others.

AO has such an amazing environment, which makes it easy to introduce oneself and have good conversation with the most important leaders in the field. It’s a wonderful opportunity to be at the forefront of implant science around the globe. I will be attending AO’s 2015 Annual Meeting, so I can continue to learn and see my friends again!

Rodrigo G. Beltrao, DDS, PhD oral maxillofacial surgery and implant dentistry Prof. Implant Dentistry Soboichi/Ibne UCLA Advanced Surgical Implant

I attended the AO 2014 Annual Meeting as a graduate prosthodontics resident at University of Michigan. The meeting provided a great opportunity to combine learning with socializing. It was an opportunity to exchange ideas and lay the groundwork for future collaborations, as well as meet up with old friends and make new ones.

The uniqueness of this meeting is that it gives you multidisciplinary training, while also giving you an opportunity to participate in social events that allow you to have fruitful dialogue about the progress being made in our field.

The opportunity to meet leaders in this field is nothing less than inspiring for the new dental generation. Plus, the destination gives you a chance to experience cultural and culinary flavors while mingling with future colleagues from around the world. I am looking forward to this year’s meeting.

Anastasia Katsavochristou, DDS graduate prosthodontics University of Michigan

Why dental students should attend the AO Annual Meeting

By Academy of Osseointegration Staff

We asked young clinicians why they’re looking forward to the Academy of Osseointegration Annual Meeting and how the event has benefited them in the past. In their own words:

Purpose
Scientists aimed to establish a biomechanical approach to directly measure relative motion at the implant-abutment interface and to quantify micro-movement in a variety of implant-abutment combinations. Geometry of the implant-abutment interface, fabrication method of the abutment, engagement of antagonistic features, abutment material, tightening torque and type of manufacturer (original, clone) were investigated.

Materials and methods
Implant-abutment assemblies were fixed in a universal testing machine at a 30-degree angle. A cyclic load of 200 N (Newtons) was applied to the testpiece 10 times at a cross head speed of 100 N/s while relative displacement between the implant and the abutment was quantified using extensometers. For five consecutive loading cycles per specimen, micromotion was recorded as a basis for statistical analysis. Comparative analysis was based on Welch tests.

Results
Investigated implant-abutment combinations produced a broad range of micromotion values. Researchers did not find perfect implant shoulder geometry or perfect fabrication technique that would result in undetectable micromotion. The values for micromotion at the implant-abutment interface ranged from 1.52 to 54.00 μm (micrometers). Researchers found tightening torque significantly affected the level of micromotion when one specific abutment type was investigated.

Implant shoulder design did not reveal a significant effect in all cases. Lack of engagement of antagonistic features of the implants resulted in increased micromotion, regardless of the implant system investigated.

Casting onto prefabricated gold cylinder resulted in abutments with significantly less micromotion as compared to copy-milled stock abutments. Computer-aided design/computer-assisted manufacture (CAD/CAM) zirconia abutments showed less micromotion than CAD/CAM titanium abutments. Insufficient levels of micromotion were reported for the stock CAD/CAM abutments coupled to proprietary and competing implant systems.

In most cases, the CAD/CAM abutments performed as well as stock abutments. Great variations in micromotion were found with clone abutments and clone implant systems.

More information
For a complete copy of the study and the JOMI November/December table of contents, visit www.osseo.org/ NEWJOMI.html. To join AO and begin receiving JOMI (bi-monthly) or obtain online access to JOMI, visit www.osseo.org/ NEWMembershipApply.html.