Thursday, September 11, 2014

FREE COMMUNICATION SESSIONS 01–04

Free Communication Session 1 - Theme: General Dentistry and Oral Health

Room F01 | 2014-09-11 | 9:30-10:30

FC1

Effect of Ziziphus Jujube (BER) Honey on Plaque Accumulation, Gingivitis and Gingival Bleeding

Mansoor Majeed
Department of Oral Biology, Affiliation missing

Aim and purpose: This study is performed to find out the effectiveness of honey in the treatment and prevention of gingivitis, gingival bleeding and accumulation of plaque.
Materials and method: It was a Randomized Control Trial in which two groups were made; one group was given honey to apply on the gingiva and on the tooth surface for 2–3 min and then gargle with water and drink it. This procedure was to be repeated three times a day for 30 days. And the other group was the control group. Thirty randomly selected patients were there in each group. Plaque and Gingival Index and number of bleeding sites were examined initially and then after 1 month it was examined according to the Loe and Silness Plaque and Gingival Index.
Result: Initially the Mean Plaque Index, Gingival Index and the Percentage of sites which were bleeding in the honey group was 0.910, 0.800 and 58.71% respectively which were reduced to 0.313, 0.296 and 27.6% in 30 ± 3 days. Whereas the control group did not show signs of improvement.
Summary and conclusion: We can conclude that Honey reduces the formation/accumulation of plaque and decreases gingival bleeding as well as it has therapeutic effects.

FC2

Dentist: A Good Role Model for General Population

Rahul Javerchand Nagda, Meghna, Riddhi Shah
College of Medicine, AlImam Muhammad Ibn Saud Islamic University

Aim and purpose: The aim of this study is to evaluate and compare the difference in attitude of undergraduates, postgraduates and faculty towards their self oral care, dental awareness and habits.
Materials and method: The English language version HU-DBI was modified to 27 item questionnaire which was distributed amongst 2032 people which included undergraduates, post-graduates and dental staff of five dental colleges of Navi-Mumbai, India. Prior permission from ethical committee was taken. The participants gave their response according to the 5 point Li.
Result: Many agreed that they did not worry much about visiting the dentist regularly (44.2% pre-clinical group). Majority of them did not floss regularly (72.2%). Significant numbers of participants were not satisfied with the appearance of their teeth (47.8%). Maximum participants from faculty group were least bothered about chewing tobacco (16.6%).
Summary and conclusion: Dental health awareness programs and education in positive oral health attitudes should be implemented in the early stage of dental training. To serve as a role model for general population there should be improvement in the attitude towards oral self-care for students as well as faculty.

FC3

Craniofacial Mophology and Muscle Pattern in Class I and Class II Skeletal Malocclusion: Mri Study

Ashish Agrawal, Vadivel Marimuthu
Affiliation missing

Aim and purpose: The functions of the jaw muscles are considered to determine the craniofacial growth and development. The aim of the study was to determine the relationship between the muscle pattern (length, cross section and angulation) and maxillofacial morphology, to determine the relationship between the muscle pattern and various skeletal malocclusion (skeletal class I and skeletal classII) and to compare the muscle pattern in both the skeletal malocclusion.
Materials and method: Twenty-eight non orthodontic treated volunteers were taken in the study lateral cephalogram was done in order to categories them into different skeletal malocclusion. MRI0.5 telsa was used in the study for defining the field of study and muscle pattern in terms of length, cross section and angulation. The muscle pattern and various cephalometric parameters were subjected to multiple regression analysis.
Result: The cephalometric data and length, cross-section and angulation of the muscles were checked and were shown to be normally distributed. The statistical analysis clearly showed correlation ($p < 0.05$) and ($p < 0.001$) between few skeletal parameters showing muscles do play important role in defining morphology.
Summary and conclusion: The study shows that the muscle pattern has significant correlation with maxillofacial morphology. In skeletal class I and II malocclusion the masseter muscle is longest and thickest (cross-section) and is angulated vertically than other two muscles (medial pterygoid and lateral pterygoid) therefore it has greatest muscular activity and affects the maxillofacial morphology the most.

FC4

Oral Health Perception and Periodontal Status among Malaysian adults

Jegarajan Pillay, Khairiyah Abd Muttalib, Salleh Zakaria, Siew Lian Yaw, Yaw Siew Lian
Oral Health Division, Ministry of Health, Malaysia

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Aim and purpose: To determine the association between perceived oral health and normative periodontal status among Malaysian adults.
Materials and method: This study mined data from the National Oral Health Survey of Adults 2010 (NOHSA 2010) which utilized a two-stage stratified sampling design. Data of 1149 dentate adults aged 15 years and above were selected. These were subjects without caries, oral lesions or prosthetic needs. Subjects were asked to rate their oral health as excellent, good, fair or poor. This data was collapsed into "good" (excellent/good) or "poor" (fair/poor) oral health perception for analysis. Periodontal condition was assessed by calibrated examiners using the Community Periodontal Index.
Result: A total of 63.0% (724 subjects) perceived their oral health as good and among these, 91.0% (659 subjects) had periodontal conditions. There was a significant association between subjects oral health perception and normative periodontal condition ($p < 0.05$). Among those with periodontal conditions, there was no significant association by gender, location, education level or age group.
Summary and conclusion: A high proportion of the subjects perceived their oral health as good even though they had some form of periodontal condition. This shows a gap between oral health perception and normative periodontal status among a large number of subjects. There must be more patient education on the signs and symptoms of periodontal disease.

Room F02 | 2014-09-11 | 9:30-10:30

FC5
Oral Health Knowledge of Accredited Social Health Activist - coastal India
Narayanarao Vinnakota, Devaki Talluri, Srinivas Pachava, Srinivas Ravoori, Suresh Sanikommu, Vikram Simha Bommireddy
Sibar Dental College Guntur

Aim and purpose: Accredited Social Health Activists (ASHAs) are those who create awareness on health and its social determinants and mobilize the community towards increased utilization of the health services. The aim was to assess the oral health knowledge among Accredited Social Health Activists of coastal Andhra Pradesh, India.
Materials and method: The present cross sectional pre-tested questionnaire study was conducted on 275 Accredited Social Health Activists who were selected from five randomly selected primary health centers during their routine training program. Ethical clearance was obtained from Institutional review board of Sibar Institute of dental sciences and permission was taken from the District Medical Health Officer. Study was conducted from January to February 2014. The data was analyzed using SPSS 20 version and categorical variables were analyzed by chi-square test at 5% level of significance.
Result: The mean age and education were 32 ± 5.11 years & 9 ± 1.32 respectively.13.8% believed that dental caries was caused by worms. Only 9.8% said that plaque causes gum disease. Only 7.3% said that tooth brush should be changed when the bristles fray out. 49.8% said that unhealed wound was not a sign of oral cancer. Only 24% said that they have received dental training. 69.5% of ASHAs have reported that people approached them with dental problems such as tooth pain, bad breath, bleeding gums and sensitivity of teeth.
Summary and conclusion: It was observed that ASHAs have poor oral health knowledge. There is a need to improve the knowledge of ASHAs by conducting special oral health training programs.

FC6
Restorative Dentistry Needs Assessment in Scotland
Chuen Yeung[1], Elizabeth Maitland[1], Praveena Symeonoglou[1], Jennifer Rodgers[2]
[1]*NHS Lanarkshire,* [2]*Affiliation missing*

Aim and purpose: To conduct a needs assessment of specialist restorative dentistry service provision in NHS boards across Scotland.
Materials and method: Patient's focus groups and semi-structured interviews with restorative dentistry consultants and general dental practitioners (GDPs) were conducted to investigate service delivery and workforce needs. A survey was carried out in restorative dentistry departments of four Scottish dental hospitals in Aberdeen, Dundee, Edinburgh and Glasgow to determine the demand for consultant services.
Result: A total of 31 patients (aged from 38 to 67) attended five focus groups in different locations. Eight consultants and 20 GDPs were interviewed. Both patients and GDPs valued services offered by restorative dentistry departments. Consultants felt that a managed clinical network workforce model could reduce pressure on restorative dentistry departments. A total of 614 survey forms collected, including hospitals in: Aberdeen (39), Dundee (150), Edinburgh (78) and Glasgow (347). Over 90% of survey forms showed that patients were referred from GDPs with treatment area specified. However, agreement between GDP and consultant on patient assessment was varied: Aberdeen (40%), Dundee (73%), Edinburgh (64%) and Glasgow (69%).
Summary and conclusion: The findings showed that while patients were satisfied with the quality of secondary restorative dentistry service, consultants would prefer additional manpower to reduce pressure on the restorative dentistry departments.

FC7
Tooth Loss Index (tli) and the Human aging Process
Magdalena Maciejowska, Wieslaw Kurlej
Department of Dental Anatomy, Medical University of Wroclaw

Aim and purpose: The aim of this study is an analysis of the loss of teeth measured by Tooth Loss Index (TLI) and its relation to human body aging.
Materials and method: Research material for this study consisted of 1000 randomly selected individuals (527 women, 473 men). Positive opinion of Bioethics Committee of Medical University of Wroclaw (Nr KB - 455/2008) was given in order to conduct this study. The work was realized as a part of Wroclaw Medical University grant number 2218. Materials were anthropometric data, medical and dental history and dental check-up. The average, the standard inclination, the maximum and minimum values were

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counted. Tooth Loss Index (TLI) that has been used in the presented study is a quotient of difference between number of remaining teeth (TR) and number of missing teeth (TM) and their sum. Value of this index is included in range of <+1, 0; −1, 0>.
Result: Results may evaluate tooth loss (passage from positive to negative values) as well as might help in describing so-called relative dental age at old persons. Presence of residual dentition might assess dental age of examined persons and that may exceed the values of calendar, physiological and morphological age (described by other methods).
Summary and conclusion: Tooth Loss Index (TLI) may be used to compare dental status in inter-population and in-between-population research.

FC8
Manual Orthodontic, Powered or Sonic Toothbrush: Which is better for Orthodontic Patients?
Ruchi Sharma
Mahatma Gandhi Dental College & Hospital, Jaipur

Aim and purpose: To evaluate the effectiveness of a manual orthodontic toothbrush, powered toothbrush with oscillating head and sonic toothbrush in controlling orthodontic treatment and to compare their relative efficacy.
Materials and method: After ethical approval obtained from the institution, 60 subjects (aged between 13–32 years) who were to receive orthodontic treatment with both upper and lower fixed appliances, randomly divided into three study groups, with 20 patients in each group. Group1, group 2 and group 3 were given manual orthodontic, powered and sonic toothbrushes respectively. Plaque index, gingival index and interdental bleeding index were scored to assess the level of plaque accumulation, gingival health and interdental bleeding at baseline, 4 and 8 week recall visits after fixed appliance bonding. Paired t tests and One-way ANOVA tests were used for intra group and inter group comparisons. The level of statistical significance was set at $p < 0.05$.
Result: This study showed that a significant reduction in all the three indices scores was found from baseline to 4 and 8 weeks in group 3. On inter group comparison; no statistically significant differences were detected between the three study groups for any of the parameters assessed.
Summary and conclusion: Thus, on intra-group comparison, sonic brushes performed superiorly in reducing gingivitis, plaque and interdental bleeding as compared to the manual orthodontic and powered brushes. On inter group comparison; the relative comparative effectiveness was found to be similar for all the three brushes.

Room F03 | 2014-09-11 |9:30-12:10

FC9
Resistivity of Green Tea and Black Tea Extract Toward the Growth of *Streptococcus* Mutans
Tri Dewi
Faculty of Dentistry, Mahasaraswati Denpasar University

Aim and purpose: Plaque is the main cause of oral disease. One of the microorganisms present in plaque was *Streptococcus* mutans. Tea has catechin which useful to prevent plaques formation that was caused by *Streptococcus* mutans. Catechins are polyphenols which helps the formation of leukocyte. The function of leukocyte was to decrease infection and bacterial growth. The aim of this study was to compare resistivity of two types of tea which are green tea and black tea toward *Streptococcus* mutans' growth.
Materials and method: The method of this study was bacteria test with Kirby Bauer's method, and used Mueller Hinton Blood (MHB) culture media. Each concentration was diluted to 1%, 2.5% and 5%.
Result: The result of this study show that there was significant difference between green tea and black tea in inhibiting *Streptococcus* mutans' growth ($a < 0.05$).
Summary and conclusion: It can be concluded that resistivity of the green tea with 2.5% concentrate is more effective in inhibiting *Streptococcus* mutans' growth than black tea.

FC10
Effect of Long-term Liquid Medication on Dental Caries in Children
Ankita Bansal[1], B.C. Manjunath[2]
[1]*Darshan Dental College, Udaipur, Rajasthan,* [2]*PGIDS Rohtak Haryana*

Aim and purpose: To assess the dental caries experience and its relationship with long-term usage of LOM among 2–12-year-old children with various chronic diseases in India.
Materials and method: A cross-sectional study was carried out at a government pediatric hospital in India for a period of 6 months in 2012. Before scheduling the present study the required ethical clearance was obtained from the Research Review Board to the conduct study, and permission was taken from the concerned hospital authorities. A total of 455 children aged 2–12 years who were suffering from various chronic diseases receiving liquid oral medication for more than 6 months were selected (study group) and for comparison 531 children of similar age group and diseases but on other forms of medication were included as control group. Dental caries was the outcome and was measured by DMFT/DMFS, dmft/dft and dmfs/dfs. The data was analyzed with SPSS using statistical tests such as t-test and one-way ANOVA. Univariable logistic regression was used with p value was fixed at 0.001.
Result: Children who were on liquid oral medication are at the increased risk of dental caries than those with other forms of medications (OR: 3.142, 95% CI: 2.37–4.15, $p < 0.001$). The prevalence of dental caries in the study group was more (77.8%) when compared to control group (52.7%).
Summary and conclusion: Long-term usage of liquid medicines containing sucrose is a risk factor for dental caries among children with various chronic diseases.

FC11
Sucrose Concentration and Ph Analysis of Commonly Used Liquid Medicines
Ankita Bansal[1], B.C. Manjunath[2]
[1]*Darshan Dental College, Udaipur, Rajasthan,* [2]*PGIDS Rohtak Haryana*

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Aim and purpose: To investigate the pH and concentration of sucrose of the liquid oral medication commonly used by children with chronic diseases.
Materials and method: The most commonly prescribed eight liquid oral medications (Iron and folic acid, Multivitamin, Phenytoin, Furosemide, Calcium & Vitamin D, Prednisolone, Theophylline and Digoxin syrups) to the chronically ill children were selected for this study. The products were evaluated for pH and sucrose concentration with three repetitions for each sample, with values averaged to provide a single value per sample. Data were recorded on study-specific charts by a single calibrated examiner. The pH of each pediatric medicine was measured using a Control dynamics APX 175 E/C Model pH meter with a relative accuracy of ±0.01 pH unit. Sucrose concentration analysis was carried out by Lane–Eynon general volumetric method, a method for estimation of Carbohydrates. The obtained data were entered in the Excel software, analyzed and presented by mean and standard deviation.
Result: Iron and folic acid, Multivitamin and Phenytoin were found to have pH below critical pH (<5.5) i.e. 4.94, 4.13, 4.99 respectively. Out of eight medications analyzed, Theophylline was found to have highest sucrose content (24.73 ± 0.00). Iron & Folic acid, Furosemide, Cal-D, and Prednisolone were found to be sucrose free medication.
Summary and conclusion: The study concludes that few of commonly available medicine have pH value below the critical value for enamel dissolution (pH <5.5), and have high sugar concentration which can be cariogenic and erosive to the dental structures if frequently used.

FC12
Oral Cancer Survey on future Healthcare Professionals
Khyaati Vinod Gidwani, Junaid Ahmed, Nandita Shenoy, N Srikant
Manipal College of Dental Sciences Manipal

Aim and purpose: The aim of this study was to investigate the oral cancer awareness among the medical and dental interns, their knowledge of prevention and early detection of oral cancer and compare the above.
Materials and method: Validated questionnaires were distributed among 200 medical and dental interns respectively. Questionnaire attempted at knowing the Knowledge, awareness and preventive measures towards Oral cancer and desire for further information/ training and the format of such information/ training for the same.
Result: Dental interns are more aware of relevance of family history regarding oral cancer than their medical counterparts. More medical interns consider themselves to be adequately trained to examine oral mucosa and palpate regional lymph nodes, even though dental interns have had the opportunity to examine oral mucosa in day today practice. Both medical and dental interns haven't got adequate opportunity to attend CPD programs on oral cancer but wish to get more training in the form of clinical discussions. Both medical and dental interns have sufficient knowledge on treatment options while they are ill informed about the treatment costs. Also they would refer the patient to an oral surgeon for further treatment.
Summary and conclusion: Our study revealed that medical interns were better equipped and trained in oral oncology than their dental contemporaries.

Room F04 | 2014-09-11 | 9:30-10:30

FC13
Probiotics in Dentistry
Esther Pathi
SVS Institute of Dental Sciences, Mahbubnagar, Andhra Pradesh

Aim and purpose: Probiotics are dietary supplements which have been advocated for the prevention and treatment of a wide range of diseases. These products consist of beneficial micro-organisms, which stimulate health promoting flora thus, suppressing the pathologic colonization and disease spread. Since, probiotics are now widely used in both medical and dental specialties (reduction in caries development, in achieving periodontal health, reducing malodour etc.), a thorough understanding of their risks and benefits is essential.
Materials and method: Materials used in probiotics are micro-organisms which stimulate health promoting flora in the oral cavity.
Result: It results in achieving periodontal health, reducing oral malodour and many others.
Summary and conclusion: This review focuses on the recent trends in use of probiotics in dentistry as well as the potential risks associated with them.

FC14
Effect of Oral Hygiene Instruction on Periodontal Parameters in Patient Use of Partial Denture in 12 Months
Shirin Hassanvand[1], Dena Sepehri[1], Fatemeh Sarlati[2], Loghman Ghahremani[2]
[1]*College of Medicine AlImam Muhammad Ibn Saud Islamic University,* [2]*Islamic Azad University*

Aim and purpose: A removable partial denture treatment is to restore the edentulous region. The main goals of producing them are, restore function to patients, But it can causes serious problems on the abutments and non abutments teeth of patients.
Materials and method: This is a Clinical trial study. The patients with problems such as epilepsy, diabetes and were excluded from the study. The William's probe was used for clinical examination of GI, PD, CAL, GBI assess and disclosing tablet was used for PI assess. 20 patients were divided into two groups; Group 1: patients that are hygiene Educated by student (therapist). Group 2: the patients that learning oral brushing, flossing and administration of chlorhexidine in addition to group 1 educations. The patients were examined after 12 months to assess the impact of hygiene education. In the period of study, is called to patients two times to remembering health education.
Result: The Significant differences in PI of the anterior mandible, GBI of anterior maxillary and mandibular area, PD of anterior mandible and GI of all areas of between the two groups was observed ($p < 0.05$). There were no significant differences in other

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areas ($p > 0.05$). The significant differences in the CAL of any of the areas between two groups was not found ($p > 0.05$).
Summary and conclusion: Considering to the results of this study, it seems that appropriate oral hygiene education is an effective method to reduce periodontal disease, but the more and longer follow-up is needed to getting better results.

FC15
Evaluation and Management of Stress of Dental Medicine Students
Monia Dhidah, Omar Marouane, Raja Chebbi Mahjoub, Tahani El Ouni
Dental Medicine School in Monastir, Tunisia

Aim and purpose: The objective of this work is to study the stressful factors of dental medicine students and the strategies of adjustment used to master this stress.
Materials and method: We used the "Dental Environment Stress Scale" to measure the stress and the "Brief Cope" to estimate the adaptive strategies at 430 voluntary students registered in dental medicine.
Result: The main stressful factors are: the fear of missing the academic year for the section "academic work", the atmosphere created by clinical faculty for the dimension "administrative faculty and factors", the difficulty in learning clinical procedures for the group "clinical factors" and the lack of time assigned to schoolwork for the section "factors staffs". We note that the planning comes at the top of the "briefing cope". The lower score is reserved for the consumption of substances. The students adopt more the coping centered on the problems and on the emotion.
Summary and conclusion: The dental environment is stressful for the student, with fatal effects on his physical and mental health. 76% of the students consider that the fear of missing one academic year is the most criterion which puts under stress them. They adopt mainly the coping centered on the problem to manage this stress. However, 9.5% of the students resort to psychostimulants, anxiolytics, and antidepressants, where from the necessity of working on the improvement of the working conditions of the students in odontology.

