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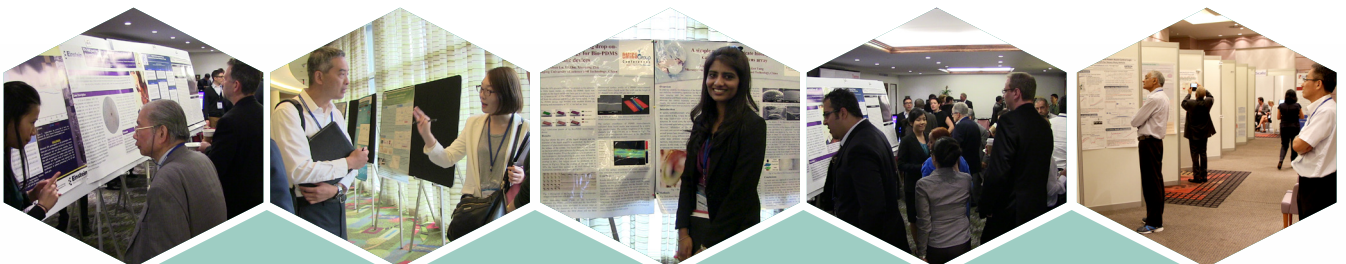
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765th Conference

International Conference on

Restorative Dentistry and Prosthodontics

October 20-21, 2016 Houston, USA

Posters



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Restorative Dentistry and Prosthodontics

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Oral health in 21st century

Deeksha Kaura

Maharishi Markendeshwar University, USA

Oral healthcare is known to have been dated back to ancient times. During the past several centuries, dentistry has seen many improvements and changes. Today, there is an increase in the patient education and hence their cooperation. The dental providers are equipped with sophisticated ways and methods to provide with effective painless oral care to the patients. People have increased awareness of the oral healthcare, its maintenance and prevention of oral diseases. There have been major advancements and evolutions in the field of dentistry, especially in the last 50 years. Fluoridation of water is one of the top most public oral health initiatives; this led to a huge reduction of carious lesions. Other than water fluoridation, advancements in composite fillings, introduction of different types of osseointegrated dental implants are introduced and being widely used by the dentists. We will be discussing the contrasts between the ancient ways of dentistry and the dental world of 21st century; the role of proper diagnosis, treatment planning, patient education, patient comfort and the painless dental procedures in treatment of dental problems.

Biography

Deeksha Kaura has completed her Bachelor's in Dental Surgery from Maharishi Markendeshwar University. She was a Student Fellow under the Indian Council of Medical Research approved research at the Department of Preventive Pediatric Dentistry at MM College of Dental Sciences & Research, Mullana. She has presented 8 scientific papers/posters at various national and international conferences.

toplano@sakarya.edu.tr

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Glutathione-dependent enzymes as biomarkers in dental fluorosis

Ludmila Gavriluc

Nicolae Testemitanu State University of Medicine and Pharmacy, Moldova

Introduction: Fluorosis, caused by long-term intake of high levels of fluoride is characterized by clinical manifestations in teeth. Although fluorosis is irreversible, it could be prevented by appropriate and timely intervention through understanding the process at biochemical and molecular levels. Increased production of reactive oxygen species (ROS) and lipid peroxidation has been considered to play an important role in the pathogenesis of chronic fluoride toxicity. Saliva as a biological liquid of the human organism may be a reflection of the metabolic state, and salivary parameters have the clinical-diagnostic means.

Aim: Comparative examination of the activities of glutathione dependent enzymes, glutathione reductase (GR) and glutathione-S-transferase (GST), and contents of glutathione, calcium and protein in the saliva of adult patients with dental fluorosis, before and after complex antioxidant therapy was done.

Material & Methods: 26 patients (19-30 years) with mild and moderate dental fluorosis (Dean's classification: 3 and 4) and 20 healthy subjects (20-30 years) were examined. Patients were treated with complex therapy, which included "Opalescent Whitening gel" (Ultradent products, USA), calcium gluconate and vitamins-antioxidants A, E, D and C. The activities of glutathione-dependent enzymes and contents of glutathione, calcium and protein were determined in the saliva of the patients using spectrophotometric methods (DiaSys Diagnostics).

