EuroSciCon

DAY 1

Scientific Tracks & Abstracts

26th International Conference on

Advanced Dental Care

October 08-09, 2018 | Moscow, Russia

DAY 1

October 08, 2018

Sessions

Oral Pathology | Dental Sleep | Oral and Maxillofacial Surgery | Dental Care | Laser dentistry

Session Chair
Roger Price
Graduate School of Behavioral Health Sciences, USA

Session Co-Chair
Sandra R Coulson
Graduate School of Behavioral Health Sciences, USA

Session Introduction

Title: **Safety in adullt sedation for dentistry: Patients, techniques, results**
Claudio Melloni, National Health Systems, Italy

Title: **Laser activated irrigation**
Barbara Škrlj Golob, University of Genova, Italy

Title: **Intra-lesional steroid treatment of Central Giant Cell Granuloma of the mandible**
Mohammed Albodbaij, King Fahad Hospital, Saudi Arabia

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Claudio Melloni, Dent Craniofac Res 2018, Volume 3
DOI: 10.21767/2576-392X-C4-011

Safety in adult sedation for dentistry: patients, techniques and results

Claudio Melloni
National Health System, Italy

Sedation for oral surgery adult patients can be challenging depending from patients comorbidites and anesthetic techniques. A strict cooperation between the surgical team and the anesthesia specialist is therefore particularly important. We present the main results from 1000 consecutive patients operated in various dentists offices under light/ moderate sedation with the association of midazolam and fentanyl. In order to maintain safety, criteria for the selection of patients, preoperative and postoperative recommendations and guidelines for monitoring should be followed according to general and state regulations. Patient vital signs should be monitored as per any surgical operating room, but all equipment should be moved between offices under the responsability of the attending anesthesiologst since dental suites are generally lacking it. Examples of the material used will be displayed. Adverse effects were classified under haemodynamic or respiratory derangements (hypertension, hypotension, bradycardia, tachycardia, desaturation, apnea); these were always minor and easily corrected thanks to a continuous dedicated surveillance.

Biography

Claudio Melloni holds a Diploma of Specialist in Anesthesia and Intensive Care (1976) and Applied Pharmacology(1981). He is an Anesthesiologist and Retired from the National Health System of Italy (2006). He has held several positions including as a professor for Anesthesia and Intensive Care at Trieste University Hospital (1973-1974); Sant'Orsola-Malpighi Polyclinic, Bologna, Italy (1974-1995) respectively; He is the Director of the Department Lugo (1995-2000) and Faenza (2000-2006). He has been a Resident in Anesthesia at St. Lukes Hospital NYC, USA (1976-77); Clinical Fellow McGill University Hospitals, Montreal, Canada (1981); Anesthesia and Reanimation Instructor Maggiore School of Nursing, Bologna, Italy (1977-1987). He worked as an Adjunct Professor of Anesthetics at University of Bologna (1989-1995). He served as a Referee for *Minerva Anestesiologica*- journal (1991-1994) and Scientific Appointee SIAARTI (2003-2006). He has several publications to his credit including: 150 papers in peer-reviewed journals- *(Minerva Anestesiologica, British Journal of Anaesthesia (2), Anesthesiology (2), AAS (1), Current Opinion in Anesthesioloogy* .

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Barbara Škrlj Golob, Dent Craniofac Res 2018, Volume 3
DOI: 10.21767/2576-392X-C4-011

Laser in Dentistry

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The oral cavity is a complex environment, where hard and soft tissue exists in close proximity and all within bacteria laden salive. All oral tissue are receptive to laser treatment. LASER is an acronym of Light Amplification by the Stimulated Emission of Radiation. According to the clinical use in dentistry we know soft-tissue, hard tissue, and so called all-tissue lasers. Another classification is based on laser wavelenght in the electromagnetic sprectrum of light: ultraviolet, visible, near, mid, and far-infrared laser. The basic component of laser are: the optical cavity, the active medium which characterizes the wavelenght of specific laser, the pumping source , the controller, the delivery system that transport the laser energy to a terminal handpiece and tips and finaly to the tissue. Most of the laser wavelenght used in dentistry fall in the visible and infrared spectrum. The medium-infrared laser represent the all-tissue lasers, for application on both the mucosa and gingiva, tooth, and bone. The visible, near and far-infrared laser are mainly used for soft-tissue application, some of them are use for caries detection and biostimulation.The interaction of laser light with tissue follows the rules of optical physics. Laser beam can be reflected, absorbed, diffused, and transmitted. The selectivity of action depended on the affinity between a wavelenght and a target tissue.