FC16
Painful Symptomatology of Musculoskeletal Injuries in Dentistry
Leandro Feliz, Dulce Pereyra, Mathew Glass, Priscilla Baez
Universidad Iberoamericana UNIBE

Aim and purpose: Dentists and dental students often experience pain in different parts of the body. This is due to the repetitive movements of the body, vibrations, body torsion, and applied force, common in clinical dental practice. To identify the quantity of dentists and dental students with painful symptoms and explore the presence of pain in relation to ergonomics.
Materials and method: A sample of 119 participants from Universi dad Ibero Americana, UNIBE, Santo Domingo, Dominican Republic was obtained (Dentistry Students and Dentists). Each participant was given a questionnaire that asked for the location of pain and its intensity, aspects of clinical training and practice, and general socio-demographic questions.
Result: The ANOVA test showed a level of significance of $p = 0.000$ for all the variables with the highest frequencies; the size effect was $0.165 > 0.14$.
Summary and conclusion: This study showed a high frequency of painful symptoms in the neck, right shoulder, hand and lower back of the studied population. To promote the use of equipment, instruments, and ergonomic accessories and the application of ergonomic knowledge in our daily dental practices.

Room F05 | 2014-09-11 | 9:30-10:30

FC17
Knowledge, Awareness and Attitude Regarding Stem Cells among Dental Practitioners
Ankita Bansal
Darshan Dental College, Udaipur, Rajasthan

Aim and purpose: To compare the knowledge, awareness and attitude of dental practitioners towards the use of stem cells in dentistry.
Materials and method: The present study is a questionnaire based survey (cross sectional study) conducted in January 2014 among dental practitioners practicing in Udaipur city, Rajasthan, India. The questionnaire was pretested, close-ended and self-administered. The ethical approval was obtained from concerned Ethical Committee. A 17 item questionnaire was included, based on knowledge, perception and application of stem cells in dentistry. Out of 135 copies circulated 100 returned the questionnaire within the specified time of 30 min. The Pearsons Chi-Square Test and percentages of the total were used for data analysis.
Result: 89 percent of practicing dentist had come across the term stem cells. 43% had knowledge of dental stem cell banks in India. 65% of dentists strongly agree that there is a good scope of stem cells in future dentistry.
Summary and conclusion: Positive attitude was found in dental practitioners towards dental stem cells, although the knowledge about this method is limited. There is a high need to increase knowledge among dental practitioner regarding clinical application of the same.

FC18
Correlation Between Rotational Speed and Noise on High-speed Dental Hand Pieces
Raony Pereira, Antonio Henrique Alves Pereira, Camila Tirapelli
School Of Dentistry of Ribeirão Preto University of São Paulo (FORPUSP)

Aim and purpose: The aim of this study was to evaluate the correlation between rotational speed and noise of high-speed dental hand pieces, in accordance with ISO: 7785.
Materials and method: Nine national and international commercial brands were assessed. Three new high-speed dental hand pieces of each brand (designed here as G1 to G9), working on a controlled test station at 30 Psi, were evaluated along 5 days – 3 measurements per day. The instrument used to measure rotational speed was a high-speed tachometer and noise was measured with a deci-

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bel meter. Data were analyzed using One-way ANOVA and Correlation test on Graph Pad Prism software.
Result: Medium rpm and decibels values were, respectively: G1: 330.11 (±3.06)/ 72.10 (±0.53); G2: 376.17 (±24.54)/ 73.08 (±1.56); G3: 349.45 (±19.48)/ 76.46 (±3.71); G4: 210.17 (±43.71)/ 82.16 (±3.69); G5: 397.93 (±13.16)/ 68.80 (±2.73); G6: 326.33 (±7.17)/ 70.46 (±3.11); G7: 345.65 (±18.11)/ 79.29 (±3.56); G8: 322.99 (±30.77)/ 77.20 (±3.45); G9: 381.01 (±2.31)/ 71.06 (±3.43). Statistical analyses ($p < 0.05$) showed that there were significant differences among the commercial brands regarding rotational speed and noise. Standard deviation values indicated that reproducibility varies largely among brands. Correlation test ($r = -0.7$) showed that rotational speed is inversely correlated with noise for dental hand pieces; as higher rotational speed, lower the noise.
Summary and conclusion: There was a negative correlation between rotational speed (rpm) and noise (Db) for the high-speed dental hand pieces evaluated.

FC19
Are Misconceptions a Set Back to Dental Practitioners in India and Other Developing Countires?
Tamhane Anuja
Vidya Shikshan Prasarak Mandals Dental College, Nagpur

Aim and purpose: To study the misconceptions prevailing among students, medical practitioners and general public regarding abilities of dental surgeons; study their effect on dental practice and suggest methods to improve scope of dental practice in India and other developing countries.
Materials and method: A cross sectional survey was conducted that included a sample size of 200 randomly selected individuals, within age group of 18–45, with an equal gender distribution, after requisite approval from the institutional ethics committee. Survey was based on questionnaire method and personal interviewing to know the apt reasons.
Result: Results of the pilot study after application of appropriate tests of statistical analysis indicate that lack of awareness regarding the developing abilities of dental surgeons and dentistry plays a pivotal role in gross misconceptions held about the same and thus minimize the patient inflow especially targeting Indian scenario and other developing or under developed countries.
Summary and conclusion: In view of the survey the authors conclude a targeted awareness program among all three surveyed sections that is students, medical practitioners and general public at grass root level to further magnify the professional scope of dental specialists in India and other developing countries.

FC20
Oral Health Care in Geriatric Patients in North Indian Population
Manu Rathee
PGIDS Rohtak Haryana

Aim and purpose: To assess the oral health of Geriatric patients in north Indian population.
Materials and method: The geriatric assessment effectively addresses the most prevalent problems faced by the elder patients and is crucial to the successful treatment and prevention of disease and disability in older people. The Geriatric Oral Health Assessment Index is an aid which shows the impact on the dimensions of life quality of the elderly population, such as functional limitation, lack of aesthetic satisfaction, chewing discomfort and avoidance of certain foods, avoidance of social contact, and self medication for dental pain. A total of 104 subjects, aged above 65 years were included in the study. Details of each subject's age, gender, denture status, socioeconomic status, general health and occupation were recorded. Subjects were divided into three groups depending on GOHAI score and oral health was assessed on basis of GOHAI questionnaire.
Result: Mostly subjects had moderate oral health irrespective of demographic and clinical characteristics. The most affected dimensions of quality of life for elders were the physical ones, expressed through avoidance of hard foods and chewing discomfort.
Summary and conclusion: The outcome of prosthetic treatment in geriatric dentistry is determined by several factors such as the general and oral health status of the patient, biologic and technical quality of prosthetic materials and the Prosthodontists knowledge and technical abilities. This paper represents the oral health of geriatric patients in North Indian population.

Room F10 | 2014-09-11 |9:30-10:30

FC21
Being Conscious About Conscious/inhalation Sedation
Nilesh Dube
Oroacare Centre for Implantolgy, Dental Care & Advanced Dentistry

Aim and purpose: Painless dentistry is an integral part of multidisciplinary dentistry. Anxiety, phobia, fear of injection and pain are major factors that prevent the patient from undergoing normal dental treatment. McElroy had said "Although the dental treatment rendered may be perfect, the appointment is a failure if the patient departs in tears".
Materials and method: Since its discovery 180 years ago, nitrous oxide has been used to provide pain and anxiety relief for patients undergoing surgical procedures with a remarkable safety record due to its inherent safe physical characteristics. The lecture deals with:

1 Understanding pain, anxiety, phobia & their management.
2 Physiologic and pharmacologic properties of nitrous oxide, its history and evolution as a medium of inhalation sedation.
3 Indications, contra-indications of inhalation sedation, signs and symptoms of optimum sedation, under sedation and over sedation and their management.
4 Techniques of Nitrous oxide/oxygen administration, pre-procedural counseling, recovery from sedation & its uses in other fields of medical science.
5 Misuse, In-house abuse and equipment safety features.
6 Medico legal aspects & ethical aspects related to Nitrous oxide/oxygen sedation.
7 Future trends in Inhalation Sedation.

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Result: Nitrous oxide inhalation sedation helps in executing various treatment modalities of clinical dentistry with a pleasant experience.
Summary and conclusion: No drug other than Nitrous oxide in the history of medical science has come under so much scrutiny & come out with impeccable safety record. The best part about nitrous oxide sedation is that it deals with pain and anxiety management without any significant adverse reactions.

FC22
Evolution of Temporomandibular Joint: A Scientific Approach Towards Research
Devika Radhakrishnan[1], Sunil Sunny[2]
[1]*Amrita School of Dentistry, Amrita Institute of Medical Sciences and Research Center Campus, Cochin,* [2]*Annoor Dental College and Hospital Muvattupuzha Cochin*

Aim and purpose: To understand the evolution of temporomandibular joint and the major factors affecting it, so that the present and future expected temporomandibular disorders can be prevented or treated cost/time effectively.
Materials and method: Cross sectional study involved lateral cephalogram of 100 patients collected from the Department of Orthodontics, of a Dental College and Hospital, lateral cephalogram of 30 animals collected from the Department of Radiology, and dental stone casts made from impressions of other herbivore and carnivore specimens from a targeted college. Extensive review of literature was done. Written consent was taken from all the human participants. The research protocol and cephalometric analysis received ethical approval from the institutional ethics committee. Pilot study was done and necessary modifications were made. The collected data was analysed using SPSS, version 20. Data analysis consisted of frequency distribution and descriptive statistics.
Result: The dentition of herbivores, carnivores and omnivores showed variation in the morphology of teeth, number and phylogenetic pattern of cheek teeth.
Herbivores showed more attrition of posterior teeth and only humans showed cusp-fossa pattern of occlusion. The cephalometric analysis of humans as well as animals showed morphological changes, change in the position of condylon, saddle angle and Curve of Spee.
Summary and conclusion: The situation indicates diversity of dentition pattern among mammals involving differences in the number, size, shape and arrangement of cusps of cheek teeth.
The attrition of teeth affects the Curve of Spee and thus affects the morphology and function of TMJ. TMJ had been continually evolving due to changes in diet and other environmental factors and thus being the major factor for TMDs.

FC23
Herbal Mouthrinse
Roleen Pereira, Vabitha Shetty
A B Shetty Memorial Institute of Dental Sciences

Aim and purpose: To asses and compare antimicrobial properties of neem with honey mouthwash and cocoa with honey mouthwash with chlorhexidine mouthwash.
Materials and method: Aqueous extracts of neem and cocoa were prepared and honey was added to the respective extracts to formulate the mouthwash. Ninety children aged 9–13 years of either sex, who fulfilled the inclusion criteria participated in the study. They were equally divided into three groups. Group 1 children were asked to rinse with 10 ml of neem with honey mouthwash daily, group 2 children were asked to rinse with 10 ml of cocoa with honey mouthwash and group 3 were asked to rinse with 0.2% of chlorhexidine mouthwash daily for 21 days. All children were asked not to eat or drink for 1 h after rinsing and performed routine oral hygiene measures everyday of unstimulated saliva was collected from each child at the start of the study and again on the 14th and 21st day after administering mouthwash. Salivary samples were analysed for S Mutans and Lactobacilli counts.
Result: Result revealed significant reduction in both S Mutans and Lactobacilli counts in both neem with honey and cocoa with honey mouthwash was comparable with 0.2% chlorhexidine mouthwash.
Summary and conclusion: Anti bacterial effect of neem with honey and cocoa with honey mouthwash were comparable to each other and with chlorhexidine mouthwash. They can be recommended as an alternative to chlorhexidine and effective adjunct in oral hygiene procedures.

FC24
The Effect of Educational Videos on School Children
R. Bhavyaa, Jayanth Christian
Sri Ramachandra University, Porur, Chennai

Aim and purpose: Aim of this study is to assess knowledge,attitude, and practice (KAP) towards oral health among school children in a government aided as well as private school of Chennai city,and to assess the effect of dental education on KAP.
Materials and method: This survey was performed in two schools in Chennai to assess the KAP towards oral health in lower middle class and middle class families. The survey comprised of 500 children 250 (government) and 250 (private school) between the age of 17–18. Data on oral health KAP were collected by means of a self administered questionnaire. After the questionnaire was collected a video was shown to them to create awareness about the importance of maintenance of good oral health for a healthy living. After a month the same questionnaire was administered to them. This was done so to analyse if the motivation behind not visiting a dentist was because of financial status, lack of awareness of free/low cost treatment or lack of knowledge on importance of treatment. The statistical significance was determined by chi-square test.
Result: It has been found that the government school children have very less knowledge about the necessities and availability of dental treatment while the private school children lack the attitude.
Summary and conclusion: The school populations of today are adults of tomorrow. Dental health education of children at an early age helps in improving preventive dental behavior and

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attitudes, which is beneficial for life time. Finding out the cause of the problem is always the root to the solution.

Room F11 | 2014-09-11 |9:30-12:10

FC25

Ventilator Associated Pneumonia and Importance of Oral Care – A Review

E. Elampavai
The Oxford Dental College and Research Centre, Hosur Road, Bommanahalli, Bengaluru

Aim and purpose: Ventilator-associated pneumonia (VAP) is the most important nasocomial infection among mechanically ventilated patients and the biggest worry of critical care physicians. Its incidence in these countries is 20 times that in the developed nations with significant morbidity, mortality, and enhanced cost of care.
Materials and method: The articles related to ventilator associated pneumonia were retrieved from the English literature and systematically analysed.
Result: Improving oral hygiene represents one of a number of interventions that may influence the development of VAP.
Summary and conclusion: Dental plaque serves as a reservoir for microorganisms associated with pulmonary infection and these potential respiratory pathogens have been shown to rapidly colonize plaque in mechanically ventilated critically ill patients. Attention to oral hygiene is recognized as an important component of care, which reduces VAP. However, there is substantial variability in how this is performed. Decolonization strategies with oral antiseptics such as chlorhexidine or topical antibiotics decrease VAP. With this review, we would like to draw attention of hospital administration and pulmonologists in our country over importance of routine dental examination and maintenance of oral care during their stay in intensive care units.

FC26

"Platelet Rich Fibrin" [Prf] - Biofuel for Tissue Regeneration

Shweta Patil, Shibani Nerurkar, Atul Surve, Trupti Desai, Sachin Bagade, Shreshtha Patel
Terna Dental College and Hospital

Aim and purpose: To describe the concentrate PRF and its potential role in regeneration of soft and hard tissues.
Materials and method: PRF is a natural fibrin-based biomaterial prepared from an anticoagulant –free blood harvest without any artificial biochemical modification that allows obtaining fibrin membranes enriched with platelets and growth factors. PRF has a dense fibrin network with leukocytes, cytokines, structural glycoproteins and also growth factors such as transforming growth factor beta 1, platelet derived growth factor, vascular endothelial growth factor and glycoproteins. The equipment required for PRF preparation consists of the centrifugal machine, blood collection kit consisting of 24 gauge butterfly needle and 9 ml blood collection tubes.
Result: 1. it has been applied in many different clinical fields and is a better healing biomaterial than PRP and other fibrin adhesives. 2. Inexpensive method of preparation, ease of application, minimal expense and lack of biochemical modification (no bovine thrombin or anticoagulant is required). 3. Enhance both hard and soft tissue healing.
Summary and conclusion: PRF is a successful and inexpensive technique for regeneration of tissues. The main advantage is that PRF preparation utilizes the patient's own blood reducing or eliminating disease transmission through blood.

FC27

Stem Cells in Dentistry

Meghna Chaudhary
Karnavati School of Dentistry

Aim and purpose: The aim of this article is to emphasize on importance of care and caution in dentistry and risk management in case of ignorance of protocols or chair side accidents.
Materials and method: A 14 year old male child patient with past history of trauma came with extra oral sinus in lower anterior region came for dental treatment in Targeted School of Dentistry, Uvarsad, Gandhinagar, and Gujarat. IOPA showed large periapical lesion in respective region. Immediate CT scan done to confirm diagnosis. Patient obtained non-surgical treatment using calcium hydroxide therapy. In post-operative follow-up, whole lesion healed in 8 months followed by CT scan. The other case is about an accidental swallowing of small equipment's used during dental implant happened during chair-side treatment procedure. 73 years old male patient accidentally swallowed hex-driver during implantation, which stuck in pylorus. It was spotted and removed by surgical endoscopy.
Result: The patients were treated accordingly and successful results were achieved.
Summary and conclusion: Necessity of composure and presence of mind with ability of dentist to treat any emergency regarding dental treatment.

FC28

Efficacy of Painless Injection Technique – Vibrajet – Clinical Trial in Chennai, India

Jeevika Deepak
Thai Mookambai Dental College

Aim and purpose: To evaluate the efficacy of vibrajet vs. conventional injection technique.
Materials and method: This is a prospective, randomized, crossover design carried out among adults above 18 years of age in private hospital in Chennai city, Tamil Nadu, India. Out of 52 subjects, 37 were willing to participate in the study. Split mouth technique was carried out. In the first appointment dental procedures was carried out following local anesthesia using conventional injection technique. (Without the attachment of the vibrating device) and on the next appointment a vibrating device

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(vibrajet) attachment was fixed on the conventional syringe and dental procedures were carried out. The patients were asked to report their discomfort using verbal descriptor scale. Sign test was applied to calculate the efficacy of vibrajet to that of conventional injection technique.

Result: Out of total study subject, 35 subjects reported increased pain score while piercing using conventional injection technique than using vibrajet. The p value for 2-tailed sign test shows ($Z = -5.5$, $p = 0.00$) there was significant difference between two techniques. 14 subjects reported increased pain score during deposition of solution while using conventional injection technique than using vibrajet. The p value for 2-tailed sign test shows ($p = 0.04$) there was significant difference between two techniques.

Summary and conclusion: Vibrajet has significantly reduced pain both during insertion of needle and during deposition of solution when compared to the conventional injection technique.

Room F12 | 2014-09-11 |9:30-10:30

FC29

Cerec

Jasleen Suri, Aakash Bansal, Lokendra Gupta, Pankhuri Jain
Manipal College of Dental Sciences Manipal

Aim and purpose: CEREC allows dentists to construct, produce, and insert individual ceramic restorations directly in a single appointment, over multiple appointments with lab side work in between.

Materials and method: After a detailed insight and research into CEREC or Cerec (Chairside Economical Restoration of Esthetic Ceramics), in various online library's such as PUBMED,Google Scholar, SCIENCE DIRECT, JADA,ORAL HEALTH JOURNAL, Cochrane, Wiley online library, JIARM etc, the search resulted in 115 articles. Out of those, 10 articles were filtered, referred and included for this review article.

Result: This technology takes every clinical detail of your case into consideration, creating the most precise restoration. The exact specifications are sent to in-office milling machine. Within a short duration of time of <20 min, this state-of-the-art device fabricates your custom, color-matched restoration. Finally, your restoration is fitted, polished, and bonded in place. The entire process takes 1–2 h only, depending on the extent of your dental work. CEREC technology makes it possible to produce and integrate ceramic restorations in a single appointment and makes it possible to reduce the amount of follow-up work and time-intensive occlusion adjustment that was often necessary in the past.

Summary and conclusion: Currently, the CEREC method has been proven internationally. Its unique feature in dental CAD/CAM technology enables the dentist to capture the tooth preparation directly in the mouth of the patient allowing the dentist to fabricate and seat a ceramic restoration in one appointment. Seemingly, the CEREC CAD/CAM concept is becoming a significant part of dentistry.

FC30

Role of Computed Tomography in Qualitative Assessment of Healing and Maturogenesis in Nonvital Immature Molars

Shivani Gupta
MM College of Dental Sciences and Research

Aim and purpose: To assess special need and application of recent radiographic modalities like Computed Tomography in addition to conventional radiography to assess the level of maturogenesis and healing in immature posterior teeth following endodontic treatment.