Results: Chronic fluoride intoxication led to the imbalance of antioxidative glutathione-dependent defense system in the patients with dental fluorosis. The results reflected dose-dependent fluoride intoxication and metabolic imbalance and suggested that complex antioxidant therapy was effective and partially restored imbalance of the anti-oxidative defense of saliva in the patients with fluorosis.

Conclusion: Glutathione-dependent enzymes, GR and GST, may be used in dental practice as biomarkers for estimation of the degree of metabolic disturbances in patients with dental fluorosis.

Biography

Ludmila Gavriluc is Professor of Biochemistry and Clinical Biochemistry in the Department of Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Moldova. She graduated from the State Medical University, Medico-Biological Department with specialty in Biochemistry and completed PhD (1978) and MD (1997) at the State Medical University, Moscow, Russia. She had scholarships in Russia, Italy, USA (01-08.2013, Fulbright Program US, Feist-Weiller Cancer Center, LSU HSC, LA). She is author of 104 scientific and methodic peer-reviewed manuscripts and 6 books. Areas of her scientific interests are clinical-diagnostics, oncology, hematology, stomatology and antioxidant therapy.

gavrlu@mail.md

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Comparative study of hardness for hard chairside relining and denture base materials on repeated disinfection procedures: An in vitro study

Taksh N Shah

University of North Texas Health Science Center, USA

Aim: There is hypothesis that disinfection procedures may decrease the hardness of reline and acrylic denture base resins. The aim of this in vitro study was therefore to investigate the effect of chemical and microwave disinfection procedures on hardness values of commonly used hard chairside reline (Ufi Gel hard, Kooliner) and denture base acrylic resins (Lucitone 199).

Materials & Method: Powder (polymer) and liquid (monomer) were mixed according to manufacturers' instructions to prepare 20 specimens from each material. Specimens were divided into 2 control and 2 test groups. Hardness measurements (VHN-Vicker's hardness number) were made after polymerization and water immersion (control groups), and after chemical and microwave disinfection (test groups). Measurements of hardness were analyzed using one-way analyses of variance (ANOVA) and Tukey's honestly significant difference (HSD) test ($\alpha=.05$).

Results: Chemical disinfection method significantly increased ($p=.001$) hardness values of Lucitone 199 (from 19.00 VHN to 21.02 VHN) and Kooliner (from 13.02 VHN to 14.02 VHN); whereas increased hardness values for Ufi Gel hard (from 17.00 VHN to 17.16 VHN) were statistically insignificant ($p=.642$). Microwave disinfection method also significantly increased ($p=.001$) the hardness values of Lucitone 199 (from 19.00 VHN to 26.00 VHN), Ufi Gel hard (17.00 VHN to 21.00 VHN) and kooliner (13.02 VHN to 14.08 VHN).

Conclusions: Both chemical and microwave disinfection methods increase the hardness of reline and acrylic denture base resins, contradicting previously published studies. Microwave disinfection method is more appropriate compared to chemical disinfection method.

Biography

Taksh N Shah is a graduate student who is working towards becoming an Epidemiologist from University of North Texas Health Science Center (UNTHSC). He is a Certified Professional in Dental Surgery from Gujarat University, India. He is currently working as the Student Assistant in the Molecular and Genetics Laboratory at UNTHSC. He reflects a diverse cultural and organizational background and has been a part of inter-professional activities and patient safety summit. He has gained 4 years of experience in research, which includes his publications and posters in India as well as USA. His major research areas include pediatric dental care and exposure of VOC compounds in infants and pregnant women. With Public Health Dentistry as his future goal, he is aiming to get into dental school next year.

shahtaksh99@gmail.com

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Multidisciplinary approach for the aesthetic treatment of maxillary central incisor: A case report with 3-year follow-up

Mohammed Abdul Rahman Badwan, Erkut Kahramanoğlu, Melih Motro, Yaşar Özkan and Yasemin Kulak Özkan
University of Marmara, Turkey

