

2nd Annual Dentistry and Dental Sciences Congress

January 10, 2022 | Webinar

Keynote Forum



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New materials for implants Rehabilitation with better behavior to decrease the risk to have periimplantitis

Implant rehabilitation is one of the most important and common treatments nowadays. In recent times, the materials used for these implant rehabilitations have changed. At the beginning, gold and resin were used, but nowadays, zirconia, lithium disilicate and cobalt-chromium are the most common materials for implant and tooth rehabilitation. The mechanical behavior of these materials is very different from the new materials I want to present. New composites, hybrid composites as veneering materials and carbon fiber, peek (polyether-ether-ketone), graphene, acetal resin for the framework have a completely different quality than zirconia, ceramics, or non-noble metals: they can absorb and dissipate the forces applied (functional and parafunctional forces) to the implants. Teeth have the periodontal ligament to absorb these forces, but not implants. These materials, by absorbing and/or dissipating these forces, reduce the stress in the implant area: bone, implant, prosthesis and gingival area.

All the literature shows us that the stress in the implant area, associated with gingival inflammation, can affect the bone integration of implants, leading to peri-implantitis and possible implant failure. These new materials in a patient with risk or high risk of having gingival inflammation (smokers, poor hygiene, previous periodontitis, genetic factors...) can decrease the risk of having peri-implantitis.

In this presentation, I want to show you different studies (finite element analysis, epoxy resin...) and multiple cases explaining this theory, this philosophy, these new materials. The material used for implant rehabilitation can affect implant survival.

Biography

Oriol Cantó Navés is a doctor in dental surgery (DDS), universitat de barcelona (UB) (1991) and he did his PhD, in universitat internacional de catalunya (UIC). He is associate lecturer in master of rehabilitation and dental esthetic program and implants program of the universitat internacional de catalunya-barcelona (UIC) and medical director: university dental clinic (UIC). He is a member of the spanish society of prosthodontics and esthetics (SEPES) and member of the implants spanish society: SEI. He attended many scientific conferences.

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Scientific Tracks & Abstracts



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Review of bioactive bioceramic materials for pediatric Dentistry

Carolyn Primus

Augusta University, USA

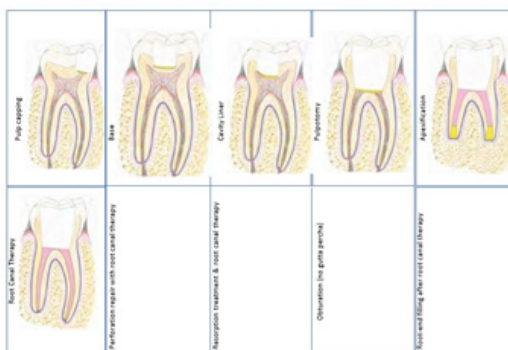
Statement of the Problem: Inert ceramics have been used for medical devices for centuries to replace hard tissue defects, especially in teeth. In the 1990s, calcium silicate cement and later, the calcium aluminate cement, were found to be bioactive and biomineralizing. That is, they form hydroxyapatite *in vivo*. This bioactivity has led to improved outcomes for dental disease in primary and permanent teeth. Hydraulic calcium silicate and calcium aluminate cement are combined with ceramic and organic additives, which are set with water and with body fluids.

Methods: X-ray diffraction and particle size analyses were combined with published information to compare and Indications for Bioactive Bioceramic Materials contrast various products used for pediatric pulpotomies.

Findings: The bioactive bioceramic cement products for pediatric are primarily composed of tricalcium and dicalcium silicate powders, with various ceramic powders to make them radiopaque. The particle size distributions of the products have been improved (finer) and the prices have decreased over the past 20 years since their introduction to pediatric dentistry. Some products have been formulated with organic liquids or resins.

These ceramic cement perform differently *in vivo* than other pulp medicaments, bioactive glasses and so-called bioactive resin-modified glass ionomers, providing greater clinical benefit.

Conclusion: These ceramic cements are a boon for pediatric dentistry to arrest the disease, encourage reparative dentin and support healing without resorption or fixation of the pulpal tissue.



