5TH
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UNIVERSITÄT BERN

پنجمین سمپوزیوم استئولوژی ایران
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۲-۱ خرداد ۱۳۹۳
5
Iranian Osteology Symposium

5th Iranian Osteology Symposium

22,23 May- 2014

Iranian Academy Of Peirodontology & Bern University

www.OSTEOLOGY.ir

About Symposium

Iranian Osteology (G.B.R) Symposium Founders

Dr. Ali Reza Fathiyeh
Prof. Gholam Ali Gholami
Dr. Nahi Jabbour
Prof. Anton Sculean
Prof. Seyed Mojtaba Seyyedeyn
Prof. Mahmoud Tamizi

Symposium President: Prof.Gholam Ali Gholami

Organizer

Postdoctoral Section, Dept. of Periodontics, Dental School,

Shahid Beheshti Medical University

Iranian Academy of Periodontology

Scientific Committee:
Head of Committee: Prof. S.A.MirEmadi
Members:

Dr. Mohammad Bayat
Prof.Hosein Behnia
Dr. Masoud Ejlali
Dr. Nahi Jabbour
Dr. Abbas Karimi
Prof. Abbas Khodayari
Dr. afshin Khorsand
Prof. Behzad Houshmand
Prof. Ardeshir Lafzi
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Prof. Reza PourAbbas
Prof. Mohammad.E Rahmani
Prof. Amir Reza Rokn
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Dr. Mahsa Rezai
Dr. Mostafa Solati
Dr. Rojin Taliee

The welcome message from the founder of «Iranian Osteology Symposium»

In the Name of God, the Compassionate, the Merciful

Dear Colleagues, Honorabale Guest Lectureres:

In the past 25 years many wonderful works have been performed by our colleagues in the field of «Guided Bone Regeneration» (GBR) around the world. These efforts have provided our scientific community with so much advancement concerning techniques and treatment protocols. Not the forget the fact that, many of our Iranian colleagues had a considerable contribution for such innovations in this regard.

Nowadays in the light of tissue engineering concept, new devices, different biomaterials, and membranes have assisted our professionals to be able to reconstruct even the most atrophic jaws for rehabilitation. Furthermore, the digital technology flourished the «more innovative» treatment plans with «less invasive» surgical procedures and the «most predictable» results.

This symposium is to enlighten the participants with the significant role of «digital technology» for the quality of treatment based upon biologic and histological findings by the world-class lecturers.

G.Ali.Gholami, DDS, MSD
The Founder of the Iranian Osteology Symposium
Professor of Periodontics, SBMU

1st day, Thursday, 22nd May 2014

Time	Lecturer	Title
8:30-9:30		Registration & Opening Ceremony
Moderators		Dr.J.Dadmanesh Dr. M.Ejlali Dr.A.Mesgarzadeh Prof.S.M.Seyyedeyn
9:30-10:30	Prof. R. Mericske Stern	Digital Diagnostics: Maximize Safety and Quality
10:30-10:45	Break	
10:45-11:45	Prof. R. Mericske Stern	CAD CAM Techniques: Maximize Function and Esthetics
11:45-12:45	Dr. Nahi Jabbour	The Use of Bone substitutes in Oral Implantology
12:45-13:00	Q&A	
13:00-14:00	Lunch & Prayer	
Moderators		Dr.A.H.Ahangari Dr.V.Moshirabadi Prof.R.Pourabbas Dr.M.R.Talebi
14:00-15:00	Prof. R. Mericske Stern	Implant / Abutment / Suprastructure Connection
15:00-16:00	Dr. Nahi Jabbour	Factors Affecting Osseointegration