Twelve (12) years old patient applied to our clinic with unilateral complete cleft lip and palate problem. The patient presented maxillary constriction with bilateral posterior cross-bite and left central incisor was in cross bite as well. It was planned to expand the upper arch by means of rapid maxillary expansion. Then fixed orthodontic treatment was planned to settle the occlusion. The treatment started with rapid maxillary expansion by using bonded hyrax appliance. After the expansion fixed appliances were placed both on mandibular teeth and the anterior teeth on maxilla. Following orthodontic treatment, the patient was referred to the department of prosthodontics for further applications. Cone beam computed tomography (CBCT) is used for implant site evaluation. According to the CBCT a sufficient horizontal and vertical bone volume exists. The Camlog screw-line implant (Camlog Biotechnologies, Basel, Switzerland) placement was performed with local anesthetic agents. After 4 months of healing by the use of temporary abutment for soft tissue remodeling, a screw retained provisional restoration was fabricated. All-ceramic crown was fabricated after 3 weeks. Two-piece Ti-ceramic abutment was used. Then, GRADIA gum shades (GC Corporation, Tokyo, Japan) was used at the cervical part of crown for reproduction of gingiva. After the prosthodontic treatment, the patient was recalled at the 6th month and 1st year. The patient was satisfied after 3 years of use. No complication was observed after the augmentation process and implant placement. As a conclusion, a multidisciplinary approach in esthetic zone shows successful clinical and radiographic results.

Biography

Mohammed Abdul Rahman Badwan graduated from Pharos University in Egypt in 2012. Now he is a Master's student in Prosthodontics Department of Marmara University, Dentistry Faculty, Istanbul, Turkey.

dr.m.badwan@gmail.com

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Novel approach in the treatment of a partially edentulous patient with immediate loaded implants: 1-year follow-up

Qutada Ismael, Buket Evren, Yaşar Özkan and Yasemin Özkan
Marmara University, Turkey

Depending on the developments in computer technologies, implant surgery techniques have several improvements during the last years. Since it is very important for a patient to have teeth in a day, flapless surgical technique with computer guided procedure is chosen for the immediate loading of implants. A 31 years old female patient with missing maxillary incisors was treated with surgical stent and computer guided flapless implant system (Materialize, Belgium, R2GATE and Megagen Implant Co, South Korea) for immediate loading of implants. In order to decide the correct locations of implants, computerized tomography and software programs were used. Before surgery, surgical guides, abutments and temporary crowns were manufactured and on the day of surgery implants were loaded with temporary crowns. Zirconium based restorations were prepared and cemented after 3 months of osseointegration. After one year of follow-up, no resorption around the implant was observed in the X-ray examination and also no gingival recession or inflammation was seen during clinical examination. The patient is satisfied with her restorations after one year of use. Since computer guided protocol has many disadvantages, it is a successful treatment option for edentulous patients who demand teeth on the same day of implant placement.

Biography

Qutada Ismael graduated from MSA University, Egypt in 2012. Now he is a Master's student in Prosthodontics Department of Marmara University, Dentistry Faculty, Istanbul, Turkey.

qatada_2003@hotmail.com

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Full zirconia fixed tooth supported restorations manufactured from monolithic zirconia: Clinical report after three years in service

Mustafa Mahmoud Meghlaj and Yasemin Ozkan
Marmara University, Turkey

Purpose: The aim of this case reports is to evaluate the clinical advantages and limitations of monolithic zirconia restorations for full arch tooth supported restorations and report the rate of complications up to 3 years after insertion.

Materials & Methods: Two patients are treated with monolithic zirconia crowns in full arch reconstructions.

Results: After 3 years, no biological or functional problems or complications were reported. The prostheses were esthetically pleasing, and no clinical complications have been reported after 2 years.

Conclusions: CAD/CAM monolithic zirconia full crowns are a treatment option for full arch restorations showing a complete success in this study. The outcome of this study showed high success in function, aesthetics, phonetics, and high patient satisfaction.

Biography

Mustafa Mahmoud Meghlajis graduated from Ibn Sina in Saudi Arabia 2014. Now, he is a Master's student in Prosthodontics Department of Marmara University, Dentistry Faculty, Istanbul, Turkey.

qatada_2003@hotmail.com

Notes:

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Full arch implant-supported fixed prosthesis manufactured from monolithic zirconia: clinical report after two years in service

Ossama Ziad Ouda and Yasemin Ozkan
Marmara University, Turkey

The most common problems in implant supported hybrid dentures are loosening or fracture of the screws. Wear, problems in resin teeth, problems in porcelain, fracture in framework are some other problems which have been seen in hybrid dentures. Screw holes at the site of misplaced implants cause esthetic problems. This clinical report describes a patient treated with implant supported monolithic zirconia and hybrid denture. The dentures were esthetically pleasing and there were no clinical complications after 2 years.