Biography

Barbara Škrlj Golob graduated in the Department of Dentistry, Faculty of Medicine at the University of Ljubljana (Slovenia) in 2000. In 2016, she obtained her MSc Degree in Laser Dentistry from the University of Genoa (Italy) and another MSc Degree (Master in Clinical and Surgical Microendodontics, under supervision by Professor Elio Berutti) from the University of Turin (Italy) in 2017 respectively. In 2007, she started with private practice. In 2011, she got involved in first laser workshop in Aachen (Germany) where she received a Certificate of LSO and AALZ Dental Laser. One year later, she received PIPS Certificate awarded by Professor Giovanni Olivi (Rome).

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DOI: 10.21767/2576-392X-C4-011

Intra-lesional steroid treatment of central giant cell granuloma of the mandible

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Central giant cell granuloma (CGCG) is a benign lesion; CGCG occurs mainly in children and young adults with more than 60% of all cases occurring before the age of 30 years and female to male ratio of 2:1. The mandibular/maxillary ratio is from 2:1 to 3:1. Surgery is the traditional treatment of CGCG. Calcitonin and intralesional steroid were used with good results. In this case report, a 14 years old Saudi girl presented with a hard swelling of left side of the mandible with few months duration. Investigations including blood tests, radiographs and biopsy were done which confirmed the diagnosed of CGCG. Lesion has been treated using six weekly intralesional injections of steroid which gave very good result. Patient has been followed up for one year with radiographic evidence of defect refill with bone and no sign of recurrence.

Biography

Mohammed Hussein Al Bodbaij pursued his Bachelor's Degree of Dental Surgery (BDS) from King Saud University, Riyadh (KSA) in 1997. He joined Ministry of Health KSA soon after internship year to work in primary health-care center. He attended MSc OMFS course at Eastman Dental Institute of University College of London and obtained the degree in 2005. He returned back to KFHH to work as a Specialist. Since 2007, he has worked as an acting Consultant. In 2013, he received the Fellowship of MFD RCSI, Ireland. During his career, he gave many local and international speeches and has few publications to his credit. He is a Member of Saudi Dental Society and Saudi Society of Oral and Maxillofacial Surgery. At present, he is the Head of Oral and Maxillofacial Surgery Department at KFHH.

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DAY 1

October 08, 2018

Sessions

Dental Implantology | Orthodontics | Endodontics

Session Chair
Simon Chummar
NMC Hospital, United Arab Emirates

Session Co-Chair
Mostafa Helmy Mostafa Ahmed
Cairo University, Egypt

Session Introduction

Title: **Comparative analysis of autogenous vs xenogenous bone grafts in rabbit mandible preliminary histological results**

Samuel Xavier, University of Sao Paulo, Brazil

Title: **Alterations of VEGF and CSF-1 in periodontal tissue remodeling following biophysical force loading in hyperglycemia**

Sun Hun Kim, Chonnam National University, South Korea

Title: **Dental wear introduction, causes and management**

Roaa Talal, Sharjah University, UAE

Title: **Dental implantation with endoscopic visualization in patients with multiple sclerosis and scleroderma**

Orlov Andrey Alekseevich, Institute of General Pathology and Pathophysiology RAMS (PHANO), Russia

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Comparative analysis of autogenous vs. xenogenous bone grafts in rabbit mandible: Preliminary histological results

Samuel P Xavier[1], Erick R Silva[1], Dimitrius L Pitol[1], Lucas B Chaves[1], Vitor F Balan[1] and Daniele Botticelli[2]

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[2]ARDEC Academy, Italy

For this split mouth randomized study nine adult New Zealand rabbits were considered. The control side of the mandible was augmented with autograft block harvested from the iliac crest, while xenograft was used on the test side (Heket Biomaterials, Vicenza, Italy). Dimensions of the graft were 10 mm diameter x 3 mm height. Recipient bed sites were equally perforated. Grafts were fixed with 1.5x10 mm titanium positional screws and covered with a collagen membrane (Heket Biomaterials, Vicenza, Italy). Three animals were sacrificed at 07, 20 and 60 days respectively. Biopsies were taken for histological analysis. Paraffin sections were stained with Hematoxylin-Eosin and Masson´s Trichrome. At 07 days, xenografts showed a scaffold with empty lacunae, while autografts presented a complex pristine bone architecture including osteocytes and bone marrow. Blood clot and inflammatory cells infiltration were observed arising from recipient bed perforations in both groups. At 20 days, a sparse immature and non-organized new bone formation was found for xenograft, while autograft presented an intense woven bone formation. Osteoblast bone matrix deposition and osteoclast resorption activity was also observed as part of remodelling bone process. For both autograft and xenograft groups, a clear delimitation between graft and recipient bed was still noticed. However, at this time, graft union was more evident for autograft. New bone was found forming mostly from recipient bed perforations and close to the membrane for both groups. At 60 days, xenograft showed a higher level of resorption when compared to autografts. Graft union became bridged by well-organized bone for both groups. Considering the limitations of the present study, it can be suggested that autograft provides a better bone formation and maintenance overtime.