Biography

Primus has her expertise in materials for dentistry, particularly bioactive bioceramics. Her training is in materials science and engineering. She has invented many dental products over the past 30 years, contributed chapters to books including Phillips' Science of Dental Materials and has 7 patents related to bioactive bioceramics.

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3D printing in Endodontics

Abdullah AlFadda

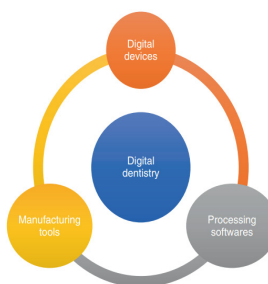
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It is well known that we view X- and Y-planes when we view images generated using digital X-rays. Now, let's embrace the third dimension that is capable of dramatically improving diagnostic interpretations and treatment planning. The aim of this lecture is to describe how endodontic therapy can be achieved by using static and dynamic navigation for complex root canal treatments.

Objectives:

- 1- Navigation in Dentistry
- 2- Digital Impression Systems, CAD/CAM and STL file
- 3- 3D Printing in Endodontics
- 4- Static Guided Nonsurgical Approach for Calcified Canals of Anterior Teeth

Fig. 1.2 Triad of digital dentistry



Biography

Alfadda was born and raised in Riyadh, the Capital of Saudi Arabia. He graduated with second class honors and earned his bachelor of dental surgery (BDS) degree at King Saudi University, College of Dentistry. Alfadda enjoys all kinds of art and considers endodontics as one he's very passionate about, which led him to pursue advanced training at King Abdulaziz Medical City. In his free time, he loves to explore new developments in digital dentistry and virtual planning.

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Sleep disorders and psychological profile in oral cancer survivors: A case-control clinical study

Elena Calabria

University of Naples, Italy

Background: Sleep disturbance and mood disorders are commonly reported in cancer survivors but their prevalence in patients affected by oral cancer remains unclear. The purpose of this study was to assess the prevalence of sleep disorders (SD), anxiety and depression and potential predictors among five-year oral cancer survivors (OCS).

Methods: 50 OCS were compared with an equal number of healthy controls matched for age and sex. The Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness Scale (ESS), Numeric Rating Scale (NRS), the Total Pain Rating Index (T-PRI), Hamilton rating scales for Depression and Anxiety (HAM-D and HAM-A) were administered. Descriptive statistics, including the Mann-Whitney U test and hierarchical multiple linear regression analysis were used.

Results: Poor sleep quality ($PSQI \geq 5$) was present in 52% (26) of the OCS. The global score for the PSQI, ESS, NRS, T-PRI, HAM-A, HAM-D was statistically higher in the OCS than the controls ($p\text{-value} < .001$). Regarding the PSQI component, the subjective sleep quality, sleep latency and daytime dysfunction were statistically significantly different between the groups ($p\text{-value} = 0.001, 0.029, 0.004$ respectively). The hierarchical multiple regression analyses showed that the PSQI was negatively correlated with years of education ($p\text{-value}: 0.042^*$) and positively correlated with alcohol consumption ($p\text{-value}: 0.049^*$) and with the use of systemic medications ($p\text{-value}: 0.044^*$).

Conclusion: Sleep and mood disorders are common comorbidities in OCS; therefore, early assessment and management before, during and after treatment should be performed in order to improve the quality of life of OCS.

Biography

Elena Calabria graduated in dentistry at the university of naples federico II in 2016. She attended a Ph.D. program in clinical and experimental medicine at the same university (2018-2021) and carried out a clinical study on patients affected by medication-related osteonecrosis of the jaws cooperating with the eastman dental institute, university college london. During her Ph.D., she also attended the outpatient and inpatient clinic at the oral medicine unit in naples and collaborated on several research projects mainly related to oral cancer, autoimmune blistering diseases, chronic orofacial pain disorders, publishing-related articles in prestigious international journals.