Biography

Ossama Ziad Ouda is graduated from Modern Sciences and Arts University in Egypt in 2013. Now, he is a Master's student in Prosthodontics Department of Marmara University, Dentistry Faculty, Istanbul, Turkey.

qatada_2003@hotmail.com

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Caries risk assessment in children from urban and rural areas

Balteanu Olga, Spinei Aurelia, Gavriluc Ludmila, Grecu Victor and Plamadeala Svetlana
Nicolae Testemitanu State University of Medicine and Pharmacy, Republic of Moldova

Objective: To assess caries risk in children from rural and urban areas in the Republic of Moldova.

Materials & Methods: Total of 658 children aged between 7 and 18 years were clinically examined. The study included 327 children from urban localities and 326 (49.54%) children from rural localities (L1), and 332 (50.46%) children from urban areas (L0). Complex caries risk assessment was performed via Cariogram software. The written consent of children's parents was taken for the study. SPSS vs.16.0 was used for descriptive and inferential analysis, using both parametric and non-parametric tests ($p < 0.05$).

Results: Influence of a series of factors was found in the majority of children involved in the study. A very high caries risk was determined in 3,61% children from urban areas and in 11,96% children from the countryside. An extreme caries risk was caused by deficient oral hygiene, high concentration of Streptococcus Mutans in saliva, lack of preventive programs etc. The probability of avoiding the occurrence of new cavities in children from the countryside is $59.19 \pm 1.88\%$, in comparison to children from urban areas – $78.82 \pm 1.91\%$ ($p < 0.001$). Caries risk in children from the countryside is 1.33 higher than in children from urban areas.

Conclusions: These results highlight the need of developing and implementing prevention programs targeting the determining factors and cariogenic risk groups. Improvement of dental care provided to children from the countryside has to focus on preventing the main dental diseases.

Biography

Ossama Ziad Ouda is graduated from Modern Sciences and Arts University in Egypt in 2013. Now, he is a Master's student in Prosthodontics Department of Marmara University, Dentistry Faculty, Istanbul, Turkey.

qatada_2003@hotmail.com

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Periodontal status and gestational diabetes of Saudi women: Relationship with low birth weight infants

Enaam Al-Hasan

Riyadh Colleges of Dentistry and Pharmacy, Saudi Arabia

Aim of this study is to determine any potential relationship between the periodontal screening and recording (PSR) values in pregnant women who have impaired glucose intolerance on the duration of gestation and weight of delivered infants. The study consisted of 100 Saudi women, 59 medically fit pregnant lady and 41 with gestational diabetes mellitus. PSR table was used when screenings were performed; PSR values were recorded for all patients and weights of all born babies were recorded. Other materials were also used like WHO periodontal probes. Disposable OD kits, cotton rolls and gauze (masks, gloves, pep napkin and disinfectant) were used to improve the infection control. Patient were seated in a comfortable chair during examination and after initial examination, an oral report was given to explain the dental status and any urgent recommendation or future expectations.

Conservative approach in dentistry- A practical challenge for dentist; innovative standard of care for dental patients

Adil Habib

Dow University of Health Sciences, Pakistan

Minimally invasive dentistry is now considered to meet the standard care among public health and to explore factors associated with the use of different techniques in dentistry. During the last few decades, advances in instrumentation, materials and techniques have enabled dentist to transit from traditional principles to a conservative approach of diagnosis and management. Therefore, preservation of a healthy tooth structure of each patient should be the primary goal for a dentist according to the "Beneficence" code of ethics. The state of art facilities has drastically improved the conventional procedures to a more conservative approach. This embraces an idea that integrates prevention, remineralization and minimal intervention. It reaches the management objective to conserve maximum natural tissues and uses least invasive surgical approach. The objective encompasses a range of preventive approaches that may vary from assessment of risk factors to early detection of disease and impedes the loss of natural structure. Minimally invasive treatments improve affordability, availability and accessibility of dental treatment. There is a need to establish clear guidelines on the management of infectious diseases. This component consists of risk assessment and development of a customized treatment plan for the individual patient to include appropriate strategies to modify individual risk. This approach to treating dental diseases includes many nonsurgical modalities, as well as the key concept that dental diseases should be treated early. Emerging technologies will facilitate evolution to primary prevention of caries, though technical, cultural and economic obstacles do exist in clinical practice.