Materials and method: Preoperative and postoperative computed tomography (CT) records and conventional radiographs of non vital immature permanent molars with periapical radiolucency undergoing endodontic procedures to promote maturogenesis and healing of permanent were studied. Qualitative and quantitative assessment of maturogenesis and healing assessed both in computed tomography (CT) records and periapical radiographs were compared and analysed.

Result: Assessment of maturogenesis and healing was better in CT records both qualitatively and quantitatively. CT proves to be accurate in definite diagnosis during case selection and assessment of healing and level of maturogenesis in immature posterior teeth following endodontic treatment.

Summary and conclusion: Computed tomography (CT) has already been proven to be superior among other radiographic modalities for diagnostic imaging during endodontic procedures. CT in these cases needs to be used in a careful manner and only when the radiation exposure is justified by the potential diagnostic benefits and improvement of the treatment results. Thus this poster highlights the comparable clinical application of CT in assessing qualitative mode of healing and maturogenesis after endodontic treatment of periapically involved necrotic molars in children and explains case specific application and the need of CT.

FC31

3D Study of Maxilla-mandibular Morphology in Skeletal Class III Patients

Mohd Ayaz Shaikh, R. Duggal, O.P. Kharbanda
All India Institute of Medical Science

Aim and purpose: The purpose of this study is to accurately measure the Maxillo-mandibular dimension, condylar dimension and cranial base length (Cone Beam Computed tomography study) in skeletal class III malocclusion patients and compare with normal occlusion patients.

Materials and method: Study population consist of 30 subject of both gender from 9–16 years age, divided into two group each of 15 subject, study group consist of Class III malocclusion patients, five girls and ten boys. Control consist of six girl and nine boys, CBCT Head (Eleven measurement on surface rendered image six linear and five angular, Ten measurement on sagittal slice four linear and six angular, and three measurement on axial slice taken) ethical approval taken from AIIMS ethical comity New Delhi India. all measurement taken using dolphin software, software allowed both mutliplanar views or selection of just one single

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plane in full screen window to zoom and facilitate landmark location. Measurement includes ramus height, body length and overall length of mandible, facial height and palatal length of maxilla.
Result: Showed that total mandibular length is increased and SNA angle is reduced, ramus make acute angle with cranial base than normal, gonial angle is more obtuse, midfacial length and cranial base length is short in class III patients.
Summary and conclusion: Class III malocclusion patients shows significant difference in maxillo-mandibular, dimension and cranial base length as compared to normal patients.

FC32
Evaluation of Stress Pattern in Different Bone Densities with Different Implant Thread Designs: A Fem Study
Abhijeet Kore[1], Rushikesh Mahaparale[1], Shobha Kore[2]
[1]*School of Dental Sciences Karad,* [2]*Affiliation missing*

Aim and purpose: During the last few years, implant dentistry has seen dramatic popularity as a treatment option in oral rehabilitation. Various studies showed that the bone quality & Implant design are two important factors that influence the success of the implant treatment. The purpose of this study is to investigate the effect of different bone densities on stress distribution in an implant supported mandibular crown, with different implant thread designs using three dimensional finite element analyses.
Materials and method: A bone block, representing the section of the mandible in the first molar region was modelled with two distinctly different bone qualities. Two types of implants were used for the study. Crown superstructure was prepared on the model. Oblique and vertical force of 450 N applied from the buccal cusp (150 N) and distal fossa (150 N) & central fossa (150 N) Von Misses Stress analysis evaluated within the different bone densities.
Result: Von Misses Stress analysis showed that, in all the FEM models stress were mainly concentrated at implant neck and apical part of the implant. It showed that the stresses were more in case of implants wit reverse buttress thread design than implants in combination design, particularly in D4 type of bone.
Summary and conclusion: From the results we can conclude that implants with combination thread designs are better than implants with reverse buttress design mainly when the bone quality is poor.

FC33
Screening of Illicit Drug Abusers in Dental Practice
Sumedha Kushwaha, Bhuvandeep Gupta, K. Jayapraksh, Richa Anand, K.K. Shivalingesh, Vaibhav Motghare
I.T.S Dental College Hospital and Research Institute Greater Noida

Aim and purpose: Illicit drugs have been defined as "drugs which are under international control (and which may or may not have licit medical purposes) but which are produced, trafficked and/or consumed illicitly". Studies done in various parts of the world have demonstrated adverse effects of such drugs (methamphetamine, cocaine, heroin, cannabis, tobacco, alcohol etc.) on oral cavity. The aim of the present study is to enumerate and describe the effects of illicit drugs on oral health and the role of dentists in preventing and treating such diseases.
Materials and method: A literature review from various international and national journals has been done and a positive relationship has been established between the use of illicit drugs and the oral cavity.
Result: It has been Illicit drugs have deleterious effects on oral cavity including the teeth (dental erosion and deep caries), periodontium (frank bone lysis, gingival enlargement, periodontitis), salivary glands (xerostomia), oral mucosa (red and white patches), palate, nasal septum, floor of the nose (perforations due to snorting) and craniofacial development during intra uterine life (fetal alcohol syndrome).
Summary and conclusion: National Survey on Extent, Pattern and Trends of Drug abuse in India conducted by the Centre in collaboration with United Nations Office on Drugs and Crime, the current prevalence rates within age group of 12–18 years was Alcohol (21.4%), Cannabis (3), Opiates (0.7), any illicit drug (3.6%) The factors causing drug abuse are preventable and dentists must be alert to oral and craniofacial manifestations of drug abuse. Public health programs need to be administered so as to reduce the initiation and continuation of such habits.

Room F13 | 2014-09-11 |9:30-10:30

FC34
Efficacy of Liquorice and Tulsi Extracts: Cariostatic Agents in Children
Pratima Swarnka
Mahatma Gandhi Dental College & Hospital, Jaipur

Aim and purpose: The present study was designed to evaluate the in vitro as well as in vivo efficacy of aqueous liquorice and tulsi and assess their acceptability among pediatric patients.
Materials and method: Minimum bacterial concentrations of both tulsi and liquorice against *S. mutans* were evaluated. The clinical trial was conducted as a double blind pilot study where pediatric patients (N = 30), aged 7–14 years,were equally divided by randomization into three groups, namely, group1 using aqueous liquorice mouthwash (15%), group 2 using aqueous tulsi (4%) and group 3 using chlorhexidine gluconate (2%) as positive control. A baseline pre-rinse and three post- rinse saliva samples were evaluated for PH and mutans streptococci colony counts. Palat ability Of both the extracts were assessed through a self-designed questionnaire having structured categorical responses.
Statistical analysis: Parametric evaluations were done using ANOVA and dunnetts "T" test.
Result: The mean mutans streptococci colony counts in all the three groups decreased significantly immediately after the oral rinsing.
Summary and conclusion: The study affirms that both liquorice and tulsi extract are potent cariostatic agents and are found to be palatable by pediatric patients.

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FC35

A Radiographic Analysis of Resorption in Primary Molars, Associated Pathology and Position of Underlying Premolars

Isha Jatana, Shalini Garg
MM College of Dental Sciences and Research

Aim and purpose: This retrospective radiographic study of analysis of root resorption in primary molars was done to evaluate its effect on position of underlying developing premolars.
Materials and method: 200 intraoral periapical radiographs were categorized according to status of physiological resorption in distal and mesial roots and associated pathologic resorptive changes in mandibular first and second primary molars. Each IOPA was then analyzed to evaluate the effect of status of mandibular first and second primary molars on the position of underlying developing premolars.
Result: Findings suggest that mandibular primary molars undergoing resorption show pathology induced changes like aberrant and asymmetrical root resorption, though findings were not statistically significant. Wide variation in change in angulation of underlying premolar were observed. There is possibility of primary root resorption as a sequel of self-corrected ectopic eruption of premolars in locations not frequently diagnosed or reported.
Summary and conclusion: Early detection of the abnormal resorptive pattern of mandibular primary molars and the consequent eruptive pattern of underlying premolars helps to permit an interceptive, otherwise leading to subsequent complex clinical situation.

FC36

Evaluation of Stress Generated in Periodontium of Maxillary Molar by Various Intrusive Forces Using Tads- an Fea Study

Nimme Rawat, Pradeep Rastogi, Ridhika Kumar, Romit Garkoti
Seema Dental College and Hospital, Rishikesh

Aim and purpose: To evaluate Von-mises stresses and Maximum principle stresses in periodontium of maxillary molar on intrusion of TADS - using finite element method.
Materials and method: Finite element model was created using Hypermesh software and software used for geometric modelling was ANSYS Workbench 11. The loading condition was designed to mimic different intrusive forces.
Result: The results suggested high stress concentration at furcation level of tooth and compression is seen in apical third of all root area of pdl except in palatal side of palatal root of pdl.
Summary and conclusion: The furcation area of tooth is most prone to root resorption and compression is seen in apical third of all root area of pdl except in palatal side of palatal root of pdl area where stretching is seen and tensile forces are generated in contrast with anterior teeth reported to display high concentration at the apex.

FC37

Retraction of Canines Using Bapat Power Arm

Parul Singh, Shirish M. Bapat
K.D Dental College and Hospital, Mathura

Aim and purpose: The aim of this paper is to assess whether BPA can cause bodily movement and reduction in rotation of canines.
Materials and method: In one patient, maxillary canines were retracted by conventional method using elastomeric power chain applied at the canine bracket hook. In another patient, maxillary canines were retracted using elastomeric power chain applied to Bapat Power Arm ligated to canine brackets from removable power arm placed in molar auxiliary tube. Retraction force of 150 g was used in both patients. Pre and post retraction orthopantomograms and occlusal introral photographs were used to assess changes in root angulations and rotations, respectively.
Result: Canines tipped distally by 140 in conventional method, however, they moved bodily with BPA. In fact roots of canines showed 20–40 more distal tip than crowns with BPA. Canines rotated distopalatally by 120 with conventional method, but only 40 with BPA.
Summary and conclusion: Bapat Power Arm was effective in causing bodily retraction of maxillary canines with minimum rotation.
Keywords: Bapat Power Arm, canine retraction, rotation, tipping.

Room F14 | 2014-09-11 |9:30-10:30

FC38

Changes in Mandibular Second and Third Permanent Molars Consequent to Orthodontic Treatment

Pradeep Kumar, Shirish M. Bapat
Seema Dental College and Hospital, Rishikesh

Aim and purpose: The purpose of the present study was to determine the changes in the mesiodistal angulations of unerupted mandibular third molars and erupted mandibular second molars and positional changes of mandibular molars concurrent to orthodontic treatment of Class I and Class II, Division 1 malocclusion subjects.
Materials and method: Pre-treatment and post-treatment orthopantomograms of eighty patients treated by pre-adjusted edgewise appliance by first premolar extraction (Gp. A), second premolar extraction (Gp. B) and non-extraction (Gp. C) approach were used. Changes in angulations and horizontal positions of molars were measured in relation to the horizontal and vertical reference planes.
Result: Premolar extractions had a positive influence on the developing third molar angulations and positions. Changes in third molars were greater than changes in second molars in all three treatment methods. Tipping and mesial movement of mandibular third and second molars were greater in Gp. B than in Gp. A, and least in Gp. C. No sample showed any distal movement of molars in all three treatment methods. Some molars had unfavorable mesial tipping. Though most changes were greater in Class II division 1 subjects than in Class I subjects, differences were significant only in second premolar extraction subjects.
Keywords: mandibular molars, mesial movement, mesiodistal angulations, distal movements.

FC39

Comparative Evaluation of Natural Antioxidants Spirulina and Aloe Vera for the Treatment of Oral Submucous Fibrosis

Sneha Maheshwari, Santosh Patil
Chattisgarh Dental College and Research Institute Rajnandgaon Chattisgarh

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Aim and purpose: Oral submucous fibrosis (OSMF) is a high risk premalignant condition predominantly seen in the Indian subcontinent. The aim of the present study was to compare the efficacy of spirulina and aloe vera in the management of OSMF.
Materials and method: Forty-two subjects with clinico-pathologically diagnosed OSMF were included in the study and divided equally in two groups, Group A (spirulina group) and Group B (aloe vera group). Group A was administered 500 mg spirulina in two divided doses for 3 months and Group B was given 5 mg aloe vera gel to be applied topically thrice daily for 3 months. Evaluation for different clinical parameters was done at regular intervals and data was analyzed using the Chi-square test. p-Value < 0.05 was considered to be statistically significant.
Result: The patients in Group A showed significant clinical improvement in mouth opening and ulcers/erosion's/vesicles ($p < 0.05$). However, there was no significant improvement in burning sensation ($p = 0.06$) and pain associated with the lesion ($p = 0.04$) among the two groups.
Summary and conclusion: Both the drugs showed improvement in the condition; however spirulina can bring about significant clinical improvements in the symptoms like mouth opening and ulcers/erosion/vesicles. Thus, spirulina appears to be more promising when compared to aloe vera for the treatment of OSMF.

FC40
Building a Tobacco Cessation Infrastructure-a Step towards a Tobacco free India
Poonam Rana[1], Kunal Oswal[2]
[1]*Terna Dental College and Hospital,* [2]*Dental practinioner*

Aim and purpose: To construct tobacco cessation centres through the tobacco intervention initiative.
Materials and method: The tobacco intervention initiative was launched in 2009 by Indian Dental Association (IDA) and interested dentists were trained in special 2 days program. A website serving as a resource for the patients, dentist and dental students was also developed. Brief interventions, self help materials and nicotine replacement therapy for established nicotine dependence form the mainstay of therapy which is made available through a specially designed tool- kit. A web based resource is also provided to the dentist. Dentists are trained to document all the information obtained during one on one counseling and subsequent follow up.
Result: Till date about 700 dentist across the country have already being trained and are actively practicing tobacco cessation. Also these dentists are master's trainers as they provide further training to newer graduates and dentists. The entire dentist's clan to have successfully completed the training are competent to certify their clinics as tobacco cessation clinics approved by IDA.
Summary and conclusion: In last three years the number of dentist enrolling for such programs was on the rise. Such initiative by IDA has definitely assisted a lot of patients to relinquish this routine. The task ahead is to maximize this potential of dentist and make such centre more easily available to the patients.

FC41
Self Perceived Need for Dental Care among Patients Visiting Terna Dental College
Poonam Rana[1], Kunal Oswal[2]
[1]*Terna Dental College and Hospital,* [2]*Dental practitioner*

Aim and purpose: The aim of the study was to understand the self-perceived need for dental treatment.
Materials and method: A cross sectional study involving the patients visiting the hospital chosen as control in Navi Mumbai were selected for the study. An interview administered questionnaire was prepared and after pilot testing implemented. Investigators were trained and calibrated and all the data was analyzed using SPSS software.
Result: Demographically 46.1% male and 53.9% were female, 11.8% were illiterate, 53% had completed schooling and 35% graduate in the study population. 48.5% participant felt they need immediate dental treatment. Among dental treatment participants felt cleaning, filling were major treatment needs. There was no statistical difference in while comparing treatment need and gender. Only 30% could assess information from a dentist about oral health.
Summary and conclusion: There is a huge treatment perceived from the population. There is limited assess of information by patient from a dentist in terms of oral health.

Room F15 | 2014-09-11 |9:30-10:30

FC42
Comparative Evaluation Polishing Systems on Surface Texture of a Nano-composite
Anisha Aparadh
M A Rangoonwala Dental College and Research Centre, Pune

Aim and purpose: To determine the effectiveness of five polishing systems on nanocomposite by evaluating surface roughness.
Materials and method: A total of 50 specimens will be prepared of light activated nanofill resin composite Filtek Z350 (3M ESPE, Dental products), approximately 10 mm in diameter and 2 mm in height and will be divided into five groups for polishing. The specimens will be prepared in a stainless steel mold. The composite will be filled with a composite filling instrument in incremental technique. The composite resin will be cured with a light curing unit for 20 s.
The polishing systems used are:
OptraPOL Next Generation composite polishing system (Ivoclar vivadent)
Super-snap polishing system (Shofu)
Enhance polishing system (Dentsply)
Jiffy polishing Kit (Ultradent)
Jazz polishing kit (SS White)
Result: The polishing will be done as per as manufacturer's instructions. After the specimens are polished, the specimens will be analyzed for surface roughness using a two dimensional surface profilometer. One way ANOVA test will be done to evaluate significant difference in surface roughness between the groups.

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FC43

A Comparative Evaluation of the Mineral Content and Microhardness after Micro Abrasion of Enamel

Zeeshan Ladhani, Sayli Dargad
M A Rangoonwala Dental College and Research Centre, Pune

Aim and purpose: To evaluate mineral content and microhardness of enamel surface after micro abrasion of enamel using CPP-ACP (casein phosphopeptide amorphous calcium phosphate) and CPP-ACPF (with fluoride).
Materials and method: Ten freshly extracted anterior teeth are selected. Teeth are treated with Abrasive slurry the prepared slurry will be applied to the labial aspects of teeth, using rotating rubber cup or flat plastic instrument is rubbed over the teeth for 50 s. Each tooth will be divided into four parts and treated accordingly with the topical application of the remineralising agent stored in artificial saliva. The mineral content of calcium and phosphorus will be checked and the surface microhardness will be evaluated to see the surface caries resistance.
Four groups will be:
Group 1-control group
Group 2-microabrasion done but not treated
Group 3-microabrasion done and CPP-ACP paste applied
Group 4-microabrasion done and CPP-ACP plus (i.e. with fluoride) applied.
Result: The final result will be twofold. Mineral Analysis will be done using EDAX (Energy Dispersive X-Ray Spectrosocopy). Microhardness will be evaluated using the Vickers Hardness Test and the appropriate analytical methods will be applied for the same.
Summary and conclusion: The resultant increase or decrease in the mineral content and microhardness will help in evaluating the surface caries resistance of the teeth. After evaluation using EDAX and Vickers Hardness test one may conclude that increase in either of the two parameters will help in improving the resistance to surface caries of the tooth.

FC44

Prosthodontic Management of "non-optimally" Placed Implants: A Case Series

Avina S. Banari
Armed Forces Medical College, Pune

Aim and purpose: This clinical case series describes the prosthetic restoration of implants in "non-optimal "positions that compromised routine restorative procedures and highlights the need for pertinent understanding of implant prosthodontics.
Materials and method: Undesirable outcomes relating to an implants position, angulation, or depth may affect the success and longevity of a prosthetic rehabilitation. Selection of correct prosthetic component viz., impression copings, gingival formers, temporary abutments and various pre-formed angled abutments may prove helpful to achieve satisfactory aesthetics and functional prosthetic outcomes.
Result: Thus, a non-optimally placed implant requires correction through selection of correct prosthetic component.
Summary and conclusion: Complications resulting from non-optimally placed implants can best be treated by avoiding them in the first place. Proper diagnosis and treatment planning are key to successful implant rehabilitation. If prosthetic complications are anticipated, scrupulous utilization of implant prosthetic components is justified. Proper diagnosis and treatment planning are key to successful implant rehabilitation.

