

**BOOKS AND CHAPTERS IN EDITED VOLUMES/  
BOOKS PUBLISHED WITH ISBN AND ISSN NUMBER AND  
PAPERS IN NATIONAL/INTERNATIONAL CONFERENCE PROCEEDINGS  
(2021-2022)**

## Effect of nonthermal atmospheric plasma on the dentinal tubule penetration of two different root canal sealers: A confocal laser scanning microscopy study

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**Aim:** The aim of this study was to evaluate the effect of nonthermal atmospheric plasma (NTAP) on the dentinal tubule penetration of Bioceramic, Epoxy resin based root canal sealers.

**Materials and Methods:**

Forty freshly extracted (n=40) single rooted mandibular premolar teeth were selected and the root canals were prepared with ProTaper Gold rotary nickel-titanium instruments. Samples were then divided into 4 groups (n=10) based on the sealer used and NTAP application.

Group 1: Bioceramic sealer (BioRoot RCS) without NTAP application  
Group 2: Epoxy resin based sealer (AH Plus) without NTAP application,  
Group 3: Bioceramic sealer (BioRoot RCS) with NTAP application for 30 sec,  
Group 4: Epoxy resin based sealer (AH Plus) with NTAP application for 30 sec. After NTAP application in group 3 and 4, all the samples were obturated using sealers according to their grouping protocols. 2 mm slices were obtained from middle third of the root from each sample by using hard tissue microtome, which were examined under confocal laser scanning microscopy (CLSM). Data were subjected to statistical analysis using one-way analysis of variance (ANOVA) followed by the Mann Tukey Post hoc test. The level of statistical significance was set at  $p < 0.05$ .

**Results:** The dentinal tubule penetration values were observed to be significantly higher in Bioceramic sealer with NTAP application (Group 3) followed by epoxy resin based sealer with NTAP application (Group 4).

**Conclusion:** Nonthermal atmospheric plasma application enhanced the dentinal tubule penetration of Bioceramic (BioRoot RCS) and Epoxy resin based (AH Plus) sealers compared to their control groups.

**Methods:** The research question was based on the PICO format 'Does the use of ultrasonic irrigation (I) provide a better treatment outcome (O) when compared to other irrigation devices (C) in adult patients undergoing root canal treatment (P)?'. A protocol for this umbrella review was registered in PROSPERO (CRD42020169677). A search of Pubmed/Medline, Cochrane, Epistemonikos, Scopus, JBI Database of Systematic Reviews, ProQuest Dissertations and Theses Global was done to identify the reviews. The standardized JBI data extraction tool was used to extract data from included reviews. "JBI critical appraisal tool" consisting of 11 items for evaluation of methodological quality of systematic reviews was used by two reviewers independently.

**Results:** 343 abstracts from database and manual search articles were screened following which 18 full-text articles were assessed. Finally, six systematic reviews were included for the present umbrella review. The number of studies included in each systematic review ranged from 3 to 48 and included samples ranged from 152 to 1436. Four reviews compared ultrasonic irrigation with syringe irrigation, and other two reviews compared ultrasonic irrigation with sonic, Endovac and syringe irrigation. With the JBI methodological quality tool, four reviews scored 'Yes' for all 11 quality indicators, one review scored 'Unclear' in one domain and one review scored 'unclear' in two domains. Only three reviews conducted a meta-analysis.

**Conclusion:** Ultrasonic irrigation provides similar outcome in root canal disinfection compared to other irrigation methods. The use of continuous ultrasonic irrigation achieves better post-operative pain reduction when compared to syringe irrigation.

836

## Evaluation Of Different Chelating Agents Complemented With Passive Ultrasonic Irrigation On The Removal Of Calcium Hydroxide From Treated Root Canals – An In-vitro Study.

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31st July Hall 8 Session 2, Hall 8: Dr. RAJEEVA SHETTY HALL, July 31, 2021, 11:00 AM - 1:00 PM

**Aim:** To evaluate the efficacy of 0.5% Peracetic acid (PAA), 1% Peracetic acid, 17% Ethylene diamine tetra acetic acid (EDTA), 10% Citric acid (CA) and 3% Sodium hypochlorite (NaOCl) in the removal of calcium hydroxide (Ca(OH)<sub>2</sub>) from the treated root canals, coupled with Passive ultrasonic irrigation (PUI). **Materials and Methods:** Sixty extracted single rooted teeth were selected and decoronated to standardize the root length to 12mm. Biomechanical preparation was performed using Protaper NiTi rotary files

up to size F4 and irrigated with 3% NaOCl followed by 17% EDTA and filled with calcium hydroxide. The samples were divided into 7 groups according to protocol followed for removal of Ca(OH)<sub>2</sub>: GROUP I: Calcium hydroxide is removed with distilled water; GROUP II: Teeth not filled with calcium hydroxide; GROUP III: 3ml of 17% EDTA with PUI; GROUP IV: 3ml of 3% NaOCl with PUI; GROUP V: 3ml of 0.5% PAA with PUI; GROUP VI: 3ml of 1%PAA with PUI; GROUP VII: 10% Citric acid with PUI. The roots were split longitudinally and viewed under stereomicroscope at 50X magnification. **Results:** Kruskal Wallis test was applied to find out significant difference between the study groups. Intragroup comparison was done using Friedman's test. Small amounts of calcium hydroxide residue was seen in 1% PAA group, in comparison to other groups in coronal, middle and apical third of the root canals. **Conclusions:** 1% PAA with PUI was effective while 3% NaOCl being the least effective in removal of Ca(OH)<sub>2</sub> from treated root canals. Passive ultrasonic activation seems to be a promising adjunctive method for the removal of calcium hydroxide from the root canal.