adilhabib786@gmail.com

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Treatment planning edentulous patients with fixed implant supported prosthesis- criteria and key factors

Ahmad Al Awadhi

Ministry of Health of Kuwait, Kuwait

Treatment planning for full edentulous patients evolved from complete tissue supported to implant supported or retained prosthesis. Fixed Implant supported prosthesis improved patient comfort and functional capabilities. It all started with using fixed detachable casted metal bar with acrylic teeth by Branemark. Although, technology in implant supported prosthesis fabrication has improved and treatment options have been diversified for the past 40 years, rehabilitation of edentulous patients remains a complex treatment. New objectives and criteria need to be suggested to simplify treatment modalities. There are several factors that should be considered while planning for the treatment in such cases. Pre-operative schemes vary considerably and there are many factors that affect functional and esthetic aspects of treatment. Quality time should be spent in diagnosis and treatment planning. We know that several authors discussed major principles for treatment planning and these principles should serve as a foundation for any treatment options that involve advanced technology. The purpose of this presentation is to propose more detailed criteria that help in decision making during treatment planning edentulous patients with fixed implant supported restorations. These criteria can be used as a guide for clinicians to simplify the process of treatment planning and to expect more predictable outcome of treatment in regards to functional and esthetic aspects.

alawadhipros@gmail.com

Biological endodontics: Evolution or revolution

Georgette Atte Brisson

National University of Cordoba, Argentina

To date, direct pulp capping was a treatment generally used in young patient with an exposed vital pulp and with a dental material to facilitate the formation of reparative dentin and maintenance of vital pulp this treatment now is applied in adult patients as well. Re-vascularization is a new treatment method that allows the stimulation of the apical development and the root maturation of immature teeth. Pulp re-vascularization is dependent on the ability of residual pulp and apical and periodontal stem cells to differentiate. This lecture will review not only the materials of choice and assess a step by step protocol for: Pulp re-vascularization, to obtain desired therapeutic success. New trends in irrigation like solutions, goals, risks and limitations and recommendations for effective and safe irrigation will be presented. Current status in endodontic instruments in past years: A reciprocating movement NiTi instrument was introduced to endodontics, and due to its simplicity of use, the lack of procedural errors during cleaning and shaping, it has acceptance among dental schools, GPs as well as endodontics worldwide. The presentation is a summary of the current status of endodontic files; recommendations for safe and effective use of instruments will be presented. After this lecture, the participants will be able to understand the biological objectives of root canal treatment recommendations for effective and safe irrigation and understand the ability of a single file system over multiple files systems in preparing canals without procedural errors.

georgettearceb@gmail.com

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From planning to cementation

Ariel Merino

Private Dentist, Argentina

Patient planning is the first step of any restorative treatment. To get a better aesthetic visualization, better communication with our interdisciplinary team and our patients is important and will in turn enhance our treatments to run more effectively. Our planning is based on the information gathered and in the correct diagnosis and interpretation to develop a high impact proposal for our patients. In this presentation we will show a review of clinical cases with minimally invasive restorative treatments, documented with photography and videos, analyzing all important aesthetics and functional points. Information is most important, which is why it is required to emphasize the analysis of the patient's interview where manifesting their desires and personal interpretations of his aesthetic for us to give our patients a leading role in this story. It is important to evaluate all possible paths in restorative treatments whether these additives, subtractive or corrective is for them that hand seek planning together with the triad patient, dental technician interdisciplinary team the best way forward.

ariel_merino153@hotmail.com

Tempocopy, a protocol to achieve complete oral rehabilitations copying the provisional prosthesis by means of CAD/CAM

Dirk Neefs^{1,2}¹Vrije Universiteit Brussel, Belgium²University of Liege, Belgium

Introduction & Aim: A method to achieve complete oral rehabilitation with predictable success. Applicable to oral rehabilitations with fixed prosthesis on teeth and/or implants. We use the fixed provisional restorations to determine the centric occlusion and dental morphology for an optimal functional outcome on a periodontal, phonetic and aesthetic level.