Free Communication Session 2 - Preventive Dentistry

Room F03 | 2014-09-11 |12:30-13:30

FC45

Fear of Social Rejection and Oral Self-care in Men versus Women

Yvonne A.B. Buunk-Werkhoven, Abraham P. Buunk
SPOH ARTS, International Oral Health Psychology, Amsterdam, The Netherlands

Aim and purpose: To examine to what extent oral self-care is predicted by fear of social rejection as a result of one's poor oral health, including having ugly teeth and a bad breath.
Materials and method: Using an online questionnaire in a sample of 1677 respondents, representative of the Dutch population of 18 years and older.
Result: Women expressed more fear of social rejection because of one's poor oral health than men did. Such fear of social rejection predicted performing optimal oral self-care as defined by professional standards, and the intention to perform adequate oral self-care in the future, but not the frequency of visiting a dentist or oral hygienist. No gender difference was found in the frequency of visiting an oral health professional. In all respects, men took less care of their own teeth than women did. Remarkably, at the same time women indicated more likely than men to reject a potential partner on the basis of his or her bad breath.
Summary and conclusion: These findings suggest that one way to motivate men to perform better oral self-care is by emphasizing the negative effect a poor oral health may have on the impression they make on women. There is a need of further experimental research to refine oral health promotion for men and women in the desired direction.
[Correction added on 12 March 2015, after first online publication: The name of Abraham P. Buunk has been amended]

FC46

Comparison of Effectiveness of Two Treatment Modalities for Tobacco Cessation

Leena Selvamary, D. Jayanthi, M.B. Aswath Narayanan, S.G. Ramesh Kumar
Tamilnadu Government Dental College and Hospital, Chennai

Aim and purpose: To compare the effectiveness of health education alone and health education with cognitive behaviour therapy as two treatment modalities for tobacco cessation.
Materials and method: A pilot study was done among 30 tobacco users. Self reported quit attempt was assessed and the sample size was estimated at 194. Ethical clearance obtained from Institutional

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Review Board and the Randomized controlled trial was designed as per CONSORT guidelines.
Among 1519 tobacco users reported, 194 were randomly assigned to one of the two groups – 100 in Group A (Health education only) and 94 in Group B (health education with cognitive behaviour therapy). Age, sex, socio - economic status, form of tobacco usage, alcohol usage and stage of motivation were matched between the two groups. Knowledge, attitude and practice of participants regarding tobacco use and ill effects were assessed at baseline. Follow up was for 6 months (2nd week, 6th week, 12th week and 24th week) after intervention, to assess reduced use, quit attempt, point prevalence abstinence, continuous abstinence, lapse, relapse and attrition rates in each follow up visit. The self reported quit rates were validated using the standardized cotinine test in the 5th session.
Result: Continuous abstinence was significantly high in Group B. Reduced use and point prevalence abstinence was significantly higher in Group A.
Summary and conclusion: Cognitive behaviour therapy plays a vital role along with health education in achieving continuous abstinence overcoming social factors among the tobacco users.

FC47
Influence of Environmental Pollution on Caries Experience and Teeth Mineral Content of Preschool Children of Tbilisi, Georgia
Mariam Margvelashvili, Manana Kalandadze, Nana Suladze, Tamar Shishniashvili, Vladimer Margvelashvili
University of Georgia

Aim and purpose: The aim of mineral content in teeth of preschool children of the capital of Georgia, Tbilisi. The study was to assess the influence of environmental pollution on caries experience and teeth.
Materials and method: Two regions, relatively more and less polluted as defined by the Center for Strategic Research and Development were selected as sampling sites. In order to assess caries experience dmft values were recorded by calibrated examiners at the kindergartens of these two regions. Twenty four children were further randomly selected (12 from each region) for the qualitative and quantitative assessment of dental hard tissue mineral (Ca, Zn, Mn, Fe, Rb, Ni, Sr) and toxic elements (Pb and Hg) content using X-ray fluorescent spectroscopy method according to the World Nuclear Agency recommendations.
Result: Overall 525 children were examined, 302 from relatively polluted and 223 from cleaner environment. The total caries experience values for polluted and less polluted areas were 1.92 ± 2.842 and 1.47 ± 2.571 respectively, and caries prevalence – 47%(142) and 37% (83) respectively, yielding statistically significant differences ($p < 0.05$). Statistically significant difference was seen in dental hard tissue lead content when comparing samples from two regions 7.74 ± 1.765 and 4.95 ± 2.302. Environmental pollution affects were also seen in the mineral content of examined samples.
Summary and conclusion: It can be concluded that caries experience is higher among the children living in relatively polluted area of Tbilisi, Georgia. Dental hard tissues seem to be good environmental pollution indicators. Further research is warranted in order to assess correlations between caries experience and lead content in dental hard tissues.

FC48
Is Hemodialysis Therapy a Potential Risk Factor for Periodontitis?
Swati Jain, Ashish Singla, P. Basavaraj, Hansa Kundu, Khushboo Singh, Shilpi Singh
D.J College of Dental Sciences & Research, Modinagar (Uttar Pradesh)

Aim and purpose: The present cohort study was conducted with an aim to assess the attributable risk of development of periodontitis among the patients undergoing hemodialysis therapy.
Materials and method: The 302 patients suffering from chronic kidney disease (CKD) were selected from OPD of dialysis centre in Delhi on the basis of inclusion and exclusion criterion. Only those subjects who were free from chronic periodontal diseases (CPI = 2 and LOA = 0) were included as study cohort. Information regarding socio demographic profile, past dental history, adverse oral habits, oral hygiene practices and treatment advised was recorded at baseline and follow-up for matching. Out of 302 study subjects, 120 patients went on hemodialysis therapy after 6 Months of enrollment forming exposure group and remaining 182 subjects formed matched control group. Incidence of periodontal disease was recorded as percentage of subjects who had CPI > 2 and/or LOA > 0 after follow-up period.
Result: 74 subjects (61.67%) from exposure group and 78 subjects (42.86%) from comparison group developed periodontitis. (p value = 0.0014) after follow –up which was statistically significant. Incidence of disease among exposed and unexposed was found out to be 0.62 and 0.43 respectively. Hemodialysis therapy group showed a relative risk of 1.44 and attributable risk of 30.65% for periodontitis.
Summary and conclusion: Periodontal status was found to be debilitated among hemodialysis patients. Hemodialysis therapy could be a major risk factor for the development of periodontitis among CKD patients and has a high attributable risk for the development of periodontitis.

Room F04 | 2014-09-11 |12:30-13:30

FC49
Comparative Plaque Removal and Gingival Health among Natural and Artificial Tooth Brush users
Bilal Hussain Khan, Aatif Haroon, Faizan Syed Muhammad, Hamza Syed Muhammad, Kinza Bhutto, Mariyam Fakhruddin
Pakistan Dental Community

Aim and purpose: To compare the effect of natural (meswak) and artificial tooth brush on plaque removal and gingival health.
Materials and method: B.D.S students of age 18–22 years were recruited into a double blind randomized clinical trial of sample size 50. Randomization was done using the simple random number table. The sample size was determined in accordance with the ADA guidelines. The total study duration was of 1 month. Provisions were made for tooth brushes and neem sticks. Pre and post intervention examinations were executed by the two blind, trained and calibrated examiners. Turesky Quigley Hein Plaque index and

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Loe and Silness gingival index were used as basic examination tools. After recording the gingival status, plaque was stained using lozenges with 1% fucoaslid. Descriptive statistics, paired t-test and ANOVA were applied for statistical analysis of data. The p value of <0.05 was considered as statistically significant.

Result: A total of 50 subjects were recruited. There were 80% females and 20% males with a mean age of 20 years. There was significant reduction in plaque and gingival scores after the use of both inventions while the plaque score of the subjects using tooth brush was greater than the meswak users at post intervention dental examination.

Summary and conclusion: This study clearly indicated that meswak can replace the toothbrush, its mechanical efficacy and chemical effects should be consumed in the developing countries with limited oral health facilities.

FC50

Periodontitis – A Risk Factor for Preterm Low Birth Weight Children (plbw)

Sara Ikram Khan, Bilal Hussain Khan, Faizan Syed Muhammad, Hamza Syed Muhammad, Khadija Waraich, Myra Nasir
Pakistan Dental Community

Aim and purpose: Our aim is to evaluate/assess association between maternal periodontits and preterm delivery among low socio economic women. Subjects of low socio-economic status are the major focus of this study.

Materials and method: Cross-sectional study conducted at Department of Gynecology and Obstetrics, Civil Hospital, Karachi with a sample size 152 postpartum women.

A proforma was filed on behalf of subjects, which allowed them to state any past or present medical conditions, drug history, family income and occupation of husband. A thorough periodontal examination was done in all participants with their consent which included gingival bleeding, calculus, pocket depth of 4–5 mm and probing depth of >6 mm. Per delivery, gestational age (in weeks) and birth weight of baby (in kg) were collected from hospital records. Infants were placed into following categories: gestational age and birth weight. The babies' weight measured in kilograms was recorded and gestational week stated in weeks. According to the standards of the World Health Organization (WHO) birth weight <2.5 kg is considered as low birth weight and gestational week below 37 weeks is said to be a pre- term delivery and beyond that is regarded as normal.

Result: Out of 152 cases, 17.1% had premature delivery with periodontal condition, 53.7% had normal delivery with periodontitis, while 7.4% and 21.8% with no periodontal disease had preterm, normal delivery respectively. It is noteworthy that those children had low birth weight whose mothers had 4–6 mm pocket depth.

Summary and conclusion: Study failed to show any association between periodontal disease (indicated by pocket depth) and delivery of low birth weight.

FC51

"Infection Control Practices across Karachi: Do Dentists follow the Recommendations?"

Hina Ahmed
Ziauddin College of Dentistry

Aim and purpose: Infection control is an important issue in dentistry. Among health care professionals, dentists are more prone to infection due to direct contact with blood and saliva. (1) to assess infection control practice in Karachi, Pakistan. (2) To investigate personal protective equipment such as gloves, mask and protective eye wear used in dental practice in Karachi, Pakistan.

Materials and method: This was a cross sectional descriptive study, carried out in Dental colleges hospitals and private clinics of Karachi. Study included dentists working in Dental colleges, Hospitals and private clinics. Undergraduate dental students and dentists not having PMDC registration were excluded from the study. Total 223 completed questionnaires were obtained. Descriptive statistics were computed and differences between groups were assessed through Chi square test using SPSS version 16.0.

Result: Statistically significant differences were observed in infection control practices of various groups of dentists regarding their use of personal protective equipment, surface disinfection between Patients, disinfecting outgoing lab cases, use of sterilization wrappings and use of Sharps disposal system. Also Statistically significant difference was found in infection control practices of colleges, hospitals and private clinics regarding their use of personal protective equipment, surface disinfection between patients, sterilizing hand pieces between patients, method of sterilization used, use of Sharps disposal system and considering infection control policies a financial burden.

Summary and conclusion: Infection control practices of the three groups of dentists were different. More over the infection control practices of dentists working in different work places was also different.

FC52

Prevalence of Dental Fear and Anxiety among Dental Patients, a Survey

Swati Patnaik, N. Naveen, Swati Patnaik, N. Vanishree
Bangalore Institute of Dental Sciences Hospital Research Center

Aim and purpose: To assess age and gender wise dental fear among the study subjects dental fear survey questionnaire (DFS) and to assess age and gender wise dental Anxiety among the study subjects using Modified Dental Anxiety Questionnaire (MDAS).

Materials and method: An observational cross-sectional study was conducted. All the patients attending Bangalore Institute of Dental Sciences, Hospital & Research center, who consented to be a part of the study, were considered for the study period of 2 months, during the month of April and May 2014. A self-structured questionnaire was used to obtain data regarding demographic data. Dental fear among the study subjects was assessed using Dental Fear Survey (DFS) and dental anxiety among the study subjects was assessed Modified Dental Anxiety Scale (MDAS). t-test, ANOVA, chi-square test and correlation was used for statistical analysis.

Result: The study showed that dental anxiety was more prevalent in females. Dental fear was found to be within the age group of 24–35 years of age. Respondents were more afraid of tooth drilling, local anesthetic injection compared to other dental procedures. Most of the study subjects gave a response that, there might

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be a significant reduction in their dental fear and anxiety level if treatment explanation, post treatment care and phone number for further contact was provided.
Summary and conclusion: The study showed that a modification in the patient approach, treatment explanation and dentist's behavior might bring about a considerable reduction in the patients fear and anxiety level.

Room F05 | 2014-09-11 |12:30-13:30

FC53
Antibiotics Prescriptions Among Dentists Working in Dental Colleges in Bangalore City
Guru Suhas, Guru Suhas, N. Naveen, N. Vanishree
Bangalore Institute of Dental Sciences Hospital Research Center

Aim and purpose: To assess the knowledge of antibiotic prescription among the study subjects & to assess the prescription patterns of antibiotics for different oral pathologies according to their specialties among study subjects.
Materials and method: A cross sectional study was conducted among all the dentists working in various teaching Dental institutions of Bangalore city. A pre-tested self structured questionnaire containing a total of 45 questions were used for recording all required demographic data, type, dose and frequencies of antibiotic prescribed for different oral pathologies. All the dentists available during the study period were considered for the study. Chi square and ANOVA was used for analysis.
Result: Amoxicillin was the most preferred antibiotic for most of the oral pathologies & as a prophylactic antibiotic. There was also misuse of antibiotics by prescribing them where it is not required. Among the different specialties in Dentistry there was a varied use of antibiotics reported.
Summary and conclusion: The need of the hour is proper understanding and standardization of antibiotics for reducing and further preventing the misuse and abuse of antibiotics.

FC54
Association of Ecc and Dietary Factors using Pediatric Carcinogenicity Index
Siddhi Pancholi
School of Dental Sciences, Karad

Aim and purpose: To assess the relationship of dietary factors – carcinogenic factors with the prevalence and severity of early childhood caries among the preschoolers of Karad city.
Materials and method: Cross sectional study among the preschoolers of the study area was done. Ethical approval was obtained prior to the start of the study. Informed consent was obtained from the caretakers. The children were subjected to type 3 dental examinations. Data regarding the diet was obtained from caretakers using food frequency questionnaire and 24 h recall.
Result: The prevalence of ECC was found to be around 30%. The food cariogenicity scores were higher in ECC and SECC group compared to the caries free individuals food.
Summary and conclusion: The food cariogenicity index can be used as a predictor for the initiation and progression of ECC among the children and can be an effective tool for motivating and educating the parents regarding oral health and help quickly identify modifiable risk factors within a child's diet.

FC55
Awareness Towards Dental Trauma Prevention and Management among Sports Instructors of various Academies in Delhi, India
Geetika Gupta, Radhika Chopra
I.T.S C.D.S.R Muradnagar, Ghaziabad

Aim and purpose: To assess the level of knowledge of sports instructors in Delhi about the emergency management of dental trauma by means of self administered questionnaires.
Materials and method: The questionnaire was given to instructors of a variety of games. A total of 105 instructors responded. The questionnaire surveyed the instructors experience, training and knowledge about the management of traumatic injuries including tooth fracture and avulsion and prevention of trauma using mouth guards.
Result: It was observed that cricket instructors most frequently faced the incidence of dental trauma among their students. Only 46% of instructors recommended mouth guards. In cases of fracture only 40% felt that immediate attention was required, 72% would not store an avulsed or fractured tooth and those who will preserve will mostly use ice or tap water.
Summary and conclusion: The findings from this survey suggest that very few sports instructors knew about emergency management and prevention of traumatic dental injuries. Thus more efforts should be directed to train them in dental injury management and also to promote the use of mouth protection devices in contact sports where there is high risk of injury to the orodental structures.

FC56
An Overwiew of the Current Medical Gloves
Nuran Özyemisci-Cebeci
Affiliation missing

Aim and purpose: The aim of this presentation is to provide protection of dentists and undergraduate dental student's health caused by gloves by enlightening them about current products, hazards of products and optimum precautions.
Materials and methods: Systematic research of the literature was carried out. Detailed data was collected and edited containing chemical components, biological effects, and phylaxis for hazardous chemical agents and product innovation of dental gloves.
Summary and conclusion: Standard precautions and hand hygiene guidelines are important to dentists and the patients they serve. Latex hypersensitivity has become an increasingly common phenomenon in dentistry, leading up to development of new glove types. All dentists and undergraduate dental students should be aware of frequent reactions and diseases induced by noxious

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chemicals and the mode of transmission of these chemicals. Choosing the appropriate gloves requires having sufficient information about assets and drawbacks of current products. As well as choice of the type of gloves, minimizing the risks of hazardous agents emitted by gloves is important for health safety.

Room F10 | 2014-09-11 |12:30-13:30

FC57

Patients' Perceptions of the Oral Health Advice Received

Priscilla Brijlal
Affiliation missing

Aim and purpose: With a view of improving patient care and compliance, this study explored patient's perceptions of the oral health advice received from dental students with particular emphasis on the nature of oral health advice, barriers related to patient's understanding and patient's attitude towards the advice given.
Materials and method: A simple random sample was used involving 60 patients who were treated by oral hygiene and dental students for periodontal disease. Ethical clearance was gained at institutional level and patients signed consent.
Result: Patients reported learning the following regarding oral health care: brushing (100%), flossing (95%), plaque (71.7%), gum disease (80%), the role of diet in oral diseases (46.7%) and bone disease (43%). 86.7% indicated that clinicians made use of visual aids and 98.3% were demonstrated brushing and flossing techniques. 58.3% of the patients did not experience any barriers in understanding the oral health advice offered to them–patients that experienced barriers highlighted the following reasons: the use of high terminology (15%), the clinician speaking too fast (11.7%) and language barriers (3.3%). 11.7% indicated there were barriers but did not specify. 21.7% informed their clinicians that they did not understand. 36.7% wanted oral health education repeated particularly around causes of oral diseases.
Summary and conclusion: Although students and clinicians covered seminal aspects of oral health education, emphasis appeared to rest on preventive techniques such as brushing and flossing. Disease progression and contributing factors were under emphasized. The results suggest that students and clinicians need to modify the oral health advice they give in terms of appropriate content, terminology, pace and language.

FC58

Dental Nlp to Washout Anxiety & Phobia in School Children

Basheer Kinaan
Muscat/Oman

Aim and purpose: Wikipedia encyclopedia, reported; Dental Anxiety prevalence 75%, while phobia ranging 5–10%, being higher in younger (1). In four Middle East Countries, average 70% of children having dental problems, due to poor oral hygiene & caries (2). Neuro-Linguistic Programming (NLP) is successful, efficient & quick treatment for phobias; used in America &United Kingdom (3).
A New child (cognitive- behavioral program) was carefully designed; using NLP principles, applied by special lecture in Schools (group 40–50), using large projector screen. A lecture with cognition restructuring (short positive words) and behavioral techniques (relaxation, breathing, praising, new terms, body language) to clarify the value & uses of normal dentition. Anxiety & phobia removal
Materials and method: Three thousand children, 10–12 Years, 52% girls, random schools, during 2000–2014
1 Child Preparation (relaxation & diaphragmatic breathing).
2 Full Enjoyable Program (with New Terms& Vocabulary) i.e., positive restructuring (e.g. dentist = uncle).
3 Quick Brain Wash – to remove phobia.
4 Deep Teaching, using video & photos on large screen.
Result: Very successful; by: Children interaction (photos& videos recorded), with Headmasters & Ministry of Health acknowledgements.
Summary and conclusion: Learning principles of NLP & phobia removal. Maintaining natural healthy teeth.

FC59

Tobacco Consumption & Premalignant Lesions among Police Personnels in Mumbai

Timsi Rajani[1], Kunal Oswal[2], Anita Peter[2], Aishwarya Rao[1]
[1]*Terna Dental College & Hospital,* [2]*CPAA*

Aim and purpose: To study the tobacco consumption & presence of premalignant Lesions among Police Personnel in Mumbai.
Aim is to find out the prevalence of precancerous lesions and conditions among police personnel's due to tobacco consumption. A Pilot Study.
Materials and method: Across-sectional camp approach with multiphasic screening of the police officers was adopted in the study. Two random police unit with average police personnel of almost 200 personnel were selected for the study. Structured closed ended questionnaire was used to gather the socio-demographic and tobacco habits. It was followed by clinical oral examination by expert for screening and diagnosis of premalignant oral lesions. Mean percentage proportion was used for data analysis.
Result: A significant causal factor for tobacco consumption is occupational stress and the fact that police are regularly exposed to stressors beyond the range of normal human experiences. Among the study of total chewing population, the association between tobacco chewers and non chewers with respect to development of premalignant lesion was highly significant.
Summary and conclusion: A significant association was found between cause of consumption of tobacco and occurrence of cancer and precancerous lesions among the police officers. Periodicoral health examination and health promotion strategies to sensitize these individuals play a key role in refraining them these "flavored addictive carcinogens".