34

## Comparison Of Diode Laser With Maleic Acid And Ethylenediaminetetraacetic Acid On Smear Layer Removal From Root Canals: A Scanning Electron Microscope Study

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31st July Hall 8 Session 2, Hall 8: Dr. RAJEEVA SHETTY HALL, July 31, 2021, 11:00 AM - 1:00 PM

**Aim:** To evaluate the effect of diode laser with maleic acid and ethylenediaminetetraacetic acid (EDTA) on the smear layer removal from root canals.

**Materials and Methods:** A total of 160 mandibular premolars were decoronated to working the length of 12 mm and prepared with protaper gold rotary files up to size F3. Group 1 canals irrigated with 1 ml 17% EDTA followed by 3 ml of 3% NaOCl. Group 2 canals were initially irrigated with 0.8 ml of 17% EDTA the remaining 0.2 ml was used to fill the root canals, and diode laser application was done followed by 3 ml of 3% NaOCl. Group 3 canals were irrigated with 1 ml of 7% maleic acid followed by 3 ml of 3% NaOCl. Group 4 canals were irrigated with .8 ml of maleic acid and remaining .2 ml was used to fill canal and activated by diode laser followed by 3 ml of 3% NaOCl. Scanning electron microscope examination of canals was done for remaining smear layer at coronal middle and apical third levels.

**Results:** maleic acid with and without diode laser had the least smear layer scores.

**Conclusion:** Diode laser with maleic acid performed significantly better than EDTA.

  
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**Aim or Purpose:** In the conventional ridge splitting technique, a complete flap is raised to allow adequate visibility of the bone defect which can result in disturbance of vascular supply and increase bone resorption rates. In this case report, a new innovative computer guided closed alveolar ridgesplitting flapless technique has been advocated to avoid this disruption.

**Materials and Methods:** After thorough clinical and radiographic evaluation, the patient presented in this case report showed inadequate bone width in the missing first premolar region. The procedure involved a series of creating and designing special 3D virtual guide slits that can accommodate and precisely fit the tools used for the alveolar ridge splitting technique.

**Results:** After a three months follow-up, the Implant was found to have successfully osseointegrated both clinically and radio-graphically. The Implant deviation from the pre-planned virtual implant position was as well found to be within an acceptable range.

**Conclusions:** For the alveolar ridge with insufficient thickness, this flapless, computer guided ridge splitting technique can be a predictable, less invasive and an atraumatic technique with immediate implant placement.

Free Communication Session 29 | 09.07.2019, 13:00–14:00 |  
Cubicle 1

Theme: Endodontics

FC113

#### Pushout Bond Strength of Perforation Repair Materials Exposed to Irrigants

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Sciences, Guntur, Andhra Pradesh, India

**Aim or Purpose:** Purpose of the study is to evaluate the impact of different endodontic irrigating agents like NaOCl, chlorhexidine, EDTA and chitosan on push out bond strength of different root repair materials.

**Materials and Methods:** 2 mm slices acquired from mid-root section of freshly extracted single rooted human teeth were used as samples. They were then divided in to three groups – MTA group, BIODENTINE group, ENDOSEQUENCE group. Specimens in each group were then exposed to four different irrigating solutions – 3.5% NaOCl, 2% chlorhexidine, 17% EDTA and chitosan. Data were analyzed using SPSS version 20 software. Descriptive and inferential statistics were used to summarize the results and  $P < 0.05$  was considered statistically significant.

**Results:** Fast setting MTA showed least push out bond strength when exposed to different irritants. Biodentine showed

intermediate values. Endosequence putty showed highest values of push out bond strength.

**Conclusions:** Endosequence putty has shown promising results in our study when used as root repair material in the presence of different irrigating solutions. Further studies on a larger sample can help in further establishing these results.

FC114

#### Managing Maxillary Lateral Incisor (Two Roots) and Impacted Canine (cyst Associated)

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Renu Aggarwal<sup>2</sup>, Monika Choudhary<sup>2</sup>, Ritika Tania<sup>2</sup>,  
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College and Research Institute, Sri Ganganagar, Rajasthan, India,  
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**Introduction:** Variation in the roots and root canal anatomy seems to be the normal rather than an exception. For successful endodontic treatment, a clinician should have a thorough knowledge of the internal and external dental anatomy and its variations. Maxillary lateral incisors usually exhibit a single canal with a single root. The incidence of two roots with maxillary lateral incisor is rare.

