

Annual Dentistry and Dental Sciences Congress

March 02-03, 2020 | Edinburgh, Scotland

Scientific Tracks & Abstracts



Sessions

Pediatric Dentistry | Cosmetic Dentistry

Session Chair

Tetsuo Nakamoto

LSU Health Sciences Center, USA

Session Introduction

Title: Children's oral care, luxury or urgent necessity

Samia Al-Khuwaitem, Padi Dental Clinic, KSA

Title: Demineralization and infiltration: Cases and cases

Francesca Zotti, University of Verona, Italy

Children's oral care, luxury or urgent necessity

Samia Al-Khuwaitem

Padi Dental Clinic, KSA

Global Overview: Statistics of oral diseases, caries specifically, in children and adolescents are as high as 90% in some countries. Taking in consideration its consequences as infections, pain, premature tooth loss and malocclusions. At the end it affects the child and his family's quality of life negatively.

Parents Perception: High percentage of people think that dental care for a child is a luxury treatment for those who are wealthy. Parents do not give their children oral care a priority as long as the child has no serious complains. For some it's the high cost of dental treatments, for others its hesitation to expose the young child to unpleasant dental experience. Not to forget the misperception that primary teeth will fall down and be replaced eventually and requires no treatment.

Health Care Providers Perception: Health care providers in pediatric departments and Obstetrics should have an effective rule in parental education and referral of patients who require any dental care. Unfortunately, even some general dentists refuse to see a very young child in their clinic for many reasons.

Decision Makers/ Governments: Decision makers in many countries underestimate the effectiveness and efficiency of dental preventive measures. Strict application of it will lower the oral disease prevalence in their population. Treatment of advanced oral diseases that could have been prevented in the first place makes a huge financial burden on governments.

Time to Take an Action:

- a. Dentists play an important role in parents' education in regard to children's oral care.
- b. Strict preventive programs to be legislated in maternity and children hospitals as well as in schools.
- c. Insurance companies can be very selective in covering dental treatments.

Biography

Samia Al-Khuwaitem, Pediatric dentist from Saudi Arabia, Dammam city. She holds a bachelor degree in dental surgery (BDS) & Master degree in pediatric dentistry from King Saud University, College of Dentistry, Riyadh City. Also, holds a certificate in dental practice management from University of Toronto, Canada. Worked as a part-time faculty in Princess Nora Bint Abdulrahman University, College of Dentistry, Pediatric Dentistry department. She has a clinical experience in pediatric dental practice over 8 years. She is the member of the Saudi Dental Society (SDS); Member of the Saudi Society of Pediatric Dentistry (SSPD); Member of the American Association of Pediatric Dentistry (AAPD). She is also Founder of the first specialized pediatric dentistry private center in Saudi Arabia. She is interested in public education about oral care for children through social media and public events.

salkhuwaitem@gmail.com

Demineralization and infiltration: Cases and cases

Francesca Zotti

University of Verona, Italy

Statement of the Problem: Fluorosis represents a dental problem affecting both aesthetic and function, often manifesting as enamel demineralization and occurring as white or yellowish non-cavitated lesions. Last research in dental materials led to feasibility of managing these lesions in a non-invasive way, in order to prevent caries development and to satisfy patient requirements. The purpose of this study was to evaluate effectiveness of “resin-infiltration” technique in terms of lesion resolution, stability of results overtime, trend of sensitive teeth and satisfaction of patients.

Methodology and Theoretical Orientation: 200 teeth affected by fluorosis were treated with resin infiltration. Dimension of lesions before and after treatment, numbers of etching cycles needed and fluorosis index were measured. Sensitive teeth degree during the treatment and during all the observation period (shiff air index ranged between 0 to 3) was evaluated every three months with a medium follow-up of 12 months. Degree of patient satisfaction of color lesion before and after treatment was also reported as well as the degree of sensitive teeth during the 72 hours following treatment by a satisfaction scale and the VAS scale. Satisfaction of treatment duration and pain during the chair-treatment was assessed by a point scale from 0 to 10.