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Mouth opening, jaw disability, neck disability, pressure pain thresholds and myofascial trigger points in patients with disc displacement with reduction

Armando Campos Lopez

University of Zaragoza, Mexico

Objective: To assess jaw and neck function, pressure pain threshold (PPT) and the presence of trigger points (TrPs) in disc displacement with reduction (DDWR) subjects compared to healthy subjects. Methods: One hundred DDWR subjects and 100 matched controls were studied. Clinical evaluations included demographic data, range of motion, jaw and neck disability, PPT and muscle TrPs.

Results: DDWR subjects have limited pain-free opening limitation ($p < 0.001$), jaw and neck disability limitation ($p < 0.001$) and higher presence of active and latent TrPs limitation ($p < 0.001$) compared to healthy subjects.

Conclusion: DDWR subjects present a limited pain-free mouth opening, higher jaw and neck disability, lower PPT and major presence of active and latent TrPs compared to healthy subjects. Cervical spine and TMJ evaluation and treatment should be considered in DDWR patients.

Table 1. Demographic and clinical data of both groups.

	DDWR (n = 100)	Healthy Controls (n = 100)	p-value
Gender (male/female)	21 (21)/79 (79)	41 (41)/59 (59)	0.23
Age	29.5 ± 12.33	27.68 ± 11.95	0.36
BMI	25.71 ± 5.13	25.8 ± 5.7	0.97
Noises during opening	86 (86)	0 (0)	0.001*
Pain-free opening	4.30 ± 3.89	5.13 ± 0.73	0.001*
Jaw Mobility			
Maximal jaw opening	5.20 ± 3.09	5.13 ± 0.73	0.06
Assisted opening	5.28 ± 0.61	5.2 ± 0.84	0.77
Right lateral	1.20 ± 0.30	1.17 ± 0.39	0.10
Left lateral	1.11 ± 0.29	1.12 ± 1.2	0.45
Protrusion	0.66 ± 0.22	0.66 ± .24	0.83
JFLS – Global	36.78 ± 29.03	2.53 ± 7.1	0.001*
JFLS – Mastication	12.65 ± 10.03	1.27 ± 4	0.001*
JFLS – Mobility	14.42 ± 10.50	0.86 ± 2.45	0.001*
JFLS – Verbal	9.81 ± 13.10	0.41 ± 1.5	0.001*
NDI Total	8.72 ± 5.72	1.94 ± 2.51	0.001*

Values are expressed as mean ± standard deviation. Gender, noises during opening, and NDI are expressed as n (%). DDWR: Disc displacement with reduction; BMI: Body Mass Index; NDI: Neck disability index; JFLC: Jaw functional limitation.

Table 5. Total number of TrPs in masticatory and neck muscles in patients with DDWR and healthy control subjects.

	DDWR (n = 100)	Healthy controls (n = 100)	p-value
Total TrPs on neck	6.81 ± 2.04	0.79 ± 1.27	0.01*
Total number of latent TrPs on neck	2.56 ± 2.31	0.54 ± 1.04	0.01*
Total number of active TrPs on neck	4.23 ± 2.59	0.25 ± .557	0.01*
Total TrPs on TMJ	6.84 ± 2.18	0.39 ± 1.71	0.01*
Total number of latent TrPs on TMJ	2.30 ± 2.54	0.39 ± 1.17	0.01*
Total number of active TrPs on TMJ	4.54 ± 2.82	0 ± 0	0.01*

TrPs: Trigger points; TMJ: Temporomandibular joint; DDWR: Disc displacement with reduction.

Biography

Armando Campos is a physical therapist with 10 years of experience in clinical field. Currently he is finishing his Ph.D. in universidad de zaragoza, spain, waiting to submit his doctoral thesis titled: "Effectiveness of orthopedic manual therapy in subjects with disc displacement with reduction". Dr has his expertise in temporomandibular disorders and neck disfunctions. He has been a professor in several universities in mexico and abroad as well as a speaker in different postgraduate physical therapy courses.