**Case Description:** In this case, clinical examination and radiographs demonstrates the presence of two root canals with two separate curved roots, impacted canine and associated cyst close to apices of maxillary lateral incisor. The presence of impacted canine along with cyst around the roots of maxillary lateral incisor causes the destruction of bone and PDL which result in loss of vitality of pulp and subsequent pulpal necrosis.

**Discussion:** Thus, endodontic treatment of lateral incisor along with disimpaction of canine and enucleation of the cyst was planned after discussing with the patient.

**Conclusion/Clinical Significance:** This case report emphasizes the need for attention during endodontic management of maxillary lateral incisors and during removal of impacted canine and associated cyst.

FC115

#### Antigen Presenting Cells and Endothelial Cells in Dental Pulp

Ana Sotirovska Ivkovska<sup>1</sup>, Zlatko Georgiev<sup>2</sup>, Ljube Ivkovski<sup>3</sup>,  
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Macedonia, <sup>2</sup>Faculty of Dentistry, Skopje, Macedonia, <sup>3</sup>Histolab,  
Skopje, Macedonia

**Aim or Purpose:** This research aimed to characterize the presence and quantitative changes of class II antigen presenting cells and endothelial cells in the dental pulp in healthy and carious human teeth.

**Materials and Methods:** We have examined 61 maxillary/mandibular premolars under 3 different clinical conditions: healthy teeth,

P038

**An Overdenture Treatment of a Young Patient: A Case Report**Emel Arslan<sup>1</sup>, Abdurrahman Şahinbas<sup>2</sup><sup>1</sup>Department of Prosthodontics, Bezmialem Vakıf University, Istanbul, Turkey, <sup>2</sup>Bezmialem Vakıf University, Istanbul, Turkey

**Introduction:** The overdenture treatment uses a removable complete denture that overlies retained teeth, tooth roots, or dental implants. Two or more, coronally modified or restored remaining teeth have been treated with root canal therapy and are used as abutments for an overdenture. Retained root abutments can give better retention, support, and stability to an overdenture and also provide proprioception which would otherwise be lost with conventional denture treatment. Implant retained prosthesis is an option but is sometimes not possible due to an insufficient amount of bone or economic reasons.

**Case Description:** A 17-year-old young female reported to the Department of Prosthodontics, Bezmialem Vakıf University with a chief complaint of aesthetics due to missing upper and lower teeth and difficulty in mastication. Dental history revealed that teeth were due to calcium deficiency missing. 13, 23, 33 and 43 were prepared for the fabrication of telescopic copings. The maxillary and mandibular arch were restored with an overdenture.

**Discussion:** Prosthodontic rehabilitation of cases like partial anodontia is critical during the growth period. During this period implant supported dentures is an option but is sometimes not possible due to an insufficient amount of bone, undesirable effects on growth and development or economic reasons.

**Conclusion/Clinical Significance:** Overdenture provides sufficient aesthetic, function and phonation even when the patient has weak teeth and tissue. Prosthodontic rehabilitation of complete or partial boosts psychologically the morale of the patients more so when the individual is of younger age. It is important to use this treatment option to prevent tooth and surrounding tissues until the patient completes growth and development.

P039

**Assessment of Brittleness Index of Three Different Ceramic Blocks**

Mahitab M. Mansour

Dental Biomaterials, Modern Sciences and Arts University, Cairo, Egypt

**Aim or Purpose:** The aim of this study was to assess the brittleness index of zirconia reinforced lithium silicate ceramic, translucent zirconia and lithium disilicate glass ceramic blocks, by measuring the fracture toughness and hardness.

**Materials and Methods:** A total of thirty-nine rectangular specimens were cut from the following ceramic blocks: Zirconia reinforced lithium silicate ceramic, translucent zirconia and lithium disilicate glass ceramic. The specimens were in the pre-crystalline and pre-sintered stages ( $n = 13$ /ceramic material). Fracture toughness (KIC) and hardness (H) were measured and brittleness index (B) was then calculated according to the following equation  $B = H/KIC$ .

**Results:** The lithium disilicate blocks showed the highest values for brittleness index ( $0.24 \mu\text{m}^{-1/2}$ ), followed by the zirconia reinforced lithium silicate blocks ( $0.22 \mu\text{m}^{-1/2}$ ), whereas the

translucent zirconia showed the least value for brittleness index ( $0.05 \mu\text{m}^{-1/2}$ ).

**Conclusions:** The Translucent zirconia revealed the lowest brittleness index, indicating that it might have superior machinability.

Poster Session 09 | 09.06.2019, 11:30–12:30 | Screen 3

Themes: General Dentistry / Epidemiology

P041

**Children and Parents Preferences of Dentists Attire**Joycelyn O Eminue<sup>1</sup>, Sylvia Etim<sup>2</sup><sup>1</sup>Child Dental Health, University of Port Harcourt, Port Harcourt, Nigeria, <sup>2</sup>University of Port Harcourt, Port Harcourt, Nigeria

**Aim or Purpose:** To evaluate children and parental preferences towards dentists' attire.

**Materials and Methods:** A 32-piece interviewer-based questionnaire was used to obtain information on socio-demographic status of children/their parents and their preferences. Also, elicited, were information based on photographs showing male and female doctors with different attires and personal protective wears. The data was analyzed using SPSS version 23 and statistical significance set at  $p < 0.05$ .