Biography

Samuel P Xavier (Oral and Maxillofacial Specialist since 1995) has completed his PhD from Sao Paulo State University, Brazil and Postdoctoral studies from University of Freiburg, Germany (2008-2009) respectively. He is currently working as an Associate Professor in the Department of Oral Maxillofacial Surgery and Periodontology, Faculty of Dentistry at University of Sao Paulo. He has published more than 50 papers in reputed journals and is a Member of the Board of the Oral and Maxillofacial Surgeons at the Hospital of the Medical Faculty of University of Sao Paulo since 1997.

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Alterations of VEGF and CSF-1 in periodontal tissue remodeling following biophysical force loading in hyperglycemia

Sun Hun Kim, SuYoung Lee, Jung Sun Moon and Min Seok Kim
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Diabetic mellitus is a well-known systemic disease to affect periodontal tissues behavior. However, underlying mechanism of how this alters the alveolar bone tissue homeostasis in a physiological condition or even under a biophysical force loading such as orthodontic force application is unknown. This study investigated the effect of hyperglycaemia itself or glucose metabolites on biophysical force-induced periodontal tissue remodelling. Alterations of two key factors for the altered alveolar bone remodelling were hypothesized: vascular endothelial growth factor (VEGF) and colony stimulating factor-1 (CSF-1). The alteration mechanism was investigated by examining the effects of hyperglycaemia and advanced glycation end products (AGE) and their receptor machineries. *In vivo* tissue responses were evaluated by applying orthodontic appliances to molars in streptozotocin-induced hyperglycaemic rats. Morphological features were examined by light microscopy and immunofluorescence and the gene alteration was determined by real-time RT-PCR. Also, the *in vitro* effect of hyperglycaemia itself and biophysical forces in a hyperglycaemic condition were determined in human primary periodontal ligament (PDL) cells and mouse bone marrow stromal cells. *In vivo*: In diabetic rats, tissue responses were histologically characterized by augmented angiogenesis in the PDL and additional undermining (or indirect) osteoclastic bone resorption from bone marrow surface. By diabetes itself, CSF-1, VEGF, AGE and AGER mRNA levels were upregulated, whereas changes in expression of DDOST, a decoy receptor for AGE and AGE-detoxifying Glo1 were not significant. VEGF expression in the PDL was enhanced in diabetic rats. Biophysical force-induced tooth movement (BTM) at day 6 was augmented in diabetic rats, compared with normoglycemic rats. In vitro: A hyperglycaemic condition (25 mM) itself downregulated the VEGF and AGER transcription in human PDL cells, compared with a normoglycemic condition (5 mM), whereas (glucose transporter 1) Glut-1 and CSF-1 were not varied. Furthermore, this hyperglycaemic condition decreased RANKL/OPG ratio and inhibited osteoclast genesis in mouse bone marrow stromal cells. In contrast, N-acetyl glucosamine or PUGNAC, an OGA (β-D-N acetylglucosaminidase) inhibitor treatment stimulated osteoclast genesis. Advanced glycation end products and N-acetyl glucosamine upregulated the expression of VEGF, CSF-1, receptors for AGE (AGER) and Glut1 at specific time points. The VEGF and CSF-1 mRNA in PDL cells was upregulated by either compression or tension force and moreover, this upregulation was more altered at the high glucose or glucose metabolites-treated conditions, compared with a normoglycemic condition. This study suggested that diabetic hyperglycaemia–induced metabolic end products may alter periodontal tissue remodelling due to augmented angiogenesis and macrophage activation and this alteration can be further altered by biophysical forces including orthodontic force.

Biography

Sun Hun Kim completed his DDS and MS., PhD from Chonnam National University, School of Dentistry, Korea in the year 1980-1991. He is a Visiting professor in UCSF medical school, USA; He is a Dean in School of Dentistry, Chonnam National University, Korea in 2013. He is a Head of Dental Science Research Institute, School of Dentistry, Chonnam National University, Korea from 2013. And also a professor in the Department of Oral Anatomy, school of dentistry, Chonnam National University, Korea from 1989.