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Management of congenitally missing bilateral maxillary lateral incisors with Dental Implants

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The replacement of single tooth in pre-maxilla is challenging because of highly specific soft and hard tissue criteria, in addition to all other esthetic, phonetic, functional and occlusal requirements. Anterior single- tooth implant is the modality of choice to replace missing congenitally maxillary lateral incisors

Congenitally missing teeth are frequently presented to the dentist. Interdisciplinary approach may be needed for the proper treatment plan. The available treatment modalities to replace congenitally missing teeth include prosthodontic fixed and removable prostheses, resin bonded retainers, orthodontic movement of maxillary canine to the lateral incisor site and single tooth implants. Implants are a viable option for replacement of congenitally missing lateral incisors and should be considered before the commencement of definitive treatment plan. Early diagnosis and proper planning can achieve excellent aesthetics. Interdisciplinary treatment plays a vital role to achieve an excellent, esthetic result for a most predictable outcome. The aims for this presentation to present a case series of replacement of bilaterally, congenitally missing maxillary lateral incisors with dental implants.

I. Introduction

The successful use of dental implants to replace missing teeth has been one of the most popular, exciting and evolving areas of clinical dentistry. When implants are thought as a treatment option, treatment planning has become more complex for the dental practitioner and an interdisciplinary team approach is recommended [1,2]. Interdisciplinary approach would involve a preprosthetic and orthodontic treatment and following consultations with an oral surgeon and a restorative dentist, implant treatment was selected as a treatment modality [2,3].

The maxillary lateral incisor is the second most frequently missing tooth after the mandibular second premolar even though Muller et al. found that maxillary lateral incisors experience the most agenesis (not including third molars).[4] Agenesis, the absence of permanent teeth, is a common occurrence among dental patients. The total incidence of tooth agenesis is about 4.2% among patients that are seeking orthodontic treatment ; and with the exception of third molars, the maxillary lateral incisors are the most common congenitally missing teeth with about a 2% incidence . [5,6] There are different treatment alternatives for patients with a missing lateral incisor because of congenital reasons [1,5]. Esthetic and functional problems can arise when an orthodontic space closure is realized and the canine is moved into the missing lateral incisor's space [2,6]. The two major alternative treatment options are orthodontic space closure or space opening for prosthetic replacements. But they both can compromise aesthetics, periodontal health and function. Treatment alternatives for restoring edentulous spaces resulting from congenitally missing permanent lateral incisors include removable partial dentures, conventional fixed bridges, resin-bonded bridges, autotransplantation, orthodontic repositioning of canines to close the edentulous space and single-tooth implant.[1,2,5]

Since the maxillary lateral is in the anterior esthetic zone, details of the total smile and individual dental esthetics need to be considered. Recent literature ranks esthetics high in orthodontic patient diagnosis. "Wylie emphasized that the goal of orthodontic treatment should be to attain the best possible esthetic result, both dentally and facially . Studies have shown the importance of

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having an attractive smile; attractive people are perceived to be kinder, more sensitive, interesting, modest, sociable, exciting, obtain better jobs and lead more fulfilling lives.[7]

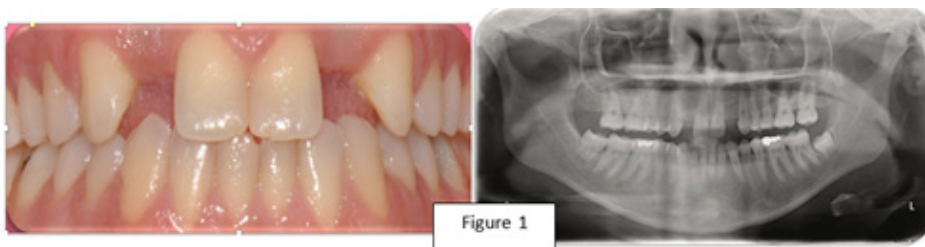
For patients with a congenitally missing maxillary lateral incisor, multiple factors should be considered when formulating a treatment plan. [8] These should include available space for the crown and root, canine position, molar occlusion, smile/dental/gingival esthetics, bone quality and quantity, age, facial profile, lip posture and finances. [8,9]

II. Case Series

Clinical Case Report

Case (1):