23rd May ,2nd day, Friday
2014

Time	Lecturer	Title
Moderators		Prof.B.Houshmand Dr.M.Lotfazar Prof.S.H.Mortazavi Prof.M.Tamizi
9:00-10:00	Prof D. Bosshardt	Biology and Histological Nature of Regenerated Bone
10:00-10:30	Prof. R. Gruber	Osteocytes: No Longer Second-class Citizens in Bone
10:30-10:45	Break	
10:45-11:45	Prof D. Bosshardt	Comparison of Different Bone Substitutes: Histological Findings
11:45-12:45	Dr. Nahi Jabbour	Case Presentation & Discussion
12:45-13:00	Q&A	The Use of Bone substitutes in Oral Implantology
13:00-14:00	Lunch & Prayer	
Moderators		Prof. H.Moghaddas Prof. A.R.Rokn Prof. Y.Shayesteh Dr. S.Yaghobee
14:00-15:00	Prof D. Bosshardt	Osseointegration and Re-osseointegration: Requirements and Evidences
15:00-16:00	Prof. R. Gruber	Learn From My Mistakes
16:00-17:00	Certification	

IOS is presented in honor of Prof. Mohammad Ebrahim Rahmani

Dr. Mohammad Ebrahim Rahmani, born in 1947, is a graduate in dentistry from Mashhad University in 1972, and board-certified periodontist from Shahid Beheshti University in 1982. He passed American National Board Dental Examination in 1984.

He completed educational and research courses in the field of periodontology and implantology at UCLA-USA.in 1984; NYU-USA. in 1991, university of Toronto in 2001 and UCLA in 2011.

He has published several papers in national and international accredited journals. Moreover, he has authored two books entitled «Oral and Dental Hygiene» and «Principles of Flap Technique in Periodontal Surgery»

He was selected as a distinguished researcher of the School of Dentistry in 2005, and also as the exemplary dentist in 2007.

He is member of Medical Council of the I.R. of Iran, member of Iranian Dental Association, Iranian Academy of Periodontology and American Academy of Periodontology.

He started teaching at dental school of Mashhad University in 1979.

His latest position was director of Periodontology specialty program, and was retired as a professor of periodontics in 2008.

Prof. R. Mericske Stern

Chair of the Department of Prosthodontics, University of Bern, Switzerland.

Today she runs a Master Program in Prosthodontics and Implant dentistry. She was a regular guest professor at the Dental School of Toronto and has lectured worldwide in over 25 countries.

She is a member of various national and international societies: honorary member of the Japanese Association of Implantology, past-president of the international College of Prosthodontists and European Prosthodontic association (ICP and EPA).

Currently, she is the president of the Swiss Society of Reconstructive Dentistry (SSRD).

Speakers

Prof. D. Bosshardt

Head of the Robert K. Schenk Laboratory of Oral Histology at the School of Dental Medicine, University of Bern, Switzerland.

His main scientific interests are located in the fields of tooth development, in particular cementogenesis, periodontal tissue regeneration, bone regeneration, and healing events associated with dental implants and other biomaterials. He is author and co-author of more than 90 original articles, review articles, case reports, and book chapters. He is a member of the International Association for Dental Research (IADR), the International Team for Implantology (ITI) and the Osteology Research Academy (ORA).

Prof. Reinhard Gruber

Head of the Laboratory of Oral Cell Biology at the School of Dental Medicine, University of Bern, Switzerland.

He received his PhD from the University of Natural Resources and Applied Life Sciences, Vienna, Austria in 1998. After a post-doctoral appointment at the Department of Rheumatology in 1999, he joined the Department of Oral Surgery at the Medical University Vienna, attaining the rank of an Associate Professor in 2004. He was a visiting scientist at Bone Tissue Engineering Center (Prof. Hollinger) at Carnegie Mellon University in Pittsburgh in 2004 and 2005. In 2008 he joined the Dental School (Prof. Giannobile) at the University of Michigan. He published 102 original articles (April 2014; h-index 21) and contributed to 11 book chapters. He is Editor-in-Chief of the "International Journal of Stomatology and Occlusion Medicine" and in two editorial boards of implantology journals. Recently, he became a trustee of the Osteology Foundation and was elected into the board of the German Society of Osteology.