Materials & Methods: We prepare every case of rehabilitation in a classical way, using die cast models, diagnostic wax up, CBCT scan, surgical guide and a thermoplastic mold of our wax up in order to achieve provisional methacrylate crowns made intra orally. In order to deprogram the masticatory muscles and finding the centric occlusion a Lucia jig is then incorporated in the provisional crowns. After a minimal time of 10 minutes the centric position is located. Adding methacrylate posterior occlusal stability and lateral guidance is optimized. Esthetic and phonetic adaptations are made. If there are no subjective and objective problems, then in the next weeks of follow up, we scan our provisional bridge. This virtual bridge then will be positioned on the virtual model and all the parameters controlled. Finally the technician makes the reduction on the virtual structure for later ceramic covering and this design is send to the Zirconia milling machine.

Results: Achieving the occlusion in centric relation, re-establishing the temporomandibular joint (TMJ) in its physiological position makes us realize full arch rehabilitations with a very good long term prognosis.

Conclusion: The tempocopy protocol allows us to work with much more predictability in aspects of occlusion, periodontics, phonetics and aesthetics.

neefsdirk@gmail.com

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Comparison of crestal bone loss and radiographic bone density change around immediate functional versus non-functional loaded dental implants: A parallel group randomized clinical trial

Kaushal Kishor Agrawal

King George Medical University, India

Some studies comparing immediate functionally loaded and non-functionally loaded implants have found a significant difference in crestal bone loss and implant survival rates while some others have found immediate functionally loaded and non-functionally loaded implants to be comparable with respect to the same parameters. The previous studies only illustrate the lack of consensus regarding the loading protocol for immediately loaded implants. There exists a dilemma regarding the protocol for immediate loading; this prospective experimental study was conducted to determine whether there exists a difference in bone response with respect to immediate functional and non-functional loading. The study sample consisted of 120 subjects who were partially edentulous in the mandibular arch and were randomly divided into 2 groups, each consisting of 60 subjects. Group I subjects were restored with implant system with immediate functional loading and Group II with implants system with immediate non-functional loading. Both groups were evaluated at baseline, 3 months and 6 months for crestal bone level changes and radiographic bone density changes. It was concluded from the study that immediate loading of implants helped to stimulate bone ossification around implants at the lateral apical level at 3 and 6 months and at the crest from 3 months to 6 months. Furthermore, the immediate functional loading of implants resulted in a significantly greater degree of bone demineralization at the alveolar crest from the time of implant placement up to 3 months compared with immediate nonfunctional loading.

drkaushalp@yahoo.co.in

Keep up with the pace of change in pediatric restorative dentistry!

Asli Topaloglu Ak

Ege University, Turkey

Caries tissue removal has been done by rotary instruments with different speeds for a long time. It has been revealed that, rotary instruments, cavity preparations based on extension for prevention and Black principles can result with loss of healthy dental tissue and tooth in the long term. This led the researches focus on new caries removal concept that prevents healthy dental tissues which is named as minimal invasive approach. At the same time and at the same speed, restorative materials have evolved as the demands have changed over the course of time. Currently, pediatric dentists are confronted with many choices available in the market as well. However, sometimes it is hard for them to decide which material to use in different clinical situations. Remarkable developments in GIC resulted in wide range of alternatives for clinical applications such as resin modified glass ionomers (RMGIC), high viscosity glass ionomer cements (HVGIC), nanoionomers and glass carbomer cements, and with claims of improved physical characteristics. On the other, compomers, composite resins are still the most esthetically desirable materials. No mixing, light polymerization and one step adhesive systems combine for their highly rated ease of use. A better understanding of the components and the strengths and weaknesses of each category of materials offers the opportunity to select the right material for the right situation. In this lecture, definitions of these materials, a general description of their contents and usage-selection criteria will be discussed.

aslitopaloglu@yahoo.com

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Rate of intrusion and root resorption of maxillary incisors by different intrusion mechanics: A comparative study

Prachi Goel

Career Institute of Dental Sciences and Hospital, India

Introduction & Aim: There are many intrusion mechanics such as Ricketts utility arch, K-SIR, RCS, J-headgear, implant, Connecticut intrusion arch, Burstone arch, three piece arch, vertical loops and many more. Since it is difficult to choose which method is better, an attempt is made through the present study to compare the rate of intrusion, root resorption and effect on maxillary central incisors achieved by three different commonly used intrusion techniques: Ricketts utility arch, Kalra's simultaneous intrusion and retraction arch and arch with reverse curve of Spee.