Findings: All 200 lesions treated had an immediate resolution, some case of sensitive teeth was reported during the 72 hours following treatment. Satisfaction of color change was confirmed by patients, even if some lesion did not completely disappear. Etching cycles needed were found to be related to sensitive teeth in following 72 hours and to fluorosis index.

Conclusion & Significance: Resin infiltration seems to be an effective technique to solve fluorosis lesions and to achieve patient satisfaction overtime. This represents an important issue for non-invasive and preventive dentistry.



Figure 1: Effects of resin infiltration on clinical features of fluorosis in central incisors and canines.

Biography

Francesca Zotti is researcher at University of Verona, Italy. She has completed PhD in Experimental Medicine and Therapy at University of Turin, Italy. She is responsible for restorative service at the University Hospital of Verona and professor of Restorative Dentistry at the Dental School of Verona. Her studies are now focused on restorative dentistry, e-learning and dental materials.

francesca.zotti@univr.it

Sessions

Cosmetic Dentistry | Gum Diseases | Orthodontics | Dentistry | Oral Pathology

Session Chair

Francesca Zotti

University of Verona, Italy

Session Introduction

Title: Facial beauty

Yasser Stas, Al-Ogaly Polyclinic, KSA

Title: Metabolic profile by H-NMR spectroscopy of saliva of periodontitis cases

Charanjit Singh Saimbi, Career Dental College, India

Title: Optimized approach combining laser capture micro dissection and micro array analysis for regional gene expression profiles of mandibular condylar cartilage

Aisha M Basudan, King Saud Bin Abdulaziz University for Health Sciences, KSA

Title: Oral health and dental treatment for people with dementia

Alexander Schembri, University of Malta, Malta

Title: Airway breathing orthodontics

Masaru Iwatsuki, TOYU Dental Clinic, Japan

Title: Recent concepts of periodontal diseases and new periodontal classification

Ossama A AlKhatib, Alarak Specialized Dental Center, KSA

Title: The tensile strength of laser welding of an incision in the keratinized oral mucosa of rabbits in vivo

Balsam M Mirdan, University of Kirkuk, Iraq

ANNUAL DENTISTRY AND DENTAL SCIENCES CONGRESS

March 02-03, 2020 | Edinburgh, Scotland

Facial beauty

Yasser Stas

Al-Ogaly Polyclinic, KSA

Many definitions are used to describe beauty. All of them change among time and societies. Media and globalization reduce the sharpness of differences and enhance the common sense feelings. Pleasure and satisfaction of the beholder is a factor affects directly and indirectly his relation with the object. The object himself will be affected by reflections of the beholders. For dentists, beauty plays a big role in daily practice. The criteria that stands behind determining, evaluating and proceeding guide lines still somehow subjective. Face beauty is related directly to the profession, Measurements, dimensions or senses, mathematics or artistic, and objective or subjective. In the lecture, all these aspects will be discussed how in the way they related to the beauty of face, mouth and teeth. Symmetry, proportions, colours and other characteristics are in discussion. How do they play role and how much does they affect our perspective and judgement of cosmetic treatments.

Biography

Yasser Stas is renowned in the field and practice of dentistry. He kept on continuing education to be able to achieve excellence in the dental practice and to deliver modern aesthetic care to thy patients with ease and comfort. His practicing dentistry for over 15 years in Al- Ogaly Medical Group located at Madinah, Saudi Arabia. He holds a master's degree in Laser Dentistry from RWTH Aachen University, Germany and in Oral Implantology from Goethe University Frankfurt Am Main, Germany. He is also a PhD holder from Universiti Sains Malaysia awarded last September 2018. He has been invited to several speaking engagements to share and influence his knowledge about modern aesthetic dental practice. He is currently taking up Masters of Science in MBA at Heriot Watt University located at Edinburgh United Kingdom. Given his passion, expertise and knowledge Dr. Yasser Stas became one of the leading dental practitioners in the Kingdom of Saudi Arabia.

drystas@yahoo.com

Metabolic profile by H-NMR spectroscopy of saliva of periodontitis cases

Charanjit Singh Saimbi, M P Singh, Mona Saxsena and Raja Roy

Career Dental college, India

Periodontitis is a chronic, inflammatory disease. It may be value for understanding the path physiology of the disease by metabolic profile of saliva samples using high resolution NMR spectroscopy.