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Roaa Talal, Dent Craniofac Res 2018, Volume 3
DOI: 10.21767/2576-392X-C4-011

Dental wear introduction, causes and management

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Statement of the Problem: according to our new lifestyle we are facing more cases of dental wear than limiting them. Dental wear can be in different ways with different causes. Abrasion, abfraction, attrition and erosion are the main key elements for this research. Starting with Abrasion and comparing it to Abfraction in the term of diagnoses in symptoms and signs. This manuscript discusses an investigation of the relationship between chemical parameters of popular soft drinks and enamel erosion comparing these drinks and its acidity to tooth. The effects of tooth brushing after exposure to soft drinks are described as a function of the chemical parameters of the drink. A correlation is drawn between the amount of tissue loss caused by erosion, and the extent of the softened layer, in that drinks which cause greater erosion also cause a thicker softened layer. The impact of dental erosion on oral health is discussed. However, it can be concluded that in most cases dental erosion is best described as a condition, with the acid being of non-pathological origin and how to manage this problem what should we advise our patients and even ourselves. Concluding this by talking about bruxism as apart of the parafunctional issue of tooth wear that can occur during sleep or wakefulness and is defined as a repetitive jaw-muscle activity that is manifest as clenching or grinding of the teeth, possibly including bracing or thrusting of the mandible. The clinical consequences of bruxism have been reviewed extensively. A review of the most recent literature has updated the findings on the effects of bruxism on the TMJ and jaw muscles as well as on natural teeth. Management approaches for sleep bruxism (SB) in adults were noted.so in general and in specific points of tooth wear will be the subject.

Biography

Roaa Talal is Completed her Bachelor degree in dental surgery from Sharjah University in UAE where she also accomplished her internship and two years of residency program. She is a Dentist at future Dental clinic in Sharjah, UAE where she works as a General Practice dentist. She was a speaker in a health symposium in Paris in March 2017 and attended many internationally conferences including the greater New York dental meeting 2017.

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Orlov Andrey Alekseevich, Dent Craniofac Res 2018, Volume 3
DOI: 10.21767/2576-392X-C4-011

Dental implantation with endoscopic visualization in patients with multiple sclerosis and scleroderma

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Currently, about 3 million people in the world are suffering from multiple sclerosis as well as scleroderma. These two diseases are very difficult to diagnose. Often their symptoms coincide with the symptoms of autoimmune diseases such as Sjogren's disease, lupus erythematosus and many others. In practice, dentists do not often have patients with these diagnoses. Therefore, it is very important to know about the symptoms of the disease and the possibility of rehabilitation of such patients. Loss of speech, difficulty swallowing and chewing food, dry mouth, ulceration of the mucosa, its atrophy lead to the development of caries, periodontitis, and also adentia. A very important stage in the rehabilitation of patients is the elimination of defects in the dentition, which makes it possible to increase the self-esteem of these patients and to rehabilitate them in the society. With scleroderma, as well as with the spastic form of multiple sclerosis, patients suffer from tooth decay and its complications. At best, such patients can open their mouths to a maximum of 2 cm. Therefore, curing caries or its complications (periodontitis or pulpitis) is practically technically impossible due to poor visualization. It is very difficult to introduce instruments into the oral cavity. Quite often, we experienced difficulty in introducing the intraoral chamber into the oral cavity. Therefore, on plastic phantoms we have developed the technique of endoscopic treatment of caries and its complications. Also technically on models with mucosal imitation we worked out the technique of transcutaneous dental implant placement, especially in the field of painters and pre-molars, which is the beginning of the first operation to be presented at this symposium. We believe that endoscopic technique will not only help in the treatment of such diseases, but also help to expand visualization in hard-to-reach places in the practice of a dentist, as well as for qualitative endodontic treatment.

Biography

Orlov Andrey Alekseevich graduated from the Moscow Medical Stomatological Institute. N. A. Semashko (MMSI) in the year 1992. Orlov Andrey was a doctor of Medical Sciences, TsNIIS and CHF in the Department of Maxillofacial Surgery in 2005. He also served as a professor in Academic Dentistry and Chief Physician. He was Oral and maxillofacial surgeon, plastic surgeon, Implantologist in 2008 Professor. At present he is working as a Professor in the Institute of General Pathology and Pathophysiology RAMS (PHANO) Russia.

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