**Results:** One hundred and fifty-nine children comprising 85 (53.5%) males and 74 (46.5%) females were assessed with a mean age of 10.34 ( $\pm 3.28$ ) years. Sixty-nine (43.4%) parents were indifferent to the gender of the dentist that managed their children, unlike their children/wards (54.1%) that preferred female dentists and there was statistical significant difference in gender preference between the male and female participants ( $p = 0.00$ ). The children (47.8%) and parents (47.2%) preferred a dentist who donned protective wears (coat, face mask and protective glasses), all the children and their parents wanted their doctors to wear a protective coat and majority [121 (76.1%) children and 134 (84.3%) parents] preferred the traditional white coat because of professionalism 26 (30.6%) and purity/cleanliness 36 (42.4%).

**Conclusions:** Children and parents have preferences regarding the dentist's attire. The traditional white coat was the most preferred dental attire.

P042

**Snapshot of Oral Health Related Taboos among South Indian Tribes**Venkat Ramana Baddam, Vikram Simha Bommireddy, Lalith Prakash Chandra Kantheti, Krishna Prasad Lingamaneni, Devaki Talluri, Suresh chand Yaddanapalli, Srinivas Ravoori  
Sibar Institute of Dental Sciences, Takkellapadu, Guntur, Andhra Pradesh, India

**Aim or Purpose:** Health being a biological and social entity makes an important contribution to economic progress. Though we live in 21st century still many underserved communities are lacking to adopt healthy lifestyles. One of many reasons would be religious convictions like taboos, myths or misbeliefs. This study aims to

the other pretreatments. There was no difference of the staining capability between the beverages.

**Conclusions:** All beverages evaluated have the ability to interact with chlorhexidine mouthwashes. Extracted tooth were not stained by chlorhexidine alone, but were stained by its interaction with beverages chromogens.

P088

#### Are the Danger Bells Ringing? Case of Indian Dental Education

Vikram<sup>1</sup>Simha Bommireddy<sup>1</sup>, Viswa Chaitanya Chandu<sup>2</sup>

<sup>1</sup>Public Health Dentistry, Sibar Institute of Dental Sciences, Guntur, Andhra Pradesh, India, <sup>2</sup>Sibar Institute of Dental Sciences, Guntur, India

**Aim or Purpose:** The trend in dental education in India for the past few years is not very encouraging with a small but steady decline in the admission rates. Consequently, the purpose of this study was to determine the regard for dentistry among current dental students and their commitment to re-choose dentistry, given an opportunity, in three South Indian states.

**Materials and Methods:** The study was conducted among dental students belonging to 12 dental institutions, four each from the three South Indian states. Convenience sampling was employed in selection of these institutions. A self-administered, structured questionnaire was used to document the students' attitudes. Exploratory factor analysis was done to identify themes from the responses received. Chi Square test was used to observe differences in the responses based on gender, geographical location, and the admission category of the students.

**Results:** 822 students participated in the study with high representation from the state of Tamilnadu. Eight broad constructs were extracted from the responses received. A majority of students reported that dentistry was not their first choice and it was observed that more than three quarters of the current students were unlikely to re-choose dentistry given an opportunity.

**Conclusions:** It is unfortunate that the regard for the profession among current dental students was diminishing. Students appeared

to be highly skeptical about the future scope for the profession and there is an urgent need for the policy makers to address the situation to bring back glory for the profession, especially with huge oral health needs existing in the nation.

P089

#### Oral Health and Treatment Needs among Primary School Pupils

Chioma L. Nzomiwu<sup>1</sup>, Omolola Orenuga<sup>2</sup>, Joycelyn Eminue<sup>3</sup>, Adebayo Onajole<sup>2</sup>

<sup>1</sup>Department of Child Dental Health, University of Calabar, Calabar, Nigeria, <sup>2</sup>University of Lagos, Lagos, Nigeria,

<sup>3</sup>University of Port Harcourt, Port Harcourt, Nigeria

**Aim or Purpose:** To assess the oral health status and treatment needs of primary school children.

**Materials and Methods:** A descriptive cross-sectional study among Primary 5 & 6 pupils. Their oral health status and treatment needs were assessed using World Health Organization (WHO), Oral health assessment criteria for children, 2013. The effect of age, class, gender, socioeconomic status, oral health knowledge and dental visits on dental caries were assessed using logistic regression model. Data was analysed using STATA version 15 and statistical significance was set at  $P < 0.05$ .

**Results:** Out of four hundred and thirty four pupil aged 8–15 years who participated in the study, 229 (52.8 %) were males and 205 (47.2%) were females with a mean age of  $11.6 \pm 1.50$  years and a predominant age range of 10–13 years. Majority, (75%) of the respondents had never visited a dentist, dental caries 67 (43.7%) was the commonest dental problem and the mean DMFT/ dmft were  $0.2 \pm 1.61$  and  $0.07 \pm 1.24$ , respectively. The need for prophylaxis 359 (82.7%) and restorative therapy 60 (13.8%) were high and factors found to be associated with dental caries were children's class ( $p = 0.001$ ), texture of toothbrush ( $p = 0.032$ ) oral health knowledge ( $p = 0.001$ ) and regular dental visit ( $p = 0.016$ ).