A 20 Years old female referred from orthodontic department to implant clinic after finishing re-distribution of spaces, her chief complaint was “I feel shy when smiling without teeth”, she was physically healthy with no history of dental trauma, she had slightly convex facial profile with lip competence. Upon intra-oral examination patient was shown to have class I molar relationship right and left and class I canine relationship right and left. Congenitally missing tooth #12, 22. Speaking of prevalence of hypodontia and developmental malformation of permanent teeth in Saudi Arabia among schoolchildren it was found that the most frequently missing teeth in Saudi Arabian children were the lower second premolars, followed by the maxillary lateral incisors and the maxillary second premolars. Agenesis of Saudi Arabian lateral incisors was significantly more frequent in maxilla ($p < 0.05$) than in the mandible (2). The patient maxillary dental midline was coincide with facial midline, but mandibular dental midline was shifted 2 mm to the left side, overbite was 10%. (Figure 1). According to house classification patient was philosophical type.



The restorative replacement of congenitally missing maxillary lateral incisors raises several treatment planning concerns. Therefore, it is beneficial to use an interdisciplinary treatment approach to obtain the most predictable outcome (3). Upon soft tissue examination, patient was found to have healthy attached gingiva of 5 mm width with pink, firm and stippled appearance. As well as free gingiva with pink, firm and flat consistency. Probing depth was generalized 2 to 3 mm all over. With thick biotype. Patient had no mobility in any of the teeth. Upon space analysis the mesiodistal width of tooth #12 was found to be 6 mm, while #21 was 7 mm. bone width was read at 3 sites, at crestal bone, then 3 mm from crest and 6 mm from crest. At the site of tooth #12 readings were 3 mm, 7 mm and 8 mm respectively. For tooth #33 bone readings were 4 mm, 5.8 mm, 6 mm, 9mm respectively.

Proposed treatment plan for the missing upper lateral incisors was to surgical place implant fixture are the missing area of #12, #22 (Figure 2) followed by implant retained all ceramic crowns. Two stage technique was chosen for this treatment which

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included Local anesthesia 4% articaine with epinephrine, followed by midcrestal with intrasulcular incision one tooth mesial & distal for #12, #22. AstraTech (Osseospeed) size 3.0 x 11 mm implant fixture for both sites and cover screw was placed. Followed by simple interrupted suture using Vicryl 4-0 and left for 2 month healing period. Hawley retainer with #12, #22 porcelain crowns was placed. (Figure 3)



After the 2-month duration, a second stage surgery was done to the implant sites and temporary implant abutment and provisional crowns were placed. (Figure 4). One of the advantages of placing custom provisional restoration instead of healing abutment at second stage surgery is to generate the exact emergence profile immediately and to allow the soft tissue to heal to its desired dimension. (4) Reaching to the prosthetic phase of treatment, conventional loading was done using cement-retained IPS e.max press crowns abutments with an implant level impression type. Hybrid abutments were used with shade A3 selection. Concerning Using Lithium-Dsilicate Hybrid Abutments for Implant Restorations, IPS e.max, pressable lithium disilicate offers a solution in combination with a titanium abutment, enabling laboratory ceramists and dentists to provide implant restorations that demonstrate predictable function, esthetic, without compromising strength, durability and life-like optical characteristics. (5) (Figure 5) shows site of #12, 22 after prosthetic part insertion.



Furthermore, concerning screw-retained Versus Cement-Retained Implant Restorations current concepts shows that no differences were significantly found between the two types of prosthesis in terms of implant survival or success rates. Prosthesis success rates (>72 months), cement-retained prostheses demonstrated a 93.2% success, compared with 83.4% with screw-retained prostheses.

It is generally agreed that the current trends to favor cement-retained implant restorations for their superior esthetics, occlusion, ease of fabrication and reduced chairside time. (6) Finally Implant maintenance and recall consisted of 3 month recall in the first year, followed by 6 month recall in the second year, then an annual visit every year. (Figure 6) shows preoperative and postoperative.

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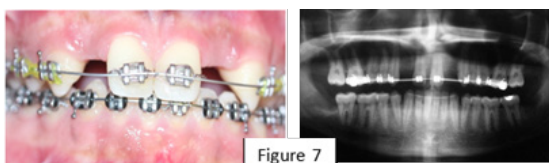
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Case (2):

18 years old male patient presented to implant clinic referred from orthodontic department, his chief complaint was “I feel ugly while I am smiling due to my front teeth spacing” upon examination patient had congenital missing laterals #12, #22. Patient had no medical history. Family history consisted of diabetes and hypertensive from father’s side and diabetes from mother’s side. Oral hygiene habits included brushing twice daily. Patient is philosophical type according to house classification.