Room F14 | 2014-09-11 |11:30-12:30

FC60

Body Mass Index and Dental Caries in Children: A Systematic Review and Meta-analysis

Amandeep Chopra, Nc Rao, Nidhi Gupta, Shelja Vashisth
Swami Devi Dyal Hospital and Dental College, Panchkula

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Aim and purpose: Dental caries and deviations from normal weight are two conditions which share several broadly predisposing factors such as diet, socioeconomic status, lifestyle another environmental factors. Research results into the relationship between Body Mass Index (BMI) and dental caries in children have been mixed and inconclusive. The aim of this review and meta-analysis was to provide evidence to quantify the relationship between BMI and dental caries in children using systematic approach.
Materials and method: A systematic search for papers between 1980 and 2013 addressing associations between body mass index and dental caries in children was conducted and a random effects model meta-analysis applied.
Result: Dental caries was associated with both high and low body mass index (effect size = 0.114, p = 0.051). Co-factors such as age and socioeconomic class were significant moderators.
Summary and conclusion: A non-linear association between body mass index and dental caries may account for inconsistent findings in previous research. Future analysis should investigate these confounding variables, helping shape association between body mass index and dental caries, through determining common risk factors.

FC61
Dental Insurance Awareness among Dentists and General Population
Aashi Gupta, Puneet Ahuja, Sahil Thakkar
I.T.S Dental College Hospital and Research Institute Greater Noida

Aim and purpose: Dental Insurance is one of the major health care delivery systems in the west. However, in India, this still remains an unpractised entity. This study tried to assess awareness amongst dentists as well as the general population regarding Dental Insurance and whether people would opt for the same.
Materials and method: A pre-tested cross sectional questionnaire survey was conducted in a random sample of 200 dentists and 400 people in the city of Delhi and Delhi-NCR.
Result: Although 77% dentists found dental insurance advantageous, only 60% advised their patients to opt for it. Maximum dentists held lack of knowledge responsible for not recommending it. They stated that half of their patients don't undergo dental treatment because of the high costs involved. Amongst the general population, 63% were unaware of the term dental insurance. Of the 73% people who had health insurance only 17% claimed to have dental insurance. Two-third of them thought dental insurance to be important, yet only 38% opted to pay an extra premium for it. Descriptive statistics were applied using SPSS 21.0 and Statistical significance was taken as $p < 0.05$.
Summary and conclusion: It is important that customer-friendly Dental Insurance schemes are introduced by the public sector and private insurance companies so that the benefits of oral healthcare delivery system are passed onto the public so that better treatment can be provided.

FC62
Association Between Depressive Symptoms and Tooth Loss in an Adult Population of Jodhpur, Rajasthan
Chandini Purohit, Jyothirmai, Rohit
Jodhpur Dental College and General Hospital, Jodhpur, Rajasthan

Aim and purpose: To examine the association between depressive symptoms and tooth loss in an adult population of Jodhpur, Rajasthan.
Materials and method: A cross-sectional study consisting of convenience sample of 200 subjects escorting dental patients in our hospital was conducted. Only systemically healthy individuals, i.e. those who did not suffer from chronic diseases, apart from periodontitis, were included. Periodontal patients and individuals who received periodontal treatment within the last 3 months prior to examination were excluded. Individuals with chronic illnesses and syndromes, those on long-term medications, subjects who received or would be receiving any form of immuno suppressive therapy, pregnant women and orthodontic patients were also excluded from the study. Each subject received full periodontal examination.
Result: Statistically significant association between susceptibility to depression symptoms and tooth loss was observed.
Summary and conclusion: These findings further emphasize the importance of identifying and treating depression, and suggest that both dentists and physicians have a role in recognizing and referring patients for such treatment.

FC63
Oral Health Comparisons between Children and Adolescents Attending Private Schools in Karachi, Pakistan
Afshan Khan[1], Moosa Sabir[1], Wardah Awan[1], Zarish Mubarik[1], Zehra Hassan[1], Anum Vighio[2]
[1]*Liaquat College of Medicine and Dentistry,* [2]*Private Clinic*

Aim and purpose: There is good evidence on oral health of children and adolescents in Pakistan, but no study to date has compared early, late mixed and permanent teeth. This study aims to highlight high risk age groups that can be targeted with appropriate dental prevention programs.
Materials and method: Conducted in five private schools in urban areas of Karachi. Descriptive analysis was done. Mean and SD were calculated for caries and percentage for Plaque and Periodontal indexes.
Result: Of the total 734, high mean dmft/DMFT was at age 7 and 18. Plaque and Community Periodontal indexes scores were higher in permanent teeth of late adolescents.
Summary and conclusion: Caries was more prevalent in early mixed teeth of children and permanent teeth of late adolescents. Gingival problems were higher in permanent teeth of late adolescents. Therefore, it is important to target need specific oral health interventions at these high risk age groups.

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Room F15 | 2014-09-11 |11:30-12:30

FC64

"Myths and Taboos in Dentistry as on Now"

Priyadarshika Kumari
Dr. SyamalaReddy Dental College Hospital & Research Centre, Bangalore

Aim and purpose: To assess how much taboos and myths among people are the reasons to neglect dental treatment.
Materials and method: A cross sectional questionnaire study carried out among patients visiting the outpatient department of Dental Hospital in Bangalore. A self-administered validated questionnaire was used to collect data regarding the reasons for patients to neglect dental treatment. The Data was analyzed using Statistical package for social sciences software. Descriptive statistics that included mean and percentages were calculated for each of the categories.
Result: Out of 152 outpatients only 16 (10.7%) had come for a general checkup of the teeth; rest 136 (89.3%) had some or the other issues with their teeth but had neglected it for the following reasons- out of these 136, 103 (75.7%) of the patients reported that they were having some myth about dental treatments and feared not to report their problem until it was extremely unbearable condition. The rest 33 people reported not coming to hospital for the reasons such as lack of time, and poor past dental experience 22 and 11 respectively.
Summary and conclusion: Even in 21st century in a well-developed metro city like Bangalore more than 3/4th of people believed that visit for a dental treatment would hamper their general health, and had myths regarding dental treatments. Efforts should be directed towards removal of these myths from patients mind; in which media has to play a major role for a better future of this country.

FC65

Dental Air Force Home Dental Cleaning System: A Revolutionary Oral Hygiene Device

Rajiv Saini
Pravara Institute of Medical Sciences

Aim and purpose: The study outlined to evaluate the clinical, laboratory and microbiological efficacy of Dental Air Force home dental cleaning system on type 2 diabetes and non-diabetic adult chronic periodontitis patients.
Materials and method: A total of 100 adult chronic periodontitis subjects were recruited volunteers for this study. Clinical (plaque index,gingival index and clinical attachment loss), Laboratory (C-reactive protein levels and Glycated Hemoglobin) and Microbiological parameters (Aa, Fn, Pg, Pi) were measured prior to phase-1 therapy; at 3rd and 6th month post phase 1 therapy. Comparative assessment was done among all the patients that were divided into two groups with student paired't test and ANOVA.
Result: The results of this study showed that there was significant decrease in clinical, laboratory and microbiological parameters from baseline to 6 months in all the groups (i.e. $p < 0.01$). The subjects under groups using Dental Air Force home dental cleaning system showed highly significant reduction to all the parameters as compared to subjects under groups using toothbrush.
Summary and conclusion: There was strong correlation between periodontal diseases and systemic parameters. Dental Air Force home dental cleaning system with the access to inter dentally area helps in preventing the accumulation of dental plaque bio film. It is further able to maintain associated markers like CRP, HbA1c for systemic diseases at significantly lower level as compared to conventional tooth brushing.

FC66

Association Between Tobacco Consumption and Periodontal Diseases Among Type 2 Diabetes Mellitus Patients

Shaikh Zakir Mahmud[1], Mohammad Shoheilul Amin[2], Mohammad Mesbah Uddin[3]
[1]Ibrahim General Hospital Mirpur, Dhaka, Bangladesh, [2]Pioneer Dental College, [3]Saba Dental Care

Aim and purpose: The aim of this analytic type of cross sectional study was to find out the relationship between tobacco consumption and occurrence of periodontal diseases among type 2 diabetes mellitus patients.
Materials and method: A total 120 type 2 diabetic patients attended at diabetic centre for routine checkup over a period of 6 months from August 2011 to January 2012 fulfilled the eligibility criteria were selected consecutively. Pre-tested semi structured interviewer administrated questionnaires were used to collect the information. Periodontal index was followed according to Ramfjord (1967) whilst assessment of gingivitis was done according to Loe and Silness index (1967). Cross tabulations and associations were determined by using the Chi-square test and Logistic regression analysis.
Result: Out of 120 participants 22.5% were current smoker and 31.7% always chewed betel leaf. Education level indicated strong association with chewing betel leaf upon unadjusted [OR = 0.56 (0.39–0.82)] ($p < 0.003$). Although there was no significant relationship between current smoker and periodontal diseases, chewing betel leaf (Paan) was significantly associated with occurrence of periodontal diseases ($p = 0.048$). In addition, knowledge about cigarette smoking and chewing tobacco increases periodontal diseases indicated strong association with chewing betel leaf ($p = 0.002$).
Summary and conclusion: The relationship between smoking as well as chewing betel leaf and periodontal diseases provide strong evidence that smokeless products could be in a straight line responsible for developing periodontal diseases.

FC67

Knowledge and Attitudes Towards HIV/AIDS Among Dental Students of Jazan University, Kingdom Saudi Arabia

Ahmed Areashi, Fahad Hadadi, Mohammad Alwadaani, Sami Maashi
Jazan University

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Aim and purpose: To assess the knowledge and attitudes of dental students of target university towards HIV/AIDS.
Materials and method: A self-administered questionnaire was used in order to assess the knowledge and attitudes of dental students towards HIV/AIDS. All the dental students pursuing dental education in Target University dental school were invited to participate in the survey. The first part of the survey questionnaire was used to collect demographic information including gender and year of study while the later part comprised fourteen closed questions with options "Agree" and "Disagree" about knowledge of HIV infection, transmission patterns, and opinions about adequacy of their own knowledge. In addition, there were 17 questions addressing attitudes regarding treating HIV patients with like rt type options ranging from strongly disagree to strongly agree.
Result: All the students agreed that HIV/AIDS patients can infect dental workers. There was no significant difference between the males and females for HIV related knowledge. However, female students had better attitudes (62.16 ± 18.1) than their male (51.54 ± 14.7) counterparts towards HIV/AIDS. Knowledge on HIV/AIDS was significantly different between the students of different years with those in 4th year presenting better score (23.87 ± 5.5) than 2nd (16.56 ± 3.7) and 3rd year (55.98 ± 17.5) students.
Summary and conclusion: Many students had basic knowledge on HIV/AIDS but very few were aware of the advanced information on HIV/AIDS. Most of the students had poor attitudes towards HIV/AIDS.

Free Communication Session 3- Dental Treatment and Restorative Dentistry

Room F04 | 2014-09-11|13:30-14:30

FC68
Biomimetic Materials- a Step to Revolutinize Future Endodontics
Nitya Srinivas
SVS Institute of Dental Sciences, Mahbubnagar, Andhra Pradesh

Aim and purpose: The aim is to fabricate new biomimetic materials like enamel, dentin, pulp and PDL.
Materials and method: Biomimetic materials in dentistry are materials that have been designed such that they elicit specified cellular responses mediated by interactions with scaffold-tethered peptides and extracellular matrix.
Result: Biomaterials used in the medical field lack the ability to integrate with biological systems through a cellular pathway. Conversely, biomimetic materials transcend the regular biomaterial in utility and will suitably perform the functions of the biological molecule that needs to be replaced.
Summary and conclusion: Hence, in this presentation we highlight how biomimetic materials will revolutionize future endodontic with advances in signaling pathways underlying morphogenesis and lineage of stem cells.

FC69
Comparison of two Retreatment File Systems Using cbct and Stereomicroscope
Vikrant Yadav
D.J College of Dental Sciences & Research, Modinagar (Uttar Pradesh)

Aim and purpose: To compare the efficacy of Mtwo Re-treatment files and ProTaper D in removal of gutta-percha from root canals and to evaluate remaining filling material in the root canals after re-treatment using Cone Beam Computed Tomography and Stereo microscope.
Materials and method: Sixty mandibular premolar were prepared using Wave One (Dentsply Maillefer, Ballaigues, Switzerland) single file system. Canals were obturated using Wave One (Dentsply Maillefer, Ballaigues, Switzerland) gutta percha cones followed by Calamus (Dentsply Maillefer, Ballaigues, Switzerland) 3D Obturating system. Teeth were divided into two Groups with 30 teeth each. After placing teeth in humidifier for 21 days, gutta percha was removed using Mtwo Retreatment files (VDW, Munich, Germany) and ProTaper D (Dentsply Maillefer, Ballaigues, Switzerland) from Group I and Group II respectively. Amount of gutta percha left was calculated using cone beam computed tomography and stereo microscope.
Result: Result was analysed using student t test (unpaired). On Stereomicroscopic evaluation, Mtwo retreatment file (VDW, Munich, Germany) showed Mtwo retreatment file removed more gutta percha. CBCT evaluation proved, in the cervical thirds, Protaper D (Dentsply Maillefer, Ballaigues, Switzerland) removed more gutta percha while in the middle and apical thirds; Mt wo re-treatment file (VDW, Munich, Germany) removed more gutta percha.
Summary and conclusion: Within the limitation of this study, Mtwo Retreatment (VDW, Munich, Germany) file proved to be the most effective instrumentation system for re-treatment.

FC70
A Comparative Evaluation of Antimicrobial Efficacy of Different Root Canal Sealers on *Enterococcus faecalis*-an In Vitro Study
Vijay Kumar Shakya
Department of Conservative Dentistry & Endodontics King George's Medical University Lucknow, Uttar Pradesh

Aim and purpose: The purpose of this study to compare the in vitro antimicrobial activity of four endodontic sealers (AH Plus, MTAFillapex, CRCS, GuttaFlow 2) on *Enterococcus faecalis* by agar diffusion test and direct contact test.
Materials and method: All the sealers were prepared in accordance with the manufacturers recommendations. ADT and DCT were used to evaluate the antimicrobial activity. ADT- all the four sealers were placed in ten plates of Muller Hinton agar media inoculated with *Enterococcus faecalis* ATCC 29212. The diameters of the zones of inhibition were measured in mm. DCT-sealers were placed into 10 sterile tubes. After that standard suspension of *E. faecalis* ATCC 29212 spread over the sealers. For Colony count were done with a digital colony counter.

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Result: All sealer shows antibacterial activity against *Enterococcus faecalis*, except GuttaFlow 2. At 24 h zone of inhibition was highest in CRCS and lowest in AH Plus. After 7 days the zone of inhibition decreased in AH plus, CRCS and MTA Fillapex. Direct contact test shows showed a significant lower number of organisms in AH Plus, CRCS and MTA than controls at both the time intervals. GuttaFlow 2 did not show any significant antimicrobial action.

Summary and conclusion: Highest microbial inhibition was shown by Calciobiotic Root Canal Sealer (CRCS), followed by MTA Fillapex and AH Plus, Guttaflow 2 did not show any inhibition of *E. faecalis* by ADT. Also the antibacterial activity of sealers reduced over time. Maximum reduction in antibacterial property with time against *Enterococcus faecalis* was seen with AH Plus.

FC71

Prevalence and Technical Quality of Root Fillings in Dakar, Senegal

A. Adjaratou Wakha[1], Abdoul Wakhabe Kane[1], Babacar Faye[1], Babacar Toure[1], Mouhamed Sarr[1], Yves Boucher[2]
[1]*Department of Odontology, Faculty of Medicine, Pharmacy and Dentistry, Cheikh Anta Diop University,* [2]*UFR Odontologie, University Paris, Diderot, France*

Aim and purpose: To examine prevalence and technical quality of root fillings and periapical status of root-filled teeth in a subpopulation of Dakar, Senegal.

Materials and method: Full-mouth periapical radiographs were obtained from 208 consecutive adults presenting to the Dental Service of the University. Occurrence and technical quality of root fillings were assessed for each root according to apical extent of root fillings and its density. Periapical status was evaluated using the Periapical Index Scoring System with a PAI > 2 indicating periapical disease. Presence of coronal restorations and posts was also noted. Statistical analysis was performed with chi-square test (significance level at $p < 0.05\%$).

Result: Of the 6234 teeth examined, 2.6% were root filled, 17.7% of the root fillings were technically acceptable and 26.2% of these were associated with a PAI > 2, in roots with unacceptable root fillings 62.5% had a PAI > 2. Unacceptable root fillings were associated with a higher prevalence of periapical disease ($p < 0.001$), a post was seen in 18.9% of the filled roots with 66.2% associated with a PAI > 2 and permanent coronal restoration was present in 78.5% of the filled roots, of which 50.7%had a PAI > 2 vs. 75.7% for no permanent restoration. At least one periapical lesion was seen in 59.6% of the subjects, a PAI > 2 was associated with 56.1% of the filled roots.

Summary and conclusion: The results indicate a low prevalence of teeth with radiographic periapical disease, a low prevalence of root-filled teeth and a high prevalence of unacceptable root fillings.

Room F05 | 2014-09-11 | 9:30-12:10

FC72

Urban Indian Community-based Study on Non-carious Cervical Lesions

Amandeep Kaur, Ajay Logani, Amandeep Kaur, Leesa Parida, Naseem Shah
All India Institute of Medical Science

Aim and purpose: To determine the prevalence and severity of Non Carious Cervical Lesions (NCCLs) and observe its relationship with potential risk factors.

Materials and method: A Community based cross-sectional observational study was conducted in an urban re-settlement colony of Delhi, India. Required institutional ethical approval was obtained. It was proposed to examine 600 subjects (300 cases and equal number of controls) who were above the age of 18-years and distribute them into three pre-defined age groups i.e. (18–30, 31–50 and 51–80) with equal gender distribution. A door-to-door survey was conducted and a total of 422 households agreed to participate. 1524 subjects were screened of which 1224 exhibited presence of NCCL. A cursive screening facilitated in enrolling the proposed requisite number of subjects. They were administered a pre-tested interview schedule. This was followed by an oral examination. Smith and Knight Tooth wear index was used to score each tooth for severity of NCCLs. Data was statistically analyzed using SPSS 16 version software.

Result: Prevalence of NCCLs was 80.3% (82.6% males and 77.9% females). The maximum number of lesions was found in 51–80 age groups (68.5%). Majority of the lesions had a "level 2"severity with sensitivity being the chief complaint. Presence of gastric reflux, use of neem stick and tooth powder were observed in subjects with NCCLs.

Summary and conclusion: A high prevalence and severity of this disease entity was observed. This can pose a significant oral health problem.

FC73

Sustained Release Drug Device for Chlorhexidine

Priyanka Ann Raju, Kurinji Amalavathy, S Prakasam
Sathyabama Dental College Hospital, Chennai

Aim and purpose: The aim of this in-vitro study was to develop a controlled release drug device of chlorhexidine for root canal disinfection.

Materials and method: 1) Size #80 paper points loaded with 20% chlorhexidine.

2) Paper points are coated with:

a) Group A 10% ethyl cellulose b) group B 20% ethyl cellulose c) group C 10% solution of PMMA d) group D uncoated drug loaded paper points (control group).

3) Drug release at 2, 4, 24, 72 h analysed using UV spectrophotometer.

Result: The experimental groups showed significant sustained drug release as compared to the control group. Among the experimental groups, group B showed significant drug release up to 72 h.

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Summary and conclusion: Polymer coated drug loaded paper points allowed controlled release of chlorhexidine. The rate of release was significantly affected by the concentration and the type of polymer.

FC74

Effect of Endodontic Irrigants on the Push-out Bond Strength of Root Repair Material

Snehal Vivrekar
Terna Dental College and Hospital

Aim and purpose: To evaluate the effect of various endodontic irrigants on the push-out bond strength of Biodentin in comparison with MTA.
Materials and method: Mid root dentin of single rooted teeth was horizontally sectioned into 1-mm-thick slices. The canal space of each dentin slice was enlarged with a number 5 gates glidden drill. The samples were divided into two groups (n = 20). Biodentin and MTA were placed into it. The samples were wrapped in wet gauze for 10 min and divided into two subgroups (n = 10) to be immersed into 3% sodium hypochlorite and 2% chlorhexidine gluconate for 30 min. No irrigation was performed in the controls (n = 3). After incubation for 48 h, the dislodgement resistance of the samples was measured using a universal testing machine.
Result: push -out bond strength value of BIodentin was found to be significantly higher than MTA.
Summary and conclusion: The force needed for the displacement of Biodentin from root dentin was significantly higher than MTA. CHX reduced the push-out bond strength of MTA. However, NaOCl and CHX did not influence the resistance to the dislodgement of Biodentin.