**Conclusions:** Dental caries was the most prevalent oral health condition. Preventive and restorative treatment needs were high.

FC046

**Oral Status of Three Hundred Patients with Eye Diseases**Yolande Koffi-Gnagne<sup>1</sup>, Stéphane Xavier Djole<sup>2</sup>, Kouassi Armel Koffi<sup>2</sup>, Alla Ngoran Siméon Kra<sup>3</sup>, Francois-Xavier Kouassi<sup>3</sup><sup>1</sup>Department of Conservative Dentistry and Endodontics, University of Félix Houphouët Boigny – Abidjan Dental School, Abidjan, Cote d'Ivoire (Ivory Coast), <sup>2</sup>University of Félix Houphouët Boigny, Abidjan Dental School, Abidjan, Cote d'Ivoire (Ivory Coast), <sup>3</sup>University of Félix Houphouët Boigny, Abidjan Medicine School, Abidjan, Cote d'Ivoire (Ivory Coast)**Aim or Purpose:** Many of the disorders of the oro-facial sphere induce ocular manifestations that can eventually lead to pathology. The objective of this study was to identify the dental care needs of patients with eye diseases.**Materials and Methods:** The oral status of patients who came for consultation for eye disorders was achieved. The dental pathologies discovered were grouped according to pulpal and periapical symptomatology, and then the care needs were assessed. Data processing was performed by SPSS software version 22 under Windows (SPSS Inc., Chicago, IL, USA).**Results:** The most frequent reasons for visits were eye pain (31.33%) and decreased visual acuity (31.67%). Ametropia (36.67%), cataract (13.67%) and glaucoma (12%) were the most common diseases. The prevalence of tooth decay reported was 87%. It shows that 92% of patients have prophylactic care needs, followed by conservative dental and endodontic care needs (61.67%), prosthetic care needs (57.67%) and surgical care needs (25.33%).**Conclusions:** The frequency of dental conditions reflects the care needs of these patients with eye disorders. It is now recognized that the dental surgeon has a role to play in the management of patients with conditions such as diabetes and heart disease. The interest of this study is to integrate systematic oral health care into the follow-up of patients with eye diseases.

FC047

**Self-Reported Oral Health Knowledge, Behaviour and Attitude among Dental Students**Lalith Prakash Chandra Kantheti<sup>1</sup>, Vikram Simha Bommireddy<sup>2</sup>, Hema Sameera Budida<sup>2</sup>, Kiran Kumar Kattappagari<sup>2</sup>, Bhuvana Durga Kolli<sup>2</sup>, Sowjanya Sheela Komarabathina<sup>2</sup>, Vydehi Mullapudi<sup>2</sup>, Gnana Sarita Kumari Panga<sup>2</sup>, Jhansi Patnala<sup>3</sup>, Tejaswini Vakamullu<sup>2</sup>, Satya Madhuri Veligatla<sup>2</sup><sup>1</sup>Guntur, Andhra Pradesh, India, <sup>2</sup>Sibar Institute of Dental Sciences, Guntur, Andhra Pradesh, India, <sup>3</sup>Sibar Institute of Dental Sciences, Guntur, India**Aim or Purpose:** Oral health is renowned to be equally important in relation to general health. The dental health professionals play an important role in the oral health education of their patients, families, friends and the community. In the future, today's students of dentistry will provide dental services and will be responsible for public oral health education; thus, it is important to investigate their knowledge, attitude, and behaviour regarding oral

health. The aim is to compare the oral health knowledge, attitude and behaviour among clinical and preclinical dental students.

**Materials and Methods:** A questionnaire based cross-sectional study was conducted among Pre-clinical and clinical undergraduate students at a teaching dental institution in Andhra Pradesh. Pre-clinical group comprised of 1st and 2nd year students while clinical group consisted of 3rd, 4th year students and interns. A sample of 482 students were selected using non-probability purposive sampling technique. Modified English version of Hiroshima University Dental Behavior Inventory (HU-DBI) Questionnaire consisting of 31 closed ended questions with dichotomous responses has been implemented in this study after performing appropriate psychometric analysis.**Results:** Knowledge, attitude and behaviour differences among pre-clinical and clinical students were analysed by Student's *t*-test, which has shown statistically significant ( $p = 0.004$ ). 'Majority of females (86.3%) have responded that they don't use toothbrush with hard bristles which is high when compared to males (73.4%)**Conclusions:** Clinical students are having high oral health knowledge, attitude and behaviour scores than the preclinical students. Specific educational programs should be planned for the preclinical students