Upon clinical examination; extra-oral and intraoral shows normal measures with facial symmetry and an average smile line. Patient had class I molar occlusion right and left sides. With an overbite 3mm and overjet 2 mm. Proposed Treatment plan consisted of orthodontic redistribution for space regaining at side #12, #22, followed by surgical placement of implants at the same site and with implant supported ceramic crowns. (Figure 7) shows intraoral photo after orthodontic space distribution.



Surgical placement of implant consisted of local anesthesia 2 carpules of 2% Lidocaine with epinephrine. Followed by crestal with intra-sulcular incision one tooth mesial & distal + T-shape modified papillary regeneration incision, reflection of flap, then expansion of bone was done for #22 and 2-stage implant placement of Astra system size 3.5x 11 mm for both #12 and 22 then cover screw. Suturing Vicryl with simple interrupted suture technique done and left for 4-month healing period. Post-surgical medications prescription included augmentin 1 gm, sulpadine, ibuprofen and chlorohexidine mouth wash. Then on the same day Maryland Bridge on site #12, 22 was placed after surgery (Figure 8). After 4 month of healing 2nd stage was done & final impression was taken and screw retained provisional crowns were placed for emergence profile and soft tissue healing. After 2 month period insertion of Zirconia cemented crowns was done (Figure 9).



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Case (3):

29 years old male patient presented to implant clinic complaining of missing front teeth. Patient is smoking ASA II. Patient had no significant medical and family history, with good oral hygiene brushing twice a day. House classification was philosophical patient. Extraoral examination showed facial symmetry with no swellings and no muscular tenderness. Smile line was average. Intraoral examination showed all parameters within normal limits and bilateral class I molar relation. Vertical overbite was 3mm and horizontal overjet was 2mm.

Proposed treatment plan consisted of implant placement at site #12, 22. Patient underwent smoking cessation protocol 2 weeks prior implant placement by using 5 A's protocol which consisted of - Ask, Advise, Assess, Assist and Arrange.

At the day of implant placement, procedure done consisted of local anesthesia 2 carpules 2% Lidocaine with epinephrine. Mucograft and sulcular flap with one tooth mesial and one distal + T shape modified papillary regeneration incision, osteotomy site preparation, 3i BIOMED 3.25 x 11.5 mm implant with GBR was placed and cover screw then vicryl suture with single interrupted technique. (Figure 10). After 3 weeks provisional essix retainer with crowns at site of #12, 22 was placed. After 6 month of implant placement 2nd stage and provisional screw retained crown was placed. Lastly, after 2-month final impression was taken using implant level technique with heavy and light putty impression material and porcelain fused to metal cemented crown was placed at site of implants #12, 22. (Figure 11)



III. Conclusions

The replacement of missing teeth in the esthetic zone is challenging, unique surgical and prosthetic concepts are implemented for proper result. Orthodontic space closure and implant substitution of missing maxillary incisors produced similar satisfactory esthetic results. Neither of the treatments impaired temporomandibular joint function. It is important that the orthodontist together with the other specialists frame a treatment objective which are realistic and meet the needs of the patient. Constant

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interaction and communication among the team members and the patient at all levels of treatment are the keys to the success of the interdisciplinary treatment.

Biography

Zainab Hasan Sulaimani is a dentist and educator with a comprehensive and unique expertise. She combines her dual roles as the program director for the dental implant fellowship at jeddah specialty dental center, saudi arabia, as well as holding the title of consultant in restorative and dental implants.

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Remote learning using co-constructed clinical cases as a preclinical strategy in Dentistry

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Introduction: As a result of the COVID-19 pandemic, patient care by dental students was suspended. Because the cognitive process supporting the diagnostic approach depends on the observed casuistry, the inability to perform anamnesis and examine patients hinders the development of these skills. Objective: Present a remote learning strategy through the execution of synchronous clinical workshops based on the discussion of co-constructed clinical cases.