FC75

Bio-technological Endodontic Principles in Non Surgical Management of Extensive Periapical Lesions

L.V. Vijayshankar
M.R. Ambedkar Dental College, Bangalore

Aim and purpose: To describe the Application of Biotechnological Endodontic principles in nonsurgical management of extensive periapical lesions with two case reports - one a 6 year follow up case report and the other with 3 year follow up case report.
Materials and method: The development and progression of endodontically induced periapical lesions is clearly associated with the presence of microorganisms in the root canal system. There are surgical and non surgical methods to treat such cases. A non surgical method should initially be done especially in cases where lesions are in close proximity to important anatomical landmarks. Studies have reported a success rate of up to 95% after non surgical endodontic treatment of such cases. This presentation describes the Bio-technological principles of root canal treatment during management of extensive periapical lesions along with some case reports-the first case is a 6 year follow up report and the other is a 3 year follow up report.
Result: The conservative treatment success in managing extensive periapical lesions could be explained based on the following aspects: Biomechanical preparation and bacterial control, lesion decompression achieved by apical patency, complementary antiseptic action of calcium hydroxide due to its alkalinity and its bony repair effect and good immune response due to patients age.
Summary and conclusion: Surgical removal of periapical lesion of pulpal origin is not mandatory. Every effort should be made to treat such lesions by conservative means. The aim of non-surgical endodontic therapy is the elimination and prevention of infection from the root canal with regression of inflammatory apical true cysts.

Room F10 | 2014-09-11 | 13:30-14:20

FC76

An Illustration of the Uses of CBCT in Endodontics

Vinisha Ranna
Government Dental College and Hospital, Mumbai

Aim and purpose: As dentists, we are dealing with a three dimensional patient, suffering from three dimensional pathology, for which we provide a three dimensional restoration or prosthesis. Why then must we limit ourselves to two dimensions when it comes to imaging? Cone beam computed tomography (CBCT) has been specifically designed to produce undistorted three dimensional information of the maxillofacial skeleton, including the teeth and their surrounding tissues. This paper attempts to illustrate the uses of CBCT in Endodontic through an extensive series of cases from our institution, based on the criteria given by the Joint Position Statement of the American Association of Endodontists and the American Academy of Oral and Maxillofacial Radiology.
Materials and method: This review presents a series of cases from our institutions that are complex and challenging to dentists. Cases of Taurodontism, dilaceration, dens in dente, external and internal resorption, trauma, iatrogenic errors and many more where CBCT has unmasked complex canal and tooth anatomy are described. This should familiarize dentists with the appearance of these lesions on the CBCT, aiding in their diagnosis and treatment.
Result: Multi-planer reconstructions of CBCT give a three dimensional insight of complex pathologies, vanquishing imaging problems thus far faced by dentists.
Summary and conclusion: In conclusion we wish to emphasize the unparalleled role that CBCT plays in the field of endodontics through this comprehensive series.

FC77

Non Surgical Management of Dens Invaginatus Type II with Large Periapical Radiolucency

Lalit Likhyani
RUHS College of Dental Sciences & Hospital, Jaipur

Aim and purpose: To evaluate clinically and radiographically the long-term clinical outcome of nonsurgical root canal treatment

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using calcium hydroxide in teeth with dens invaginatus and large cyst-like periapical lesion.
Materials and method: Patient reported with a large palatal swelling in relation to peg shaped maxillary right lateral incisor. Diagnostic radiograph revealed a large periapical radiolucency and type II dens invaginatus associated with tooth number 7. Nonsurgical endodontic therapy using calcium hydroxide paste & obturation by thermoplastic technique was planned followed by its aesthetic rehabilitation using extracoronal restoration.
Result: The case was successfully managed by non surgical endodontic treatment of a maxillary lateral incisor having the anomaly (Oehlers Type II dens invaginatus) with a large periapical radiolucency followed by its esthetic rehabilitation and a follow up of 4 years.
Summary and conclusion: Dens invaginatus is a developmental defect resulting from invagination of the crown before calcification has occurred. It has numerous complex forms. Whenever endodontic therapy involving such a tooth becomes necessary, the clinician must be aware of the various treatments available for proper care. And the size of the periapical lesion is not a major determining factor in the decision to perform conventional root canal treatment or surgical removal of the lesion.

FC78

Regenerative Endodontic: A New Approach to Save a Tooth

Jaina Dubey
People Collage of Dental Science and Research Center, Bhopal, MP

Aim and purpose: To review the current approaches for revitalization and regenerating dental tissues using regenerative endodontics.
Materials and method: Regenerative Endodontics is a creation & delivery of tissues to regenerate diseased or traumatized tissue. It uses concept of Tissue engineering. These include Root canal therapy- it is done by disinfecting & establishing bleeding into the canal system with placement of antibiotics. Stem cell therapy used to regenerate tissue. Pulp implant-cultured pulp cells are grown on biodegradable membrane filters that are implanted into disinfected canal system. Scaffold implant-a porous polymer scaffold seeded with pulp stem cells is used that contains growth factors which aid stem cell proliferation & differentiation. 3D CELL PRINTING-layers of cells are suspended in a hydrogel to recreate structure of tooth pulp tissue. GENE THERAPY- mineralizing genes introduced into pulp tissues to promote tissue mineralization. This paper highlights the approaches involve in Regenerative Endodontics by which dental tissues are generated.
Result: Current approaches tend to stimulate more reparative than regenerative responses in respect of the new tissue generated, which often does not closely resemble physiological structure of dentin-pulp. However, despite these biological limitations, such techniques appear to offer significant promise for improved treatment outcomes.
Summary and conclusion: Improved biological outcomes will likely emerge from the many experimental studies being reported and will further contribute to improvements in clinical treatment protocols.

Room F11 | 2014-09-11|13:30-14:30

FC79

Gutta Percha Alternatives in Root Canal Therapy

Kalambur Anand
Manipal College of Dental Sciences, Manipal

Aim and purpose: Gutta Percha is the most widely used Obturating material in root canal therapy. It is known for its great biocompatibility and its ability to be thermosoftened and compacted. But it also has many shortcomings like its inability to bond to the tooth structure, the necessity to apply a coronal seal and much more. The time for Gutta Percha alternatives to be tried has come.
Materials and method: The present viable options include Resilon based systems, Resilon delivery systems and the monoblock system. Resilon based systems provide better radiopacity, enhanced fracture resistance, dual curing and almost zero tissue irritation. The resilon delivery systems come as standardized tips which correspond to endodontic instruments and various tapers. The Monoblock system aims at reinforcing the tooth using a single unit.
Result: Due to the greater application and properties of these alternative materials, these other outlets to replace Gutta Percha are to be looked at as a change that has come to stay.
Summary and conclusion: The paper will highlight the composition, functions, application techniques, pros, cons, recent developments and clinical relevance of the Resilon and Monoblock systems as alternatives to Gutta Percha.

FC80

The Use of Biodentin and PRF in One-visit Apexification Treatment: Case Series

Sarika Chaudhry, Mahesh Verma, Pankaj Yadav, Sangeeta Talwar
Maulana Azad Institute of Dental Sciences, New Delhi

Aim and purpose: The successful use of new calcium silicate based cement and PRF for management of open apex cases.
Materials and method: An immature tooth with pulpal necrosis and periapical pathology presents a great difficulty to the endodontist. Traditional apexification with calcium hydroxide is associated with certain difficulties, like longer treatment time, risk of tooth fracture and incomplete calcification of apical bridge. Thus use of a biocompatible material which can form a physical apical barrier with tissue healing properties became a material of choice for treating these types of cases. Biodentine™ is new calcium silicate based cement that exhibits physical and chemical properties similar to those described for certain Portland cement derivatives. This article demonstrates the use of a newer material, Biodentine as an apical matrix barrier along with PRF in root end apexification resulting in procedure successful healing in four cases. Apexification in one step using an apical plug of Biodentine can be considered a predictable treatment and may be an alternative to MTA apexification.

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Summary and conclusion: Single step apexification with a biocompatible and bio-active material like biodentine and PRF is a novel approach for managing immature open apex roots. Biodentine is found to be a promising material for single visit apexification and management of large periapical lesions.
Keywords: apexification; apical barrier; biodentine; PRF

FC81
New Representation of Course of Root Canals in Maxillary Molar
Lora Mishra
Institute of Dental Sciences Bareilly

Aim and purpose: New Representation of course of root canal in maxillary molars when visualized under dental operating microscope, Intra oral radiograph and CT imaging.
Materials and method: Maxillary molars root canal course observed under IOPAR and CT scan where compared using Weines, Vertucci's and new proposed method. A closed questionnaire was formulated and distributed among dentists who analysed the understanding of the proposed new method when compared to traditional methods of root canal classification.
Result: The questionnaire was statistically analysed and graph was plotted.
Summary and conclusion: Maxillary molars have complex anatomy and understanding of this anatomy has greater implications on success of endodontic treatment. Radiographs aid in visualization of root canal to certain extent but two dimensional representations is their biggest short comings. Dental operating microscope and CT scan are essential and latest aids which overcome this problem. There is a universal need of a nomenclature and logarithmic analysis of root canal course which will make the understanding of this complex root canal anatomy simpler, recordable and easy to communicate.

FC82
Efficacy and Success of Contemporary Root Canal Irrigation
Rajendra Kumar Tewari
Dr Z A Dental College, Aligarh Muslim University

Aim and purpose: To review that effective irrigant delivery and agitation are prerequisites for successful endodontic treatment.
Materials and method: This article presents an overview of the irrigation methods currently available and their debridement efficacy. Despite the plethora of in vitro studies, no well-controlled study is available. This raises imperative concerns on the need for studies that could more effectively evaluate specific irrigation methods by using standardized debris or biofilm models. In addition, no evidence-based study is available to date that attempts to correlate the clinical efficacy of these devices with improved treatment outcomes. Thus, the question of whether these devices are really necessary remains unresolved. There also appears to be the need to refocus from a practice management perspective on how these devices are perceived by clinicians in terms of their practicality and ease of use.
Result: Technological advances during the last decade have brought to fruition new agitation devices. Those rely on various mechanisms of irrigant transfer, soft tissue debridement, and, depending on treatment philosophy, removal of smear layers. These devices might be divided into the manual and machine assisted agitation systems. Overall, they appear to have resulted in improved canal cleanliness when compared with conventional syringe needle irrigation.
Summary and conclusion: Understanding these fundamental issues is crucial for clinical scientists to improve the design and user-friendliness of future generation soft irrigant agitation systems and for manufacturer's contentions that these systems play a pivotal role in contemporary endodontic.

Room F12 | 2014-09-11 | 13:30-15:30

FC83
Strength of Endodontic Treated Teeth Restored with Fibre-Reinforced Composite
K. Eswar, D. Kandaswamy, N. Venkatesh Babu
Sri Ramachandra University, Porur, Chennai

Aim and purpose: To determine the fracture toughness of posterior teeth restored with fibre- reinforced composite as an entrance filling following root canal therapy.
Materials and method: 20 sound non carious posterior teeth were selected for this study. Access cavity was prepared with a diamond bur. Working length was determined. The root canals were cleaned and shaped. NaOCl was used as an irrigant. The teeth were then obturated using gutta percha with AH-plus sealer. The samples were divided into two groups. Group I received conventional micro hybrid composite resin. Group II received a core of fibre reinforced composite following which the occlusal portion was restored with micro hybrid composite resin. The samples were then analysed for fracture toughness using a universal testing machine. Fracture patterns were then noted. The results was analysed statistically.
Result: The fracture toughness of fibre reinforced composite entrance filled teeth was evaluated, along with analysis of the fracture patterns, whether they are re-restorable or not.
Summary and conclusion: Fibre reinforced composites can be used as a entrance filling provided they are concealed under a layer of composite to prevent the fibers disintegrating in the oral environment.

FC84
Air Abrasion (Dental Care without Drill)
Rik Chatterjee
Manipal College of Dental Sciences Manipal

Aim and purpose: During air abrasion, an instrument that works like a mini sand blaster is used to spray away decay. Fine particles of silica, aluminum oxide, baking soda mixture are propelled towards the tooth surface by compressed air or a gas that runs through the dental hand piece.

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Materials and method: Instruments used in air abrasion technique? Air abrasion unit and micro etcher other procedures in Air abrasion Removal of old composite restorations Preparation of a tooth surface for bonding or sealants Removal of superficial stains and tooth discolorations.
Result: Advantages of air abrasion, Air abrasion generates less amount heat as compared to drills Air abrasion reduces need for anesthesia and leaves much more of the healthy tooth structure behind Working area is relatively dry, composite filling can be done Ideally used for children and others who are fearful and have minimal decay Disadvantages Air abrasion can cause sensitivity and not used for deep cavity restorations When using around the gums and intra oral soft tissues cause discomfort as aluminum oxide particles damage the gum.
Summary and conclusion: Air abrasion, in conjunction with micro dentistry has opened up a whole new method of treatment for patients that preserve far more tooth structure than was ever previously possible, with greater patient comfort and superior aesthetics. The paper presentation is an attempt to review use of air abrasion in dentistry, that is, dental care without drill.

FC85

Combination of Novel Techniques in Management of Periapical Cyst

Rahul Thakkar, Naseem Shah
All India Institute of Medical Science

Aim and purpose: To manage periapical cyst with ultra conservative and innovative method.
Materials and method: A 30 year old male patient reported with chief complaint of swelling & pain in right upper front tooth. On examination maxillary right canine was carious exposed. On radiographic evaluation large cyst like periapical lesion was present. Combination of Seal-bio and surgical fenestration was employed in this case after taking informed consent. Histopathological examination confirmed the diagnosis of periapical cyst. The cases were followed up clinically and radiographically.
Result: Periapical radiolucency revealed progressive involution on follow-up radiographic examination without any clinical symptoms.
Summary and conclusion: A novel ultraconservative biological technique using combination of Seal-bio and surgical fenestration can be used as an alternative for treatment of large cyst like lesion.

FC86

Quantification of Calcium Ions Removed from Root Canal by Different Chelators

Hemant Kumar Yadav, Rakesh Kumar Yadav, A.P. Tikku, Anil Chandra, Devendra Kumar Patel
Centre for Dental Education and Research, All India Institute of Medical Sciences

Aim and purpose: To quantify using atomic absorption spectrophotometer the amount of calcium ions removed from root canal by different root canal chelators.
Materials and method: Fifty (n = 50) freshly extracted human mandibular premolar teeth were collected and decoronated at the cementoenamel Junction. The canals were prepared in a crown down fashion using ProTaper Tm rotary system and copiously irrigated with 1.0% sodium hypochlorite. All specimens were rinsed with deionised water. Based on the type of chelating agent used the samples (n = 10) were randomly divided into five (four test and one negative control) groups. Accordingly, Group I- 9% Etidronic acid, Group II- 18% Etidronic acid, Group III- SmearClearTm, Group IV- MTAD Tm and Group V- Normal Saline. Subsequent to irrigation, the solution was collected in a test tube and subjected to atomic absorption spectrophotometer for quantification of calcium ions removed from the root canal. Data were statistically analyzed using one way ANOVA and Tukeys post hoc test.
Result: The mean concentration of calcium ions removed from the root canal (mean ± SD) in all groups (I – V) were 13.32 ± 0.54 μg/ml, 16.36 ± 0.27 μg/ml, 20.04 ± 0.24 μg/ml, 18.15 ± 0.39 μg/ml and 8.74 ± 0.49 μg/ml, respectively.
Summary and conclusion: Smear ClearTm was most effective agent for removal of calcium ions from the root canal. Hence its combined use with an organic solvent can be recommended for efficient smear layer removal. It can also be evaluated for management of calcified canals.

FC87

Evaluation of Anesthetic Success Rates of Two Injection Techniques When Used for Pulpal Anesthesia in Posterior Mandibular Teeth With Irreversible Pulpitis During Endodontic Procedure: A Systematic Review

Seema Yadav
Maulana Azad Institute of Dental Sciences New Delhi

Aim and purpose: The objective of this systematic review was to compare and evaluate the anesthetic success rates of Inferior alveolar nerve (IAN) block injection technique alone with that of combination of IAN Block and supplemental infiltration technique when used for pulpal anesthesia of mandibular posterior teeth with irreversible pulpitis during endodontic procedure.
Materials and method: Electronic databases were systematically searched for randomized controlled clinical studies. Studies were selected by predefined inclusion and exclusion criteria. Data was search from 1998 to 2014. Out of 895 studies only five studies were included based on inclusion and exclusion criteria.
Result: Based on this review, better anesthetic efficacy was seen with combination of IAN block and infiltration technique as compared to the IAN block technique alone. However none of the technique gave 100% success rate.
Summary and conclusion: The anesthetic success rates of Inferior alveolar nerve block (IANB) injection technique alone with that of combination of IANB and supplemental infiltration technique when used for pulpal anesthesia of mandibular posterior teeth with irreversible pulpitis during endodontic procedure was studied.

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Electronic databases were systematically searched. Five studies were included based on inclusion criteria. Although there is difference in the values comparing the different techniques the data is significantly different in the anesthetic success rates. Supplemental infiltration technique significantly increased the anesthetic success rate than IAN Block alone. However, none of the technique gave 100% result.

Room F13 | 2014-09-11|13:30-14:40

FC88
To Graft or Not to Graft: A Clinical Dilemma
Joji Markose
French Centre for Dental Implants

Aim and purpose: Rehabilitation of the incomplete dentition by means of osseointegrated implants represents a highly predictable and successful when sufficient bone quantity as well as bone quality. Many times three-dimension all bone morphology, may not permit favorable implant positioning; leads bone grafting procedures to ensure favorable biomechanics and long-term esthetic outcome. Although success rates of various bone graft techniques are high, inherent disadvantages of augmentation procedures include prolonged treatment times, raised treatment costs and increased surgical invasion associated with patient morbidity and potential complications. In spite of all the recent developments in periodontal and peri-implant surgical regenerative procedures, comprehensively and esthetically re-establishing the hard and soft tissue contours still represents a challenge. Creating a prosthetic gingiva can represent an esthetic and functional alternative for the predictable reconstruction of ridge deformities in fixed, partial, or implant restorations particularly in patients who do not want to undergo any surgical procedure. An interdisciplinary treatment plan required for the long-term success of this kind of restoration.
Summary and conclusion: The aim of this lecture is to (1) Provide clinical decision-making criteria to determine when integrated pink ceramics are the design option of choice; (2) present strict, well-defined design guidelines; (3) discuss the associated clinical and laboratory steps and (4) confirm the esthetic potential of the Pink ceramics.

FC89
Immediate Load Implant Mandibular Overdenture Casted versus Infibra Ribbon Bar
Mohamed Saad Aldeen
Faculty of Dentistry, Mansoura University

Aim and purpose: The aim of this study was to compare the effect of cast metal bar and In Fibra Ribbon bar splinting on implant marginal bone height change and clinical examination after using immediate loading technique for implant.
Materials and method: Ten healthy male patients were selected and assigned into two equal groups using balanced randomization. For all patients immediate loading technique was used for lower implant supported over denture with either cast bar (group I) or in fibra ribbon bar (group II). Radiographic evaluations were performed at the time of over denture insertion then at 12 and 18 months after over denture insertion. Also clinical examinations were done.
Result: There was significant difference between two groups after 12 and 18 months for clinical examination, except implant mobility, and amount of implant bone resorption.
Summary and conclusion: Immediate loading lower implant supported over denture with in fibra bar attachment reduces stress concentration in implant marginal bone compared with cast bar. As a consequence, bone level is better preserved, and implant survival is improved.