Methods: The study was conducted over 30 patients aged between 14 and 25 years with deep bite requiring at least 2-4 mm intrusion of maxillary incisors. These patients were equally divided into three groups based on intrusion technique used, Ricketts utility arch (Group I), K-SIR arch (Group II) and RCS arch (Group III). For each patient, amount of intrusion and root resorption occurring during intrusion was measured. Seven angular and six linear cephalometric measurements were made to evaluate skeletal and dental changes before and after incisor intrusion.

Results: The mean true incisor intrusion achieved with utility arch was 1.6 mm, with K-SIR; 1.25 mm and with RCS; 0.70 mm, respectively. The rate of intrusion of utility arch was 0.44 mm/month, K-SIR-0.33 mm/month, RCS-0.35 mm/month, the difference was not statistically significant ($p=0.451$). Utility arch had significantly higher mean root resorption of 1.56 mm as compared to K-SIR of 1.08 mm and RCS of 0.96 mm.

Conclusion: Both the intrusion rate and root resorption is more in utility arch compared with the KSIR arch, though the rate of intrusion is almost same; the root resorption is much less.

dr.prachigoel@gmail.com

In vitro evaluation of microleakage of class II cavities restored with bulk-fill flowable

Edwin Sarkisians, Ladan Madani and Elham Mohammadi Golrang

Tehran University of Medical Sciences, International Campus, Iran

This study compares the microleakage of cavities filled with bulk-fill flowable composite and those incrementally filled with FiltekZ250 micro-hybrid composite at the enamel and dentin margins. A total of 102 sound human premolars were collected and randomly divided into 6 groups of 17. In groups 1, 3 and 5, standard class II mesio-occlusal cavities with specific dimensions were prepared with their gingival margin 1 millimeter above the cemento-enamel junction. In groups 2, 4 and 6, standard class II mesio-occlusal cavities with specific dimensions were prepared with their gingival margin 1 millimeter below the cemento-enamel junction. After etching of the cavities, Single Bond 2 was applied as recommended by the manufacturer. In groups 1 and 2, all cavities were incrementally filled with FiltekZ250 composite. In groups 3 and 4, the gingival 2 mm of the cavity was filled with Filtek bulk-fill flowable composite and the rest of the cavity was restored with FiltekZ250. In groups 5 and 6, the gingival 4 mm of the cavity was restored with Filtek bulk-fill flowable composite and the remaining part was restored with FiltekZ250. The teeth were immersed in 2% basic fuchsin for 24 hours and after rinsing and drying, they were mesiodistally sectioned by a diamond disc. The sections were evaluated under a stereomicroscope at $\times 40$ magnification. No significant difference was noted in the microleakage scores of the gingival margins of the 6 groups. No microleakage was noted in the enamel margins of the samples. Neither Filtek bulk-fill flowable nor FiltekZ250 could completely prevent gingival wall microleakage. Based on the results, Filtek bulk-fill flowable composite can be safely and reliably used in 4 mm thick increments.

edwinsarkisians@outlook.com

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Prevalence of myofascial pain dysfunction syndrome in dentistry students of Tehran International University of Medical Sciences

Elham Mohammadi Golrang, Mina Khayyam Zadeh, Pooria Behtarin, Zahra Ghoncheh and Hanieh Kaviyani
Tehran University of Medical Sciences, International Campus, Iran

Among oral and maxillofacial pains, masticatory muscle pain is the second most common complaint of patients after toothache, which affects a significant proportion of people. This disorder is the most prevalent form of temporomandibular disorders which is caused by various physiological and psychological causes, such as stress and anxiety. In the meantime, the stressful jobs, especially dentistry are exposed to the side effects of these pressures more than other groups in the society due to the pressure and stress which exists invariably and naturally in these jobs. The purpose of this study was to assess the prevalence of MPDS in dentistry students and also studies the relationship of this disease with mental-psychological disorders such as stress and anxiety. In this descriptive-cross sectional study, 48 patients were randomly selected in a cross-sectional manner. Each student filled out an information questionnaire consisting of background and clinical examination parts and was examined regarding clinical examinations and the presence or absence of pain 2. Syndrome caused by the mastication muscles dysfunction. Subsequently, the data and information related to the variables were analyzed, using 20SPSS statistical software and descriptive statistical tests and Fisher's exact test. The results of this study showed that the most common symptom in this study was clenching with the prevalence of 79.2%, and then was the joint sound of "Click" type with a prevalence of 77.1%. Furthermore, there was a significant relationship between depression and anxiety and masticatory muscle pain level.