Methodology: By videoconference at the request of the students, the teacher delivered background information, photographs and radiology examinations. Students could also ask questions of the teacher, who played the role of the patient, in real-time. The teacher imparted information while avoiding conducting the diagnostic process, which through “forward” (inductive) reasoning allowed the students to observe and analyze information to then formulate a diagnostic hypothesis or request more background information. If the student could not perform the pedagogical exercise, they were guided by the teacher. Final feedback highlighted the actions that led to achieving the objective.

Results: Most students formulated correct diagnostic hypotheses. They were also satisfied with the methodology because it encouraged inductive learning and achieving metacognition. The students felt that the methodology should be permanently implemented in the course as preparation for in-person patient care. It is important to note that when returning to in-person patient care, the students correctly executed the diagnostic process, which optimized clinical time and yielded excellent academic outcomes.

Conclusion: The discussion of clinical cases without a predetermined structure in which the students develop the clinical case based on their knowledge and cognitive skills is a useful tool for fostering the inductive process that leads to an accurate diagnosis. Implementing this methodology is proposed both when it is impossible to directly care for patients and in preclinical learning in dentistry.

Biography

Mariely has completed her DDS, university of valparaiso. master in Dental Sciences in periodontology, university of chile. specialist in periodontology certified by the national autonomous corporation for the certification of dental specialties (CONACEO). associate professor andrés bello university. head of department of periodontology andrés bello university, viña del mar. director of the specialization in periodontology andrés bello university, viña del mar (2016-2019). vice-president of the society of periodontology of chile, subsidiary valparaiso. researcher and national and international speaker.

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Oral health status of children with attention deficit hyperactivity disorder

Bashaer Abdulhadi

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Background: Attention-deficit hyperactivity disorder is one of the most common neurobiological disturbances that develop in children. Its characteristics can directly affect the individual's ability to maintain good oral hygiene; however, there is no clear evidence whether it is a risk factor for poor oral health.

Objectives: To assess the oral health status of children with attention deficit hyperactivity disorder and to determine if this condition influences the oral health status of the affected children.

Methods: A systematic search was conducted using multiple search engines. Only English publications between the years 2000 and 2014 that assess the oral health status including the caries experience and/or oral hygiene and/or gingival health and that included healthy controls were included. The target population was children with Attention-deficit hyperactivity disorder that are free from any other medical condition, with ages ranging from 0-18 years.

Results: Database search retrieved a total of 207 records using the keywords. According to title screening and after removing the duplicates 38 records were found to be relevant to our specifications and their abstracts were reviewed. Finally, 10 articles were found to be suitable for inclusion in the systematic review. Children with attention-deficit hyperactivity disorder tend to have significantly higher caries in the primary dentition compared to controls. Enamel caries were also found more significantly among this group of children. They also have higher plaque index scores when compared to healthy children. Gingival enlargement and gingival bleeding were significantly higher in children with attention-deficit hyperactivity disorder who were taking Amphetamine. Registration number: CDR42015015661 with the International Prospective Register of Systematic Reviews.

Biography

Bashaer Abdulhadi is consultant in pediatric dentistry at king fahad armed forces hospital, jeddah, saudi arabia. Ph.D., Msc in pediatric dentistry, member in prince mohammed bin salman autistic center in KFAFH, deputy of dental assistant program at KFAFH.

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Accepted Abstracts



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Periapical lesions in two inbred strains of rats differing in immunological reactivity

Biljana Ljubic

University of Kragujeva, Serbia

Aim: To investigate the influence of strain differences in immune responses on the pathogenesis of experimental periapical lesions in Dark Agouti (DA) and Albino Oxford (AO) inbred strains of rats.