It has been employed in 114 saliva samples in search of distinctive difference and spectral data were further subjected to multi variate analysis and one hundreds metabolites were characterized and assigned in 11 NMR spectral of saliva. The statistical analysis of control and disease using PLS-DA model resulting in R^2 of 0.84 and Q^2 of 0.79. There was an elevation in the concentration of statistically discriminate metabolites. The twenty newly identified metabolites in saliva indicate bacterial population shift along with change in homeostasis. These disturbances the biofilm, a real protector against any possible biodamage on tooth surface. These newly identified metabolites could define better geographically diversified periodontal condition.

Some of the newly identified metabolites along with the pool of metabolite may serve as biomarker for distinguishing the severity and complexity of periodontitis.

Biography

Charanjit Singh Saimbi, MDS in Periodontology retired as dean from King Georges Medical University, presently working as Director Post Graduate Studies in Career Post Graduate Institute of Dental Sciences & Hospital, Lucknow, India.

cssaimbi@gmail.com

Optimized approach combining laser capture micro dissection and micro array analysis for regional gene expression profiles of mandibular condylar cartilage

Aisha M Basudan

Kind Saud Bin Abdulaziz University for Health Sciences, KSA

Mandibular Condylar Cartilage (MCC) is a fibrocartilage that lines the mandibular condyle of the TMJ. Trauma and/or diseases can cause permanent tissue loss and disability; moreover, clinical management via cell-based regenerative therapies is limited due to the paucity of accurate molecular and genetic data. The advent of Micro Array Analysis (MAA) has enabled us to analyze the expression of thousands of genes in a single experiment. However, MAA reliability relies on procuring pure cell populations. Combining Laser-Capture Micro dissection (LCM), which allows precise cells isolation from heterogeneous tissues, and MAA technologies, enables accurate large-scale studies.

Objective: of this study is to optimize a method combining LCM and MAA to perform zone-specific gene expression analysis for MCC using 5-week-old rats.

Materials and Methods: Two MCC and two Femoral Condylar Cartilages (FCC) specimens were harvested from 5-week-old male SD rat, and then the LCM protocol previously described was applied to collect RNA from FCC (Control) and MCC zones; fibrous (FZ), proliferative (PZ), mature (MZ), and hypertrophic (HZ) zones individually. An optimized approach was established to subject the LCM-RNA samples to two-cycle linear amplification, Biotin-labeling and fragmentation, and then sent to a specialized center to perform microarray hybridization using Affymetrix GeneChip Rat Genome 230 2.0 Array.

Results: All quality control measurements at three points; LCM-RNA integrity (before amplification), purity and RNA integrity after amplification, and after fragmentation, revealed high quality that fulfills requirements for the subsequent procedures. Specificity (background) and sensitivity (percentage of genes detected) of the hybridization process were 63.9-74.5 and 54.6-60.1% respectively, showing higher values than Affymetrix and Arcturus protocols. Likewise, 3':5' ratio of mRNA, was 5.5-16.2 for GAPDH, and 11.8-32.9 for β -Actin, indicating the better quality of our samples when compared with other reports.

Conclusions: An approach for zonal gene expression analysis of the MCC from 5-week-old rats using LCM and MAA was successfully performed, and a well-supported hypothesis was formulated to distinguish the genes of MCC cells/zones from each other and from articular chondrocytes. Resolving zonal gene expression differences among the cell populations in MCC will enhance basic understanding of fibrocartilage biology and contribute to the future cell-based therapies.