Speakers

Dr. Nahi Jabbour

Chairman of the Swiss International Academy for Osseo-Integration and Maxillofacial research / Switzerland
Graduated from Damascus University / Syria in 1981 as Doctor of Dental Surgery, specialized in Oral surgery -1982 1984
Fist Training in Implant surgery at New York University 1986
Special Training on Straumann Implant at Berne University, 1993 Dept. of Oral Surgery (Chairman Prof. Berthold)
Education Manager at Straumann Institute for Dental Implant Training and education from 2002 – 1997
Till present time Head of Clinical and Animal Research and Business Developments
and Education Manager for Star Science International GmbH in Bern / Switzerland
Dr. Jabbour Has a lot of experience in Implant surgery, Guided Tissue Regeneration, and sinus lift research, he has given over 300 lectures and courses in Implantology in National and International levels.

Digital diagnostics: maximize safety and quality

Conventional two-dimensional imaging such as single radiographs and orthopantomograms have been used many years in implant dentistry. However, along with the availability of CBCT imaging and more sophisticated software, these techniques became the standard in implant planning, particularly for complex situations. Computer assisted diagnosis and planning makes problems and risks better visible, improves treatment outcomes and serves as information for the patients. Nevertheless, conventional prosthetic planning steps are non abandoned. Analog and digital techniques should be combined.

CAD CAM Techniques: maximize function and esthetics

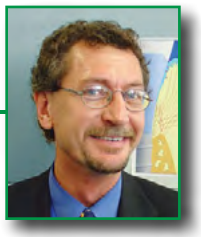
Passive fit of frameworks on implants is a primary goal in implant-prosthodontics, but difficult to achieve by means of conventional laboratory procedures. Although CAD CAM techniques have been proposed in dentistry long ago, a fast, significant development and their introduction in daily clinics took place only in the last seven years.

The CAD CAM technology enables to process modern materials like Titanium, but particularly Zirconia, monolithic Zirconia and increasingly various PMMA, hybrid resin and composites for provisional or final small restorations. Frameworks of large extension and of one piece- cross arch design for the edentulous jaw are fabricated with high precision from Titanium and Zirconia. A close cooperation between dentist and dental laboratory is mandatory.

Prof. R. Mericske Stern

Implant / abutment / suprastructure connection

The connection between implants, abutments or the entire suprastructure is a biological and technical question. Passive fit, gap location, bacterial leakage, platform switching, cement escape and aspects of maintenance are disputed. While cementation of prostheses on prefabricated or individually cast abutments appears to be simple, the retrievability of large frameworks by means of screw retention is suggested. Depending on the geometry of the implant (shoulder) a variety of solutions are identified. Moreover, the connection of CAD CAM fabricated zirconia-based reconstructions to the implants appears to be a crucial aspect when discussing technical complications. Current techniques and trends are discussed.



Biology and histological nature of regenerated bone

Bone reveals a unique potential for regeneration, which is probably best illustrated by fracture repair. Bone is able to heal fractures or local defects with regenerated tissue, or “regenerate”, of equally high structural organization, without leaving a scar. The mechanism of this healing pattern is often considered to be a recapitulation of embryonic osteogenesis and growth. Because bone has a unique spontaneous healing capacity, the trick in reconstructive surgery is to harness this great regenerative potential to enhance bone formation for clinical applications. Thus, adequate bone augmentation or treatment of any bone defect requires a profound understanding of bone development and morphogenesis at the cellular and molecular levels.