FC048

**Hormonal Contraception Increase Expression Cytokeratin 1 of Epithelial Oral Cell**Juni Handajani<sup>1</sup>, Swastiana Eka Yunita<sup>2</sup>, Urfa Tabtila<sup>2</sup><sup>1</sup>Department of Oral Biology, Faculty of Dentistry, Universitas Gadjah Mada, Sleman-Yogyakarta, Yogyakarta, Indonesia,<sup>2</sup>Universitas Gadjah Mada, Sleman, Yogyakarta, Indonesia**Aim or Purpose:** Contraception was used to prevent pregnancy. Changing of hormonal may affect keratinized of oral epithelial mucosa cell. Cytokeratin 1 (CK1) was expressed in keratinized of oral epithelial mucosa cell. This study was aimed to analyze the effect of contraception on the expression CK1 in the epithelial palate mucosa cell.**Materials and Methods:** This study involved 40 females divided into 4 groups: pill, injection, IUD, and non-contraception as control. Saliva sample was collected by unstimulated method. The salivary estrogen was measured by ELISA kit. Epithelial cell of palate mucosa was swabbed using cytobrush then stained immunohistochemistry. Primary antibody of Cytokeratin 1 was used to analyze expression of CK1. Data were analyzed using ANOVA in IBM SPSS.**Results:** Result showed a significant difference the effect of contraception to salivary estrogen and expression CK1 ( $p < 0.05$ ). Games-Howell test revealed that a significant difference comparison salivary estrogen and expression CK1 between control with pill and injection group ( $p < 0.05$ ) but no significant difference between control and IUD ( $p > 0.05$ ). There was a strong correlation between salivary estrogen and expression CK1 by Pearson test ( $r = 0.880$ ).**Conclusions:** Hormonal contraception could increase keratinization epithelial cell by increasing expression CK1.



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### Scanning electron microscopic study on the bacterial contamination of cavitated caries lesion

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**Introduction:** An analysis of the presence of bacteria inside caries lesions might clarify history of dental caries and possibility of arresting carious process. The purpose of this study was to determine the microbial invasion in cavitated caries lesions by observing under scanning electron microscope (SEM).

**Aims:** The aim is to observe the bacterial contamination in cavitated lesion visualised by SEM.

**Methods:** Tooth sample (n=13) divided into four groups as enamel, dentine, deep dentine and root stumps. Samples were dehydrated, coated with gold and examined under SEM. Bacterial cocci were counted from photographic images. Nonparametric Mann-Whitney test was applied.

**Results:** No bacterial cocci deep dentinal caries and root stumps and high bacterial cocci count was seen in enamel and dentinal caries. The bacterial contamination was significantly high  $p=0.034$  ( $p<0.05$ ) in enamel caries.

**Conclusion:** Bacterial contamination was more in enamel caries and disappears as the lesion progressed to deep dentinal caries.

### Management of an Unusual Midline Diastema with a Fixed Appliance: A Case Report

Aswin Rao

Manipal College of Dental Sciences, Mangalore

**Case report:** This is the case of a 12 year old, male child who reported with a 9mm midline diastema. Two mesiodens were present causing the midline diastema. The diastema was unusual as the central incisors were displaced unequally from the midline. Tooth 21 and 22 were displaced more distally from the midline leaving inadequate space for eruption of tooth 23. The challenge in this case was to close this unequal diastema. Thus the fixed appliance could not use reciprocal anchorage to close the diastema. A fixed appliance was modified by using a Nance palatal arch with a labial wire extension to close this unequal diastema.

**Uniqueness of the case:** The presentation discusses this unusual presentation of diastema and the modified fixed appliance used to treat the case.

### Role of pedodontist in diagnosis and treatment of obstructive sleep apnea in children.

Avula Jogendra Sai Sankar

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**Introduction:** Obstructive sleep apnea (OSA) is a potentially disabling disease caused by complete or partial obstruction of the upper airway which is characterized by excessive daytime sleepiness, disruptive snoring and repetitive episodes of shallow or paused breathing during sleep. It is quite prevalent in adults; however its increased incidence in children is alarming.

**Aim:** To highlight the role of pedodontist in early detection of OSA as they are one among the physicians who first come across child patients.

**Materials and method:** Data was collected from the parents of the patients who attended the pediatric department with a history of snoring/sleep disturbances.

**Discussion:** Often thought to be due to altered lifestyle (obesity), its prevalence is quite often noticed in 2 to 8 years age group where the tonsils and adenoids are larger than the underlying airway size.

**Conclusion:** Early detection and treating with simple oral appliances can avoid further complications.

### A Bite out of Anxiety - Animal Assisted Therapy

Rangeeth BN

Thai Moogambigai Dental College and Hospital

Historically, animals have held an important role in this relationship as they provide company, stimulus and motivation. Animal-assisted therapy involves interaction between patients and a trained animal, along with its human owner or handler, with the aim of facilitating patients' progress toward therapeutic goals.

This Pilot study examined whether a session of Animal Assisted Therapy reduced the anxiety levels of 20 children, needing invasive dental care, at a private dental care facility. Participants spent at least 15 minutes at the waiting area with a trained Dog. Anxiety ratings by a blinded examiner were noted prior and after Animal Assisted therapy.