Biography

Aisha M Basudan, Consultant in Orthodontics, King Abdulaziz Medical City (KAMC), Ministry of National Guard - Health Affairs, Riyadh, Kingdom of Saudi Arabia. Research Scientist, Department of Stem Cell and Regenerative Medicine, King Abdullah International Medical Research Center (KAIMRC), Ministry of National Guard - Health Affairs, Riyadh, Kingdom of Saudi Arabia. She graduated with a Bachelor of Dental Science from King Saud University/College of Dentistry, Saudi Arabia. I also completed my Certificate in Orthodontics and Master of Dental Science degree at the same university. Then she obtained a PhD degree in Tissue Bioengineering field from The University of Hong Kong (2015). She currently works as a Consultant in Orthodontics at King Abdulaziz Medical City and as a Research Scientist at King Abdullah International Research Center, Ministry of National Guard. Her research interest focuses on mandibular condylar cartilage molecular biology and regenerative therapy of related craniofacial anomalies/disease/injuries/abnormal growth patterns.

aisha_basudan@yahoo.com

ANNUAL DENTISTRY AND DENTAL SCIENCES CONGRESS

March 02-03, 2020 | Edinburgh, Scotland

Oral health and dental treatment for people with dementia

Alexander Schembri

University of Malta, Malta

People with dementia may no longer have or will reach a stage when they no longer have the ability to voice their needs for oral care and treatment, carry out daily oral hygiene to a level that prevents disease, make informed choice and give valid consent for treatment. This may have a negative effect on the oral health of the individual and on the quality of life. Thus to contribute to maintain an acceptable quality of life of persons with dementia, the dental team has the specific role to keep them free of oral infections, restore their dentition so they can enjoy eating, maintain speech and aesthetics as long as possible.

Biography

Alexander Schembri has Graduated in 1989 Bachelor of Dental Surgery, post graduate diploma in Gerodontology and Geriatrics in 1993 and Masters in Gerodontology and Geriatrics in 2003 from the University of Malta. Inducted fellow of FICD in 2016. She is the founder member of the Maltese Association of Geriatrics and Gerodontology. He is the past president of the European College of Gerodontology ECG 2016/17. He is also a visiting lecturer at University of Malta and responsible for the teaching of Gerodontology; Author of the children's book *Id-dentatura tan-nanna*.(Grandma's dentures); Awarded' Best Elderly Oral Healthcare Initiative at the Oral Health & Dentistry Awards 2018.

info@alexanderschembri.com

ANNUAL DENTISTRY AND DENTAL SCIENCES CONGRESS

March 02-03, 2020 | Edinburgh, Scotland

Airway breathing orthodontics

Masaru Iwatsuki

TOYU Dental Clinic, Japan

Now it is clear that dentists need to play an important role in managing airway development and craniofacial formation. The size and shape of the upper air way is determined by the growth and development of the maxilla and mandible. Especially the growth of the maxilla is depending on the tongue pressure. If the tongue position and shape is not proper, the maxilla can't get the enough pressure from the tongue. It will cause the underdevelopment of the maxilla. We have to stimulate the growth of the maxilla in many clinical cases. Today I will show you how to evaluate the size and relation of the maxilla and mandible and how to treat the patients who have narrow air way without any surgical assist and show you some clinical cases.



Biography

Masaru Iwatsuki received his DDS Degree at Nihon University in Japan. He also received Certificate in Pediatric Dentistry at Boston University. He is a visiting professor of Orthodontic Department at Mexico State University.

masaru.iwatsuki@gmail.com

Recent concepts of periodontal diseases and new periodontal classification

Ossama A AlKhatib¹, Samar M F Saati² and Delia O Alkhatib³

¹Alarak Specialized Dental Center, KSA

²Modern Dental Polyclinics, KSA

³King Abdulaziz University, KSA

The concept of periodontal diseases has been becoming more clearness and understanding, and recently all efforts spent to put a new periodontal classification which will give us a different view about same periodontal diseases we faced before. The pathophysiology and progression of periodontal disease has been more explanted, for that the periodontal treatment appears to be more complicated because of many risk factors are responsible locally and systemically.