Methodology: Periapical lesions were induced in male DA and AO rats by pulp exposure of the first mandibular right molars to the oral environment. Animals were sacrificed 21 days after pulp exposure. The mandibular jaws were retrieved and prepared for radiographic, pathohistological, immunohistochemical analysis, real-time PCR and flow cytometry. Blood samples and the supernatant of periapical lesions were collected for measurement of cytokines and oxidative stress marker levels. Statistical analysis was performed the Kruskal-Wallis H and Mann-Whitney U non-parametric tests or parametric One-Way ANOVA and Independent Samples T-test to determine the differences between groups depending on the normality of the data. A significant difference was considered when p values were < .05.

Results: DA rats developed significantly larger ($p < .05$) periapical lesions compared to AO rats as confirmed by radiographic and pathohistological analysis. The immunohistochemical staining intensity for CD3 was significantly higher in periapical lesions of DA rats compared to AO rats ($p < .05$). In DA rats, periapical lesions had a significantly higher ($p < .05$) percentage of CD3+ cells compared to AO rats. Also, the percentage of INF- γ , IL-17 and IL-10 CD3+CD4+ cells was significantly higher in DA rats ($p < .05$). DA rats had a significantly higher Th17/Th10 ratio. RT-PCR expression of IL-1 β , INF- γ and IL-17 genes was significantly higher in periapical lesions of DA compared to AO rats ($p < .05$). The receptor activator of nuclear factor kappa-B ligand/osteoprotegerin ratio was higher in DA compared to AO rats with periapical lesions ($p < .05$). Systemic levels of TNF- α and IL-6 were significantly higher in DA compared to AO rats ($p < .05$). Levels of lipid peroxidation measured as thiobarbituric acid reactive substances and reduced glutathione were significantly higher ($p < .05$) in the supernatant in the periapical lesions of DA rats.

Conclusion: After pulp exposure, Dark Agouti rats developed much larger periapical lesions compared to Albino Oxford rats. Genetically determined differences in immunopathology have been demonstrated to be a significant element defining the severity of periapical lesions.

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Management of Autistic Patients in the Dental Setting: Behavioral Approaches and Recommendations

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Autism is a lifelong neurodevelopment disability notable through major impairment in communication skills, social interactions and cyclic stereotypes of behaviors [Patill et al, 2016]. Boys are at higher risk of developing Autism Spectrum Disorders (ASD) than the girls, the ratio of 4.6: 1 has been reported on the gender-specific epidemiology of autism spectrum disorders. Common in siblings and twins of those with autism [Freitag,2007]. The symptomatology of ASD starts before the age of 3 (Jaber,2011). Marked impairment in the use of multiple non-verbal communications, difficulties to develop social relationships. difficulties in sharing experiences and feelings, delay or complete lack of verbal development as well as strict adherence to rituals (Totsika et al,2011), with possibly coexisting sensory disabilities, mental retardation or epilepsy (Barbaresi et al,2006). With the increase of the diagnostic cases of autism spectrum disorder (ASD), the dental management became a challenging. Dentist need be alert to different behavioral and therapeutic techniques that required to ensure safe dental treatments for affected patients. Dental care of an autistic child requires comprehensive understanding of the background of the autism, the fears and the preferences of the parents as well as the medical and dental history of each patient should be considered. The objectives of the topic: 1- is to develop a better understanding of characteristic of ASD patients. 2- is to make the dental appointment less aggressive for the patient with ASD. 3- is to emphasize on the importance of collecting data on the patient's medical and dental history, as well as possible comorbidities and medications in use.

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Laser gingival depigmentation using diode laser

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Patients that have periodontal disease have a high risk of developing peri-implants, but there is no study to prove why there is a high chance of that happening. It may be because of the bacteria (gram-negative anaerobic bacteria) that causes periodontal disease still in the membrane or it may be because patients are prone to having the disease. For non-surgical treatment, the instruments that should be used to clean the sub and supragingival peri-implant area is ultrasonic systems. Almeida et al. (2012) suggest that this is because it seems to be a better choice to remove calculus and plaque.

Even though studies have shown that the Plastic curette does not change the implant surface, there is no evidence to show what happens if the Plastic tip fractures while carrying out nonsurgical subgingival debridement which will lead to further disruption. Furthermore, Titanium curette should be used around Dental implants because it does not leave any traces around the implants and would be the best instrument option for non-surgical debridement.

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