FC90
Quality of Life in Diabetic Patients after Provision of Immediate Dentures
Mehmood Hussain, Nazia Yazdanie
Hamdard University Dental Hospital

Aim and purpose: Multiple approaches can be employed for oral rehabilitation of diabetic patients; one way is the provision of immediate dentures for such patients. Fabrication of immediate dentures for diabetic patients will markedly improve the Quality of Life (QoL) by improving speech, mastication, aesthetics and confidence of such patients.
Materials and method: Twenty four patients were males while six mere females with age range of 22–74 years. The duration of this study was of 2 years. Questionnaire based on OHIP-14 was used before and after 6 months from provision of immediate denture to assess quality of life of in patients. Data was collected and statistical analysis had been done by using SPSS software. Wilcoxon Signed Ranks Test was applied and results were obtained. Probability level of $p < 0.05$ was considered statistically significant.
Result: All patients were satisfied with their immediate dentures. Three patients need slight adjustments in their dentures which were provided to them. All patients had significant improvement in speech (p value 0.01), diet satisfaction (p value 0.00), mastication (p value 0.01), decrease embarrassment (p value 0.08) and self confidence (p value 0.025). However impact of immediate denture on variable like tension was not favorable with p values 0.157.
Summary and conclusion: Provision of immediate denture brings improve QoL in diabetic patients; efforts should be made to increase awareness in dentist & patients about immediate dentures.

FC91
Copy Denture; How Useful They Are in Elderly?
Shaza Hamid
Kings College London, UK

Aim and purpose: The aim of the study is to find out how useful the copy dentures are for the elderly people.
Materials and method: Copying existing denture, if should be done at all and if yes, where it can result in predictable outcome.

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Elderly population requires special attention. Often the care is compounded due to existing medical condition, side effect of current medication and judgment is often clouded in mental capacity of individual. Identifying condition and cases where copying techniques can be successfully employed for the benefit of patient is objectively presented.
Result: Usefulness of copy dentures cannot be over emphasized. Successful denture wearing often for number of years, requiring replacement due to wear of occlusal surfaces, poor fit or loss of VDO, can be duplicated in new dentures to benefit the patient most.
Summary and conclusion: Copy denture technique is quite useful procedure, if utilized with caution of retaining desirable features of existing dentures, though; it is not uncommon to duplicate the existing flaws. Adequate time should be given to examine denture clinically both in and out of the mouth to. Sufficient effort should be made to understand patient desires and expectation about the replacement denture.

FC92
Antimicrobial Efficacy of Chitosan Against *Enterococcus faecalis* and *Candida albicans*
Pankaj Yadav, Mahesh Verma, Sangeeta Talwar, Sarika Chaudhary, R.K. Saxena
Maulana Azad Institute of Dental Sciences, New Delhi

Aim and purpose: To evaluate the antibacterial efficacy of chitosan when used as root canal irrigant against *E. faecalis* and *Candida albicans* biofilm formed on tooth substrate.
Materials and method: The antibacterial effect of 0.25% Chitosan, 0.5% Chitosan, 2% chlorhexidine and 3% sodium hypochlorite against *Enterococcus faecalis* and *Candida Albicans* was evaluated. Agar-well diffusion methods, minimal inhibitory concentration tests and biofilm susceptibility assays were used to determine the antibacterial activity. Decoronated teeth specimens were inoculated with *E. faecalis* suspension and *Candida albicans*, incubated at 37°C for 4 weeks to allow biofilm formation. Scanning electron microscopy was used to observe *E. faecalis* biofilms on the chamber surface of the root canal. The specimens were then instrumented with protaper rotary files and the canals were enlarged to F3 size. After irrigation with test solution, three sterile paper points were successively introduced into one canal.
Result: Significant reduction of (CFU)/mL was observed for the chitosan groups and the antibacterial activity of the chitosan groups were at par with 3% NaOCl and 2% Chlorhexidine.
Summary and conclusion: The use of animal extract alternatives as a root canal irrigant might prove to be advantageous considering the several undesirable characteristics of NaOCl and chlorhexidine.

Room F14 | 2014-09-11 | 13:30-14:30

FC93
Do Dental Implants Regained the Lost Proprioception... a Myth or a Reality??
Sonia Ahuja
Terna Dental College and Hospital

Aim and purpose: The aim of this paper is to review the literature on the concept of dental implants regaining the lost proprioception.
Materials and method: As being a review paper entire literature has been reviewed on the concept of dental implants regaining the lost proprioception. As when the tooth is lost due to various causes it can be replaced by various treatment modalities and dental implants being one of the newer and accepted treatment modality; as it osseointegrated with the underlying bone. However, it is still believed that the patient still said to have certain amount of perception after dental implants being osseointegrated with the underlying bone.
Result: A lot of newer studies have been conducted in this field which is discussed in this paper that has shown regeneration of periodontium around a dental implant.
Summary and conclusion: By being able to regenerate periodontium like tissue around a dental implant one can only move step closer towards simulating the natural teeth however; further research in this field is necessary.

FC94
Recent Prosthodontic Treatment Strategies in Management of Sleep Apnea
E. Mahesh Gowda
Armed Forces Medical College, Pune

Aim and purpose: Loss of teeth or edentulous plays an important role in terms of respiratory process and overall health of stomatognathic system and can be considered as a contributory factor for Sleep disorders.
The subject of sleep medicine, for dental profession in general and prosthodontists in particular, continue to offer great challenges and opportunities in terms of diagnosis, treatment planning and treatment strategies based on qualitative evidence.
Materials and method: The literature describing the prosthodontic aspect of sleep therapy has improved dramatically in last few years in terms of both quality and quantity.
There is growing epidemiological and experimental evidence that sleep disorders are associated with wide variety of adverse health consequences. Based on the considerable mortality and morbidity, associated with its co morbidities, sleep disorders are important public health issues.
Result: Although the role played by the prosthodontists is still in infancy, there is much to learn and understand in the rapidly evolving field of sleep medicine, as the recognition of co-managing patients with sleep disorders by the prosthodontists is fast becoming a reality.
Summary and conclusion: This presentation highlights the recent prosthodontic treatment strategies in the field of sleep apnea, particularly on Obstructive Sleep Apnea.

FC95
Pre-fabricated "componeer" System a Cost and Time Effective Solution for Aesthetic Rehabilitations
Parag Dua[1], Sh Gupta Vsm[2]
[1]*Armed Forces Medical College, Pune,* [2]*Army Dental Centre R and R Hospital*

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Aim and purpose: Ceramic veneers have always been considered the gold standard for provision of long term aesthetic and durable restorations. At the other end of the same restorative spectrum, lies the "Direct veneering system" which has been revitalized by introduction of Componeers. These are fabricated with a high pressure and temperature molding process & laser surface vitrification. The concept of utilizing "Direct Veneering" technique for Componeers has wide scope in treatment of Armed Forces personnel due to its minimal treatment time (no lab phase) & excellent aesthetics and function. These case reports highlight these advantages of this system in treating localized or generalized dental hypoplasia, mild to moderate diastema and fluorosis.
Materials and method: A series of cases presented with dental fluorosis and anterior diastema. They were treated with Pre fabricated, nano hybrid and laser vitrified shells called Componeers. Light Cure composites were used as luting agents. A minimally invasive enamel reduction technique was employed for aesthetic rehabilitation of these patients.
Result: Highly Aesthetic results were obtained in the patients. Minimal change of colour was observed clinically & the componeers were observed to be highly retentive.
Summary and conclusion: The advent of "Componeers" has caught the clinicians eye in terms of delivering a one-visit, cost-effective, minimally invasive yet highly aesthetic result. A series of patients with dental fluorosis and diastema were rehabilitated using "Componeers". The clinical performance of componeers was found to be high for retention, surface texture & marginal integrity.

FC96
Balanced Complete Denture in Three Visits
Love Bhatia, Ajay Singh, Devika, Gaurav Garg, Himanshu Gupta, Rohit Singh
Sardar Patel Post Graduate Institute of Dental and Medical Sciences, Lucknow

Aim and purpose: The edentulous state represents a compromise in the integrity of masticatory system and adversely affects the function and aesthetics. The psychology and biomechanical affects of tooth loss must never be overlooked. So, the desired needs of the patient must be fulfilled in a minimum time frame. Various systems and techniques have been documented to meet all these needs of the patient and the operator like the Biofunctional Prosthetic System. But these system have certain disadvantages which limit their use.
Materials and method: IST Visit -Preliminary impression, vertical jaw relation, final impression, centric bite record and teeth selection. IInd Visit - Trial, Centric verification and obtaining Protrusive record. IIIrd Visit - Denture insertion and follow-up instructions.
Result: A balanced complete denture in three visits was provided to the patients thus greatly reducing the number of visits. All three patients were highly satisfied with the Aesthetics, function and comfort during the 6 months recall period.
Summary and conclusion: The ability to reduce the time required to provide patients with dentures and the potential to reduce the cost and time of care for patients while still providing quality dentures using state of the art dental materials is promising. The aim is to provide patients with Complete Dentures having optimal form, function, and aesthetics in a minimum time frame of "THREE -VISITS".

Room F15 | 2014-09-11 | 13:30-13:40

FC97
Prosthodontic Rehabilitation of Maxillofacial Defects in Gunshot Wound Cases
Arun Khurma
Armed Forces Medical College, Pune

Aim and purpose: The main aim of rehabilitation of patients with maxillofacial defects is to restore form, function, esthetics and above all is to maintain the psychological support to the patient. The gunshot injuries, though not very common, but leads to considerable number of cases with varying degrees of maxillofacial defects. These injuries can be of war time or peace time which includes the suicidal attempts. These cases require thorough and meticulous treatment planning during all phases of treatment and the prosthodontist is the most integral part of the team. The basic prosthdontist procedures are modified based on sound knowledge of anatomy and physiology of this region in order to achieve the main objectives of rehabilitating these patients.
Result: The aim of this paper presentation is to describe step by step procedures to rehabilitate patients having maxillary defect due to gunshot wounds through various case series. These include innovative prosthodontic concepts in terms of modifications in impression procedures and design principles for retention in rehabilitation of such cases.
Summary and conclusion: The modifications in basic prosthodontic procedures coupled with the sympathetic approach towards these patients go a long way to successfully rehabilitate patients with maxillary defect due to gunshot wounds.

Free Communication Session 4 - Oral Surgery and Oral Medicine

Room F03 | 2014-09-11 | 15:45-16:15

FC98
Medpor – the Cosmetic Miracle
Vasundhara Bhaskar Rikame
Terna Dental College and Hospital

Aim and purpose: Aim of this presentation is to describe the versatility of Medpor as a craniofacial implant material. Facial structures reconstruction and augmentation is one of the emerging branches in the field of medicine and dentistry. Also the number of patients demanding cosmetic surgeries to improve facial esthetics is increasing tremendously. Porous High Density Polyethylene (PHDPE) commercially known as Medpor is an innovative and promising way to serve the above purpose.
Materials and method: Medpor is a substance composed of high density porous polyethylene which was introduced in the use of reconstructive surgeries. It can be used as an alternative to alloge-

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nous grafts because of its characteristic properties such as excellent biocompatibility, easy morphological adaptability and maintaining its shape after being positioned.
Result: According to reviews, no additional follow-up or monitoring is needed for the implants beyond the routine follow-up required for the condition being treated with the implants. In various studies, Medpor was found to be long lasting with a low frequency of complications and high overall patient satisfaction.
Summary and conclusion: Medpor has successful history of craniofacial augmentation and reconstruction. Hence in near future it could be promoted as a biocompatible and potential implant material in facial reconstruction and cosmetic surgeries.

FC99
Corticotomy Assisted Orthodontics-novel Synergy in Time to Save Time
Rajat Kumat
Terna Dental College and Hospital

Aim and purpose: The aim of this presentation is to throw light on the Corticotomy Assisted Orthodontic Treatment (CAOT) technique, the rationale behind it, its clinical impact and its scope and limitations. Also, the recent advancement in the form of of Periodontally Accelerated Osteogenic Orthodontics (PAOO) will be highlighted.
Materials and method: CAOT technique involves the method of selective alveolar de-cortication in the form of decortication lines and dots performed around the teeth that are to be moved. This is combined with selective medullary penetration to enhance bleeding. It is done to induce a state of increased tissue turnover and a transient osteopenia, which is followed by a faster rate of orthodontic tooth movement. In PAOO technique bone graft materials (Autograft, mix of Autograft+Allograft, Allograft+Xenograft, or Xenograft+Alloplast).
Result: The results of this technique includes faster tooth movement, shorter treatment time, safer expansion of constricted arches, enhanced post-orthodontic treatment stability and extended envelope of tooth movement.
Summary and conclusion: Corticotomy Assisted Orthodontic Treatment (CAOT) is a promising technique that has many applications in orthodontics as it helps to overcome the current limitations of conventional orthodontic treatment.

FC100
Dilemma's in Removal of Maxillofacial Implants: An Evidence Based Approach
Abhay Taranath
Manipal College of Dental Sciences Manipal

Aim and purpose: From the time of use of internal fixation devices in the form of bone plates, it has been a bothersome issue for maxillofacial surgeons worldwide whether its removal outweighs the benefits over risk of leaving it behind. This paper aims to resolve the dilemmas faced by maxillofacial surgeons upon retention or removal of maxillofacial implants by an evidence based approach.
Materials and method: Various published scientific papers were analysed in detail to support reasons for removal and or retention of maxillofacial implants. The long term effects of implants in terms of stress shielding, corrosion, infection, metal toxicity and allergy, metallosis, oncogenicity, radiation effects and internalization etc were analysed by evidence based approach. All articles gathered by electronic search were studied for scientific evidence. Articles were segregated upon when only correlation was found and not evidence.1, 2, 3. Role of market forces, insurance bodies, patient acceptability etc were also analysed as factors influencing decision making in retention or removal of maxillofacial implants.
Result: The paper will put forth reasons for removal of implants and long term effect of leaving back implants in orthognathic surgeries and facial fractures.
Most often the issues with removal have been insurance policies and patient acceptance. The major concerns like carcinogenicity have been found have only a loose association when implants are retained.
Summary and conclusion: Retention of implants cannot leave bothersome issues in the minds of the surgeon when appropriate technique and materials are used. Pure titanium implants can safely be retained.

Room F04 | 2014-09-11|15:30-15:40

FC101
Facial Attractiveness of Young Females – A Scientific Analysis with 2d Morphometry
Joseph John[1], P. Mahendra[2], J. Neeta[2], Ramdas Balakrishna[2]
[1]*Malabar Dental College, Kuttipuram, Kerala,* [2]*The Oxford Dental College, Bangalore*

Aim and purpose: To determine how young women considered to be attractive differ in their two-dimensional facial characteristics from normal women of the same age and race.
Materials and method: Standardized frontal and lateral photographs of 75 young girls were taken which were given for analysis to 15 judges to rate attractiveness of each in a scale of 1–10. They were grouped in three groups. Group A, Most Attractive, B; Average & C; Least attractive.
Result: Group A (159.75 ± 4.18) had less convex faces, than Group B (163.2 ± 6.2) and Group C (166.2 ± 5.23). The mean Value for the fore head (upper face) of Group A (8.1 ± 0.16) was significantly larger than the corresponding value of Group B (5.08 ± 0.17) and Group C.
Summary and conclusion: The facial attractiveness increases with decrease in convexity of faces. The attractive group had a larger forehead than corresponding value of the Average and Least attractive group. Whereas the middle facial height was larger in the least attractive. The most attractive girls had wider faces, both in middle & lower third. The ratio of middle third to total face was higher in the attractive group. The most attractive group had a lower ratio of lower third to total face, were the ratio increased as the attractiveness decreases.

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POSTER SESSIONS

Poster Session 1 (P1-P24)

Theme: General Dentistry and Oral Health

P1

Association between Body Mass Index and Dental Development

Maryam Ehsani, Parvin Sajadi, Aidin Valizade, Farida Abesi, Sina Haghanifar
Babol University of Medical Sciences

Aim and purpose: Accelerated dental development in obese children can affect pediatric dentistry and orthodontic treatment planning. The purpose of this study was to determine the relationship between dental development and BMI in 7–15 year old children.
Materials and method: In this descriptive cross-sectional study, 168 subjects aged 7–15 years were studied. Dental ages of subjects were determined using the Demirjian method. Weight and height of the subjects were measured and BMI status was determined for each subject. Chronological age was calculated by subtracting the birth date from the date on which the radiographs were done for every individual. The difference between chronological and dental age was measured and analyzed regarding BMI and gender.
Result: According to the results of this study, the difference between the dental age and chronological age for boys, considering the BMI can influence the timing of intervention.

P2

Oral Health of Children and Adolescents with Down Syndrome, Yemen

Walid Al-Soneidar, Ghadah A. Al-Sufyani, Sadeq Ali Al-Maweri
University of Yemen

Aim and purpose: The aim of this study was to assess the oral hygiene and gingival health of children with Down syndrome (DS).
Materials and method: This cross-sectional study involved 101 children with DS, aged 6–16 years, attending special schools in Sanaa, Yemen. The plaque index (PI), calculus index (CI) and the gingival index (GI) were used to assess oral hygiene and gingival health status.
Result: The mean age for the study population was 10.52 ± 2.77. The mean PI, CI and GI scores were 1.45 ± 0.57, 0.58 ± 0.61 and 1.54 ± 0.64 respectively, with no significant difference across gender ($p > 0.05$). The 12–16 years age group had significantly higher PI, CI, and GI scores than younger age groups ($p < 0.01$). Subjects with severe mental retardation had significantly higher PI ($p < 0.01$) and GI ($p < 0.05$) scores than mild and moderate retardation groups; however, no significant differences regarding CI were detected. Step wise linear regression analysis revealed that the best predictors for CI, in a descending order, were age and mother's education, and the best predictors for PI were IQ xlevel, age and fathers education. Having severe mental retardation, older age, less educated parents were the most important predictors for poor gingival health status.
Summary and conclusion: These findings show that children with DS have poor oral hygiene and high levels of periodontal diseases. Hence appropriate oral health education should be tailored to the needs of these children with the support of their teachers and parents.

P3

Assessing the Advocacy of Oral Health Practices Amongst Indian Dentists

Sampada Jayant Deshpande
Affiliation missing

Aim and purpose: The present study was carried out to assess the knowledge, attitude and practice regarding advocacy of oral hygiene practices among dental professionals working in Udupi Taluka, Karnataka, India.
Materials and method: With due approval from the Ethics Committee, Manipal University, the study was conducted across two teaching hospitals and several private practices, from March to June, 2013. Closed-ended questionnaires were distributed amongst 120 practicing dental professionals, amongst which 105 responded. The questionnaire covered areas ranging from practice of topical fluoridation, extraction protocols, and attitude regarding patients with communicable diseases, disinfection, methods of patient education and knowledge of basic oral health concepts. The data obtained was evaluated using SPSS 11.0.
Result: Practice protocols were satisfactory. However, attitude and knowledge consisted significant gaps. This is with alarming relevance to the practice of recommending tobacco rehabilitation to patients, use of dental software and maintaining codes of disinfection while dealing with patients with communicable diseases.
Summary and conclusion: The scientific value of this survey helps the dental profession to address key issues about the current scenario of dentistry in Modern India. Indian dentists need to incorporate modern technology and higher health standards into their practices, to help serve better.

P4

Oral Health Status Among Adults in the State of Kuwait

Huda Nazar, Sabiha Almutawa, Shahin Alhawaj, Yousef Alduwairy, Jitendra Ariga, Pramod Soparkar
Forsyth Institute Ministry of Health, Kuwait

Aim and purpose: To describe the oral health status of adults in Kuwait.
Materials and method: In 2011–2012, a cross-sectional study was done at the Ministries Complex in Kuwait. Oral health examination was performed to a convenience sample of adults during morning working hours ($N = 995$). Portable Dental Chairs and light source was used for examinations. Six trained and calibrated dentists performed the examinations. The recording was done on a manual form by trained recorders. Only mouth mirror and periodontal probe was used. Data was collected about dental caries, oral hygiene, and periodontal status. Data was entered and analy-

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sed on Epi-info 3.5.3. Total number of participants was N = 995. Overall, the mean age was 36 ± 10.6 years. The gender distribution was 693 (69.5%) males and 293 (29.4%) females. Seventy nine percent of the adults were healthy and 7% were unhealthy. The mean number of teeth present was 28.5 ± 3.5. The mean number of teeth with dental caries (coronal and root caries) was 3.08 ± 3.4. The mean number of filled teeth was 3.9 ± 4.4. Forty five percent of participants had gingival recession in at-least one tooth. Only 3% of participants had soft tissue abnormality. Among participants 33% reported that their oral health was good and 35% had oral pain at time of examination. Almost 16% of adults had good oral hygiene.