Comparison of different bone substitutes: histological findings

Bone fillers are often used in combination with a barrier membrane for guided bone regeneration (GBR) procedures. To reduce the drawbacks of autografts (e.g., donor site morbidity, unpredictable resorption, limited quantities) new biomaterials are being developed, tested and used for bone regeneration. Progress in the field of synthetic bone substitutes has made great strides, and more and more such biomaterials, mainly calcium phosphate ceramics, are used instead of or in combination with autogenous bone in reconstructive bone surgery. In very demanding clinical defect morphologies, however, the rate of hard tissue degradation has to be taken into consideration. In these cases, a substitute material with a very low degradation rate is preferred in order to maintain the volume of the augmented bone. It seems, however, that the search for the ideal bone substitute material is still going on. Comparisons between biomaterials require standardized defect models that are clinically relevant.

In this regard, the non-critical size defect model with self-contained defect morphology in the mandible of miniature pig has proven advantageous for the testing of the effects of biomaterials on bone formation and for evaluating the degradation rate of bone substitute materials, since it has provided very consistent results. Despite new and exciting developments, the autogenous bone graft can still not be replaced, because of its osteoinductive, osteoconductive, and potentially osteogenic properties. However, combining autografts with slowly degrading bone substitute materials is considered beneficial for ridge augmentation in implant dentistry.

Osseointegration and re-osseointegration: requirements and evidences

An osseointegrated implant is characterized by direct apposition of living bone to the titanium surface. Despite advancements in the speed of osseointegration mainly due to implant surface modifications, peri-implantitis may occur.

Prof D. Bosshardt

Peri-implantitis is an infectious condition of the tissues surrounding osseointegrated implants with loss of supporting bone and clinical signs of inflammation and has a prevalence of about %10 of implants and %20 of patients 5 to 10 years after implant placement. Currently, there is no standard of care for treating peri-implantitis. Various clinical protocols for treating peri-implantitis have been proposed, including mechanical debridement, the use of antiseptics and local and systemic antibiotics, as well as surgical and regenerative procedures. Re-osseointegration of contaminated implant surfaces is possible and largely depends on 1) the surface of the implant; 2) type of decontamination technique; and 3) regenerative biomaterials used.

Prof D. Bosshardt

The Use of Bone Substitute in Oral Implantology

15 years ago, localized bone defects have been a main Contraindications for Implant patients such as:

- Insufficient crest width or bone height
- Local bone defects within the alveolar crest
- Combinations of above
- Sinus grafting

Significant progress has been made with bone augmentation procedures in recent years. And Bone Augmentation also Sinus Grafting, became a routine application in daily dental practice. In this Lecture I will summarize, based on scientific evidence the principle of guided bone regeneration, and 15 year experience in Bone grafting and Sinus elevation procedures.

Prof. Reinhard Gruber

Osteocytes: no longer second-class citizens in bone

Osteocytes have recently been considered “amazing” based on the key discoveries that they control the delicate balance between bone formation by osteoblast and bone resorption by osteoclasts. For example, osteocytes express RANKL and sclerostin being central regulators of osteoclastogenesis and osteoblastogenesis, respectively. These key findings have lead to a revival of the osteocytes in bone research. The clinical implications of these findings are tremendous as they provide new paths to understand the mechanisms of local and systemic bone loss. Aim of this presentation will be to summarize the fundamentals of bone remodeling and how osteocytes control the balance of bone formation and resorption, specifically emphasizing the implication in periodontology and implantology.

Oral presentations: Learn from my mistakes

Oral presentations are importantin of our professional life; we have to deliver information in the most convincing way. Experience comes with getting feedback, studying other speakers, attending courses, reading books – but also by making mistakes. My list of mistakes is long. To name a few: many words on a slide; small typeface, race through the speech, overuse software features; wrong handling of the microphones and the laser pointer, fail to check the equipment, mix speaking and writing, exceeding the allotted time etc.I have realized that success in oral presentations comes with considering the three Ps: Preparation, Planning and Practice.

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The Iranian Academy of Periodontology انجمن پریودنتولوژی ایران

دانشگاه علوم پزشکی و خدمات بهداشتی درمانی شهید بهشتی

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