The periodontal treatment is given to the patient should be supported by extended recalls of periodontal maintenance care and should be consider the variability of complex factors which cause periodontal disease.

Biography

Ossama Alkhatib had graduated in 1985 from Dental School-Damascus University, and started periodontal specialization after finishing Diploma in 1988, Master in 1993, he has completed his PhD in Periodontology at the age of 44 years from Damascus University and postdoctoral studies Board from Syria, External doctor at Dental School, Marqwatte University, WI, USA (1993), he is member of AAP (1277), he was the academic director of periodontology, Assisting. Prof. at Al-Arabiya Dental College in Jeddah-KSA. He has published more than 10 papers in different journals and has been working at Alarak specialized dental center in Jeddah, KSA.

osam.samo@yahoo.com

The tensile strength of laser welding of an incision in the keratinized oral mucosa of rabbits *in vivo*

Balsam M Mirdan and Suzan Najj

University of Kirkuk, Iraq

Introduction: In this study, coagulation of the blood at the wound side is evoked using a 980-nm-wavelength diode laser. The laser is used to approximate incision wound edges to be compared with the healing of the sutured incision. Quality of healing is accessed by the Clinical observations, histological slides, and tensile strength measurement.

Material and methods: The study is conducted on 24 albino rabbits; an intraoral incision in the hard palate is done on both sides, right and left, for each rabbit. One side serves as a control group where the incision is sutured, while the other side's incision is welded by a 980-nm-wavelength laser. The laser is operated in continuous wave mode (CW) 20 W/cm² power density for 27s exposure time.

Results: Clinically, some loss of tissue details (smooth feature) are observed on the welded side in comparison with the conventionally treated side. Histopathologically, healing of the epithelial layer was perfect, while the submucosal layer showed loss of angiogenesis and loose connective tissue replacing the normal structure. The tensile strength measurement shows comparable results for the welded incision and the sutured incision; moreover, the immediate and first-day tensile strength of the welded incision shows superior results to the sutured incision.

Recommendation: Further studies are needed to monitor histologically the healing after laser welding and measure the development in the tensile strength to assess the validity of the 980-nm-wavelength laser beam as a tool in tissue welding.

Conclusion: Laser beam with nine hundred eighty-nanometer-wavelength is a suitable tool for welding incisions in the oral cavity at areas subjected to stress, such as a socket after tooth extraction.

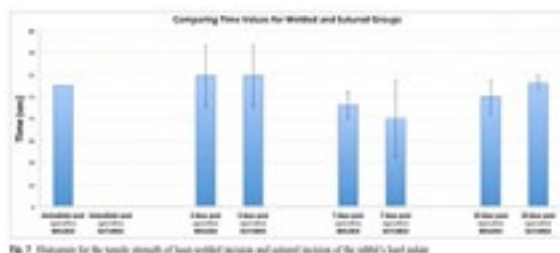


Fig. 3 Histogram for the tensile strength of laser welded incision and sutured incision of the rabbit's hard palate

Biography

Balsam M Mirdan has her expertise in evaluation and passion in improving the health and wellbeing. Her open and contextual evaluation model based on responsive constructivists creates new pathways for improving healthcare. She has built this model after years of experience in research, evaluation, teaching and administration both in hospital and education institutions. The foundation is based on fourth generation evaluation (Guba & Lincoln, 1989) which is a methodology that utilizes the previous generations of evaluation: measurement, description and judgment. It allows for value-pluralism. This approach is responsive to all stakeholders and has a different way of focusing.

balsammirdan@gmail.com