This study is a first of its kind in Indian Literature, needing a pilot study prior to more intensive evaluation. The results of the study are presented in this presentation to plan a more intensive study.

### What's within? A report of two cases.

Bhat Sangeetha Govinda,

Department of Pedodontics and Preventive Dentistry, Amrita School of Dentistry, Ernakulam

**Introduction:** Non vital anterior teeth in children pose a major aesthetic concern. A bigger problem arises when a foreign body exists in the already non vital tooth, causing a major road block to cleaning and shaping and result in pain and infection.

**Case report:** Report 1: A 12 year old reported with a non vital 21. IOPA revealed a foreign body, that was found to be a stapler pin! The tooth was eventually treated endodontically. Report 2: A 5 year old with severe ECC was found to have embedded a bead from a necklace into her 85. The tooth was extracted due to poor prognosis. Uniqueness. Foreign bodies being inserted into the nasal cavity and external ear by young children is quite a common phenomenon. But foreign bodies being inserted into the teeth is not an everyday presentation.

### The prevalence of oral melanin pigmentation among children of 4-14 year of age and its association with passive smoking

Bhavna Dave

Department of pedodontics and preventive dentistry, K.M. shah dental college and hospital, Sumandeep vidyapeeth, Vadodara, Gujarat.

**Introduction:** Smoking is one of the reasons for melanin pigmentation in the oral mucosa. This study was done to determine the prevalence of oral melanin pigmentation in children and its association with passive smoking.

**Aim:** To determine the prevalence of oral melanin pigmentation in children among 4-14 years of age and its association with passive smoking.

**Methods:** This observational study was carried out among 600 children from Oral Health Screening Camps conducted in the government schools of Waghodia district, vadodara, Gujarat. Gingival pigmentation was assessed on the basis of the Dummett Oral Pigmentation Index and evaluation of exposure to Environmental Tobacco Smoke was done through history.

**Results:** Gingival pigmentation was seen in 395 children (65.83%).

**Conclusion:** According to the result of this study, we concluded that there is correlation between passive smoking and oral-melanin pigmentation in children.

### Influence of plant extracts mixed with endodontic sealers on the growth of oral pathogens in root canal : an In vitro study

Sonali Saha

Sardar Patel Post Graduate Institute of Dental & Medical Sciences

4.47+/-1.83 to 7.24+/-1.77 ( $p < 0.0001$ ) was observed.

**Conclusion:** Improved oral health knowledge of the pregnant mothers can have an impact in reducing the prevalence of ECC in the society.

### Sinus approximation of root consideration in treatment modalities- A New perspective

Korath Abraham

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**Introduction:** Association between maxillary sinus and teeth had been studied in detail regarding perforation and pathologies resulting from surgery and root canal treatment. The studies on effect of sinus on tooth and its implication are rare.

**Aim:** To study the effect of sinus pathologies on the tooth to formulate a easy classification of scoring of sinus approximation of tooth.

**Materials and Method:** 43 Ortho pantomograms with a mean age of 14.7 was studied. Sinus approximation to root(SAR) was classified into SAR1, SAR2, and SAR3. Total value was divided by the number of tooth to give the SAR score from 1 to 3, with 1 as mild and 1.1-1.5 as moderate and 1.6 and above as severe. Chi sure test was applied to the values.

**Results:** 41.8% were mild, 37.3% were moderate and 20.9% were having severe sinus approximation to root.39.533% had sinus problem. 72.09% were sensitive to cold. 53.66% observed pain or discomfort during chewing. 9.3% had under gone root canal treatment to of which 66.66% experienced frequent pain after RCT.

**Conclusion:** Sinus approximation of root can alter subjective and objective inference of diagnosis. Caution needs to be applied in choosing treatment. After treatment care should be excised before deciding the next treatment based on the patient complaint.

holistic approach to health is unique to Ayurveda and Yoga. According to Ayurveda, constitutional type of an individual (Prakriti) is based on characteristics like physiological, physical and mental features of an individual. It is very useful in predicting an individual's susceptibility to a disease, prognosis and selection of treatment. Integrating Ayurveda and Yoga with Dentistry will provide a synergistic effect and would offer a less harmful approach in the prevention and management of dental diseases.

### 'Say it the right way' – Inter-disciplinary approach to speech correction in Clefts

Amarshree A. Shetty, Devika Jayakrishnan Nair

Department of Pedodontics and Preventive Dentistry, A.B. Shetty Memorial Institute of Dental Sciences, Mangalore

Cleft lip/palate (CL/P) is one of the most common structural birth defect with a birth prevalence ranging from 1 in 500 to 1 in 2000 depending upon the population. A child with an oral cleft is born with the unique challenge to fight against various problems relating to appearance, dental arch dimensions, growth of the face and speech development which requires a multidisciplinary approach for the successful management of these cases. Children born with cleft of the lip and palate are at risk of resonance, articulation and expressive language problems that impair communication for many years. Treatment of cleft includes multiple surgeries, speech therapy, dental and orthodontic treatments over first 18 years of life.

Hence, an inter-disciplinary approach is a must while correcting the speech defects in such children as it may otherwise impair child's development, relationships, confidence and self-esteem.