Results: Total number of participants was N = 995. Overall, the mean age was 36 ± 10.6 years. The gender distribution was 693 (69.5%) males and 293 (29.4%) females. Seventy nine percent of the adults were healthy and 7% were unhealthy. The mean number of teeth present was 28.5 ± 3.5. The mean number of teeth with dental caries (coronal and root caries) was 3.08 +−3.4. The mean number of filled teeth was 3.9 +− 4.4. Forty five percent of participants had gingival recession in at least one tooth. Only 3% of participants had soft tissue abnormality. Among participants 33% reported that their oral health was good and 35% had oral pain at time of examination. Almost 16% of adults had good oral hygiene.

Summary and conclusion: The data suggests that there is high caries prevalence among adults which could be attributed to poor hygiene. Efforts should be laid on introducing oral health promotion activities promoting oral hygiene practices among adults in Kuwait.

P5

New Immunotropic Drugs for Local Treatment of Inflammatory Periodontal Diseases

Narine Sakisian, Galina Ron
Ural State Medical University, Ekaterinburg

Aim and purpose: The problem of the treatment of inflammatory periodontal diseases is one of the important problems in stomatology. A complex therapy using medicines of topical application plays crucial role in the treatment of these diseases. Taking into account that the forming and development of the most of the known pathological processes are determined by the nature of immunopathogenetic changes, development of new treatment methods with usage of immunotropic drugs for local application is especially relevant.

Materials and method: Earlier we developed the number of new pharmaceutical compositions as an ointments forlocal treatment of inflammatory oral cavity diseases using immunotropic substances of cytokine agents, phthalhydrazide and piperazine derivatives, and zinc-containing components and silicon- and silicontitanium-organic glycerohydrogels as an ointment (liniment) bases [RF Patent 2470640, 2012].

Result: High pharmacological activity (anti-inflammatory, healing and regenerating) of developed medicines were shown at the local treatment of chronic periodontal diseases on patients with impaired immune status.

Summary and conclusion: The proposed method involves applying the ointment on the gums once a day for 7–10 days. This method is simple in the execution and gives good clinical results. The ointment application is recommended as a repeated course of treatment to support the remission process and in the exacerbation period after antibiotic therapy.

This work was supported by the Presidium of RAS (Project No. 12-P-3-1030) and by the Presidium of Ural Branch of RAS (Project No. 12-M-34-2071).

P6

Diabetics' Risk for Oral Diseases and Impact of Oral Health on Their Quality of Life

Aziza Eldarrat
Affiliation missing

Aim and purpose: Aims of the study were to evaluate diabetic's awareness of their increased risk for oral diseases as complications associated with diabetes, impact of oral health on their quality of life and their attitude to maintain good oral health.

Materials and method: Approved self-administered questionnaire was used to assess the study aims.

Result: Two hundred questionnaires with complete answers were used in the study. Average of participant's age was 47 years old, duration of diabetes 20 years and glycaemic control 11%. A majority of the participants were females and 70% of the participants had type 2 diabetes. Of edentulous participants, 56% were not wearing complete dentures. Majority of the participants brush their teeth once daily (47%), never use dental floss (61%), and had not visited a dental clinic within the last year (67%). A significant association ($p < 0.05$) was found between glycaemic control and oral infections.

Summary and conclusion: The awareness of participants of their increased risk for oral diseases and the impact of oral health on their quality of life is low. In order to promote proper oral health and to reduce the risk of oral diseases, health professionals in both the dental and medical fields need to develop new programs to educate the public about diabetes and its complications for oral health.

P7

Effects of Different Storage Media and Sterilization Methods on Shear Bond Strength of Composite to Enamel

Mahsa Ahmadishadmehri, Alireza Boruziniat, Yegane Khazayi, Nasrin Danaeifar
Mashhad Dental School, Mashhad University Of Medical Sciences (MUMS)

Aim and purpose: In the field of dentistry, extracted teeth are commonly used for in vitro researches. Extracted teeth contain various micro-organisms which posses cross infection risk. The aim of the current study was to evaluate the effect of storage media on shear bond strength of composite to enamel.

Materials and method: 100 extracted human premolars without any crack or caries included in this study. According to storage

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media, time of bonding, and autoclaving factors samples divided in three groups: 1- fresh teeth 2- chloramine storage teeth. 3- thymol storage teeth. Composite cylinders bonded to the buccal surface of teeth shear bond strength and type of fracture was evaluated after 6 and 12 month storage, with or without autoclave. Data were analyzed with two-way ANOVA and Chi-square using spss version 11.5 with the confidence interval 95%.

Result: Based on shear bond strength test, storage media and autoclave had no significant effect on bond strength ($p > 0.05$). however time had significant effect on bond strength ($p < 0.05$) and tukey post-hoc test revealed that bond strength of 6-month and 12-month samples had no significant difference with fresh samples; but bond strength of 12 month samples was significantly lower than 6-month samples. According to the chi-square test type of fracture has significant association with autoclaving factor and the number of enamel cohesive fractures was more in autoclaved samples than non-autoclaved.

Summary and conclusion: Type of storage media and period of storage had no significant effect on enamel bond strength in comparison to fresh samples. However autoclaving led to an increase in enamel cohesive fracture.

P8

Knowledge and Dentin Hypersensitivity's Management among Dentists from Senegal

Adjaratouwakha Aidara, Papa Ibrahima Ngom, Babacar Faye, Fatou Leye Benoist, Khaly Bane, Mouhamed Sarr
Endodontics Conservative Dentistry Service, Department of Odontology, Faculty of Medicine, Pharmacy and Dentistry, Cheikh Anta Diop University, Dakar, Senegal

Aim and purpose: The aim of the present study was to assess knowledge and management of Dentin hypersensitivity by Senegalese dentists.

Materials and method: The study involved 238 dentists, from private and public sectors, chosen from a list provided by Senegalese National order of dentists. The questionnaire was send by postal service to all dentists. Data collected were in regard with socio demographics and knowledge on factors, type of pain, diagnosis, preventive and curative procedures. The dentists were requested to return the form using the provided postage prepaid envelope. SPSS®17.0 was used for the statistical analysis.

Result: The response rate was 68.9%, 83% of the participants had good understanding of the characteristics of pain related to DH and 92% recognized chemical and thermal stimuli as releasing factor but mechanical stimulus was not evoked. Most of them (90.9%) did not have any idea on pain transmission mechanism across the dentin but 68% of them use mechanical stimuli to elicit DH pain and preventive measures are advised by 78% of the dentists. Desensitizing toothpaste is the mostly chosen (82.3%) for managing DH followed by professional topical application of fluoride (75%), 37.8% proceed to root canal treatment and laser was not mentioned as a method of treating DH (the type of practice -private or public - did not have significant influence on these results).

Summary and conclusion: In Senegal, a training program must be conducted on this subject to enhance DH's care management.

P9

Geriatric Dentistry in India

Prabhakar Diwan[1], Veena Yardi[1], Prashant Hatkar[1], Pa Kale[2], Suhasini Nagda[3], Nandini Diwan[4]
[1]College of Medicine, AlImam Muhammad Ibn Saud Islamic University, [2]GS Medical College, Mumbai, [3]Nair Hospital Dental College, Mumbai, [4]Ruparel College, Mumbai

Aim and purpose: Before reaching one's century, a human being passes through different phases of life. A child is always taken care of as he or she is the hope of the future. Young people are the center of productivity and they are viewed positively. But the same person, as he gets old, is considered non-productive and a burden to the society. After independence, India has made phenomenal progress in science and technology. With advances in medical science and with more awareness of hygiene, the older population of today enjoys better health. Number of dentate elders is on the rise. Today, elders are physically fit and as such keep themselves occupied with various social activities. They can afford to spend on health. It is essential that they are offered modern dental care.

Materials and method: The study of Geriatric Dentistry was conducted with the help of 50 elders, both male and female who were above 60 years. The patient of maximum age was 68 years female.

Result: About 50 cases of elder patients, male as well as female were studied by intraoral clinical examination. Their findings were recorded. Ground sections of about 25 extracted teeth were examined by naked eyes and their findings were recorded. Orthopantograph (OPG) of each elder patient was obtained and radiographic pictures of teeth as well as condition of maxillary and mandibular bones were studied and findings recorded.

Summary and conclusion: The main purpose of this study is to suggest proper methodology to find out how. Geriatric Dentistry in India "can be studied and presented to the Dental professionals in India."

P10

Probiotics in Dentistry

Shruti Singh, Samidha Kushwaha, Sreedhar Nekkanti
Manipal College of Dental Sciences, Manipal

Aim and purpose: International Life science Institute of Europe describes PROBIOTICS as "A viable microbial food supplements which beneficially influence the health of human "Probiotics have already proved their effectiveness in treatment of systemic and infectious diseases such as Acute diarrhea and Crohn's disease due to their immuno stimulatory properties. Probiotics may also prove useful in addressing problems arising in the oral cavity.

Materials and method: These micro-organisms inhibit the biofilm and protect oral tissues from disease, as they have cariostatic activity; help in preventing candida colonization and act as antioxidant. Probiotics can be used in dentistry not only to promote oral health but also to prevent oral diseases like Caries, Gingivitis, Periodontitis, Halitosis, Candidiasis & dry mouth. The mechanism of action of probiotics is related to their ability to compete with

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pathogenic micro-organisms for adhesion sites, to antagonize these pathogens or to modulate the hosts' immune response.
Result: In dental decay, probiotics prevents de-mineralization of the teeth by forming a biofilm and as most probiotics are in dairy forms they promote re-mineralization. In case of periodontal disease, proposed mechanism of action of probiotics is strengthening the mucosal barrier via tropic effects on the epithelium and stimulating both the innate and adaptive immune system. Not only has this probiotic had the ability to co-aggregate with species renowned for volatile sulphur compound production thus reducing the source for malodorous compound in the oral cavity.
Summary and conclusion: This paper presentation discusses the health promoting probiotic bacteria and their role in controlling oral and dental infection.

P11
The Accuracy of Preoperative Orthognathic Predictions in Distal Malocclusion
Zaur Novruzov, Rena Aliyeva, Zaur Novruzov, Zohrab Garayev
Azerbaijan Medical University

Aim and purpose: Distal malocclusions are the most frequently encountered, therefore the most widely treated anomaly by orthodontists. The orthognathic surgeries are widely used in the treatment of distal anomalies an adult patient. The prediction of cephalometric changes as a result of orthognathic surgery still remain a problem during pre-surgical orthognathic treatment planning because of varying relative movements of the hard and soft tissues. The aim of this study is to investigate the accuracy of the manual cephalometric prediction method in distal malocclusion.
Materials and method: The study sample consisted of 18 adults (eight males, ten females) who had undergone surgical orthognathic treatment. The hard and soft tissue movements have been simulated on the presurgical cephalograms by the manual prediction method and cephalometric measurements of the prediction tracings have been made. All the tracings have been double digitized and the measurements have been done on a computerized programme (PORDIOS). 19 angular, 23 linear and 3 proportional soft and hard tissue measurements have been performed. The cephalometric measurements derived from the prediction tracings have been compared with the actual outcome by the t-test.
Result: The evaluation of t-test suggested that S-Ar-Goangle, SNB angle, Go-SN length, interincisor angle, Subnasale-St, Sn-LLV/LLV-Meratio and mentolabial angle measurements show statistically significant difference.
Summary and conclusion: It has been concluded that besides its low prediction accuracy in some areas of the craniofacial region; the cephalometric prediction tracing method supply useful information about surgical orthodontic treatment outcome in distal malocclusions.

P12
Treatment of Endodontically Induced Periapical Lesions using Platelet-rich Plasma
Navin Agrawal, Archana Manandhar, Dhirendra Kumar Giri, Mahima Subba, Vimmi Singh
B P Koirala Institute of Health Sciences

Aim and purpose: To evaluate the use of Platelet Rich Plasma as autologus fill and Biodentine as retrograde root canal filling.
Materials and method: Platelet rich plasma (PRP) is a fibrin matrix in which platelet cytokines, growth factors, and cells are trapped and may be released after a certain time and that can serve as a resorbable membrane. Choukroun and his associates were among the pioneers for using PRP protocol in oral and maxillofacial surgery to improve bone healing in implant dentistry. Autologous PRP is considered to be a healing biomaterial, and presently, studies have shown its application in various disciplines of dentistry. This is a case of a 38 years old female presenting with non-vital discolored upper front teeth (21, 22) with periapical rarefaction suggestive of chronic periapical pathology and a gingival defect in relation to 22. She was treated endodontically with orthograde root canal obturation followed by periapical surgery and retrograde root end filling with Biodentine. The defect was packed with autologous PRP and bone graft.
Result: There was a positive uptake of PRP and Biodentine with evidence of gingival and periapical healing.
Summary and conclusion: This case has allowed us to explore the use of Bio dentine and PRP in one of the ways that could help us use material at our disposal. This case study should prompt investigators to carryout research further new dimensions.

P13
Report of a Case: Management of a Patient with Dental Trauma, Complicated Crown Fracture
Emilia Valenzuela Espinoza, Ilse Nunez Acosta
Facultad De Odontologia, UNAM

Aim and purpose: Dental trauma of compound fractures of crown is very frequent in children between 8 and 12 years, in permanent young teeth with opened apexes, the success of the treatment is going to depend a lot of passed time and to come to the consultation, the size of the exhibition pulpar and the pollution, the materials most used for this treatment are the hydroxide of calcium and the MTA, for his excellent regenerating capacity, the repair of the exhibition pulpar is going to depend much on the sealed one to avoid the micro filtration of bacteria, is because of it that in this case was chosen as material the MTA. Studies have reported high seal ability besides having a great bio-compatibility for regeneration. To demonstrate the efficiency of the MTA, used as sealer cement in a covering pulpar directly and to achieve the regeneration pulpar as well as the closing apical in a permanent young tooth.
Materials and method: The materials most used for this treatment are the hydroxide of calcium and the MTA. Male patient, 8 years old, who appeared to the consultation an hour after happened the traumatism of dental organ 11, presenting a compound fracture of

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the crown and sub luxation, opened apex. Treatment covering pulpar direct with bio pulpectomia partially.
Result: After a follow-up to 2 years, he presents a regeneration of the flesh with dental bridge and the closing of the apex was achieved.

P14
Dental Art Photography
Mayur Davda
Affiliation missing

Aim and purpose: The principle objective of this abstract is to reinforce what dentistry has to offer in an art form to its pursuers.
Materials and method: Using a DSLR camera, macro lens, flash units, polarizing light films, contrasters and use of diffuser tents for teeth/ cast photography the creative aspect of dentistry is brought into focus. Using light at a specific angle to bring out the textures on teeth, transmitted light to illuminate the micro structure of teeth in cross sections, cross polarization to eliminate reflections and other laws of optical physics have been used to bring about inspiring and artistic compositions of dental images. High magnification using extension tubes give results comparable to an objective lens of 4× of a microscope. Long exposure settings have been implemented effectively.
Result: The result of using various camera settings and optical physical qualities of light in creative photography of teeth, ground sections, casts/models, etc. yielded unseen dental images with a high level of visual impact.
Summary and conclusion: Using creative photography in dental science along with using it for scientific study and documentation adds up to the essence of dentistry as an art form and needs to be encouraged as some of the imaging techniques may well be used for research work in future of dentistry thereby opening up new horizons which were unseen before. Hence it can be concluded that art inspires science to reach newer heights and vice versa.

P15
Green Dentistry: A Review
Yogesh Chhaparwal, Shubha Rathi
Manipal College of Dental Sciences, Manipal

Aim and purpose: Green dentistry or eco-friendly dentistry is a practice that reduces waste and pollution, saves energy and money, incorporates high tech innovations and is wellness based. This paper addresses the environmental impact of dentistry and describes measures that can be taken by dental staff to reduce the production of potentially harmful and general wastes.
Materials and method: An extensive literature review was conducted which targeted all manuscripts published in peer reviewed journals relating to the topic of occupational health problems in dentistry. The review began with a search of relevant Medical Subject Headings such as "occupational health", "occupational disease", dentists, in pubmed, the official literature search engine of the National Library of Medicine in the united states.
Result: This review has shown many occupational health problems remain in modern dentistry, particularly, musculoskeletal disorders, percutaneous incidents, and contact dermatitis. A Published 10 year review of literature indicated that percutaneous injuries are declining and increase in prevalence of musculoskeletal disorders has been observed.
Summary and conclusion: This review identifies some common wastes produced by dental professionals and suggestions for reducing the impact on the environment which can help ensure patient and worker safety, prevents the risk of future liability and protects our air, water and land.

P16
Oral Health Attitudes and Behaviour of Dental and Medical Students
Runki Saran, Saurabh Kumar
Melaka Manipal Medical College

Aim and purpose: The aim of the study was to find out the difference in oral health knowledge and behaviour of medical and dental students studying at the Melaka Manipal Medical College, Manipal.
Materials and method: A self-administered questionnaire based on a modified version of the Hiroshima University Dental Behaviour Inventory (HU-DBI) was administered to 50 second year dental students and 50 second year medical students at the Melaka Manipal Medical College, Manipal. A written consent was obtained from the subjects. The HU-DBI questionnaire, consists of twenty polar responses (agree-disagree) regarding oral health-related behaviour. A quantitative estimate of oral health attitude and behaviour was calculated by the total appropriate agree/disagree responses. The maximum possible score is 12. Higher HU-DBI score indicates better oral health attitude and behaviour. Data obtained were subjected to statistical analysis.
Result: The mean HU-DBI score of the dental students was significantly greater than that of the medical students. Significantly greater percentage of medical students reported not worrying much about visiting the dentist than dental students. Furthermore, percentage of medical students seeking dental care only when symptoms arise was significantly higher compared to dental students.
Summary and conclusion: The current study shows that second year dental students show better attitude towards their dental care than the medical students and can form better role models for the general population and patients.

P17
Orofacial Pain in Finnish and Thai Populations
Kirsi Sipila[1], Mimmi Tolvanen[2], Satu Lahti[2], Panupen Sitthisomwong[3], Somsak Mitrirattanakul[3]
[1]Institute of Dentistry, University of Eastern Finland, Oral Health Care, Social and Health Services, [2]Institute of Dentistry University of Turku Turku Finland, [3]Mahidol University Bangkok Thailand

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Aim and purpose: Cultural or ethnic factors may play an important role in subjects pain reports. The aim of the study was to compare the prevalence of or facial pain symptoms between Finnish and Thai populations.
Materials and method: The Finnish study population comprised the Northern Finland Birth Cohort 1966, of which 5696 subjects participated in the present study. The Thai sample consisted of 1501 randomly selected people living in 10 different districts in Bangkok. Data on orofacial pain was collected based on questionnaires.
Result: After adjusting for age, gender and education, the logistic regression analysis showed that Thai subjects had an increased risk for reporting oral pain (OR 4.5, 95% CI 3.7–5.4), tooth pain (OR 2.0, 95% CI 1.8–2.4) and pain in the face (OR 1.5, 95% CI 1.2–1.7).
Summary and conclusion: It can be concluded that Thai people report more orofacial pain symptoms than Finnish subjects. Cross-cultural factors exist in the background of reporting pain symptoms in the oral and facial area.

P18
Denistry Merging with Digital World
Indranil Bhadra, Sreepriya
Bangalore Institute of Dental Sciences Hospital Research Center

Aim and purpose: To implement accuracy in all dental fields by technology with zero error.