el.mg27@yahoo.ca

Evaluating the level of iron, zinc and vitamin B12 in blood and saliva of patients with geographic tongue

Mina Khayyam Zadeh, Elham Mohammadi Golrang, Zahra Ghoncheh, Hanieh Kaviyani and Mohammad Taghi Kiani
Tehran University of Medical Sciences, International Campus, Iran

Benign migratory glossitis or geographic tongue is a common benign condition of unknown cause that occurs in the form of annular lesions on dorsal surface of the tongue. Vitamin deficiencies, emotional stress, digestive disorders and nutritional deficiencies are often cited as reasons with greater possibility. This study aimed to assess iron, zinc and vitamin B12 levels in blood and saliva of these patients in order to seek a more effective treatment for them. This is a case-control study consisting of 40 subjects who were examined at Oral Medicine Department of Tehran Dentistry School, International Campus and Mashhad Dentistry School by oral disease specialist and were enrolled based on inclusion and exclusion criteria. Samples of blood and saliva (2 mL each) were collected from cases and controls and the levels of iron, zinc and vitamin B12 were measured. Independent t-test was used for statistical analysis. The subjects consisted of 20 patients with geographic tongue with a mean age of 33.15 ± 4.8 and an age range of 19-49 years including 8 females and 12 males and 20 healthy people with a mean age of 29.40 ± 50.7 and an age range of 24-45 years including 10 females and 10 males. The mean level of saliva zinc was lower in the patient group than that the control group and there was a statistically significant difference between the two groups. No statistically significant difference existed among other variables in the blood and saliva. In patients with geographic tongue, salivary zinc levels were lower than the controls; although iron and vitamin B12 deficiencies may affect lingual papillae; no changes were found in their levels in serum and saliva.

elham.mg28@yahoo.com

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Post orthodontic aesthetics: A smile apart

Akshayraj Langaliya

AMC MET Dental College and Hospital, India

The principle objective of any aesthetic dental treatment is to achieve a beautiful smile. It's the beauty of the smile that gauges the acceptability of any given treatment. The primary treatment for improvement in appearance and achievement of an esthetic smile is orthodontic treatment in the present dental scenario with the changing concepts of orthodontics making it acceptable for any age group. There is a very limited number of patients who, in spite of being treated with contemporary orthodontics, still require an additional approach for esthetic correction. This heightened awareness of esthetics has challenged the field of orthodontics to look into this aspect in a more organized and systematic manner for which a through multi-disciplinary approach is essential. Five (5) exclusive case reports are discussed where alternatively novel techniques were implemented, maintaining a conservative approach within the perimeters of restorative and esthetic guidelines.

akshaylangalia@yahoo.com

Comparison of fracture and deformation in the rotary endodontic instruments: Protaper versus K-3 system

Sana Ehsen Nagi and Farhan Raza Khan

Aga Khan University and Hospital, Pakistan

Introduction: Fracture of rotary instrument in the root canal space is considered as a serious procedural accident in endodontics. The best way to manage such accidents is to avoid use of deformed endodontic file.

Materials & Methods: An experimental study was done on the extracted human teeth to compare the fracture and deformation of the two endodontic files system namely, K-3 and Protapers. A record was kept of any file deformation or fractured during root canal preparation. The location of fracture was also noted along with the identity of the canal in which fracture took place. Chi-square test was applied to compare the deformation and/or fracture in the two rotary systems.

Results: The incidence of fracture was similar in the two groups. Most of the fractures occurred in mesiobuccal canals of maxillary molars and buccal canals of premolars. However, the likelihood of file fracture increases 5.65 folds when the same file is used more than 3 times.

Conclusions: There was no difference in K-3 and Protaper files with respect to file deformation and fracture. Irrespective of the rotary file system, apical third of the root canal space was the most common site for file fracture.

Dr_sanas@hotmail.com