### Comprehensive Care- A Reality!

Amitha M. Hegde, Rachaita Chhabra

Department of Pedodontics and Preventive Dentistry, A. B. Shetty Memorial Institute of Dental Sciences

In today's world, we have not just doctors, but specialists and super specialists. With increasing differentiation and specialization, it is becoming more important to integrate with various specialties in order to provide the best possible care to the patients.

Special children have a right to healthcare, as does every child. However, these facilities may not be readily available to them due to their distinctive needs. Nowhere is the need for an integrated approach to healthcare more evident than in the field of special care dentistry.

This poster focuses on providing complete care to a patient with special healthcare needs, including aspects of both, medical and dental treatment. We showcase a unique initiative to approach the care of special children, in a multidisciplinary manner. We also outline the diverse treatment modalities available as a result of the interdisciplinary approach and the future endeavors that could be undertaken for the same.

### Knowledge and Awareness of emergency dental trauma management among daycare centers in Chennai

D. Senthil, Niviethitha, D. K. Chanaram, B

Department of Pedodontics and Preventive Dentistry, SRM Dental College, Ramapuram, Chennai, Tamil Nadu

A survey was conducted to evaluate the knowledge and awareness regarding emergency management of TDI among caregivers in daycare centers in Chennai. The survey was performed in 45 daycare centers using a two part structured questionnaire covering demographic details and knowledge. Chi Square test was used and the level of significance was set at  $p < 0.05$ . The study revealed that although 18% of the population had undergone first aid training, many did not know the importance of

### Dermatoglyphic analysis – How far is it predicting the future risk of clefting?

Krishna Vallabhaneni S.S, Sridhar Muktineni

Department of Pedodontics and Preventive dentistry, Sibar institute of dental sciences, Takellapadu, Guntur, Andhra pradesh

**Aim:** To determine variations in dermatoglyphics to predict the occurrence of cleft in off springs.

**Method:** A total 400 parents between 25-45 years were divided into two groups - Group A consisted of 200 parents with cleft children and Group B of 200 parents with at least 2 healthy children. Dermatoglyphic prints were collected by ink method from both hands and evaluated for a-b ridge count, asymmetry and t point.

**Results:** Significant significance was observed between Group A and B with a-b ridge count ( $p$  value  $< 0.001$ ) and asymmetry ( $p$  value  $< 0.001$ ). Absence of t point was noticed in few mothers of affected children ( $p$  value 0.002).

**Conclusion:** Dermatoglyphics can be used as tool to study the developmental instability of cleft anomalies.

### Faculty poster Presentation Inter-disciplinary Pediatric Dentistry

Sanguida A

Department of Paedodontics & Preventive Dentistry, Indira Gandhi Institute of Dental Sciences, Sri Balaji Vidyapeeth, Pillayarkuppam, Puducherry 607402

Dental caries and periodontal diseases still remain major global oral health burden despite advances in detection and treatment techniques. Modern treatment of oral diseases is expensive and is associated with problems of drug resistance, adverse effects and varied affordability. Many of the non-communicable diseases are associated with preventable risk factors that are lifestyle related. Each individual is unique and hence, treatment should also be personalised. The concept of individualized and

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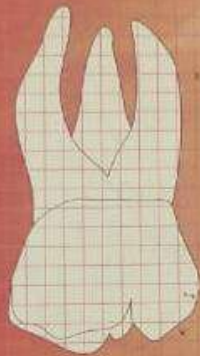
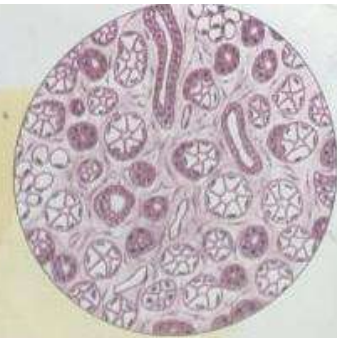
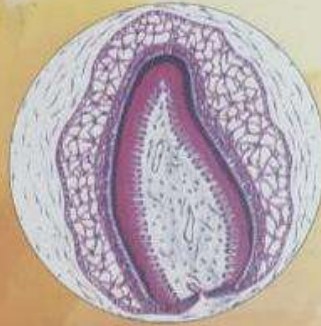
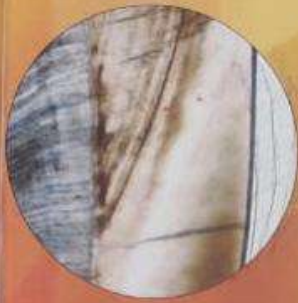
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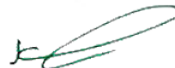
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**Cover page image:** Micro CT image showing complex root canal anatomy of a maxillary first molar. (Courtesy: Prof. Marco A. Versiani, DDS, MSc, PhD; Prof. Jesus D. Pecora, DDS, MSc, PhD; and Prof. Manoel D. Sousa-Neto, DDS, MSc, PhD, Department of Restorative Dentistry, Faculty of Dentistry, University of Sao Paulo, Brazil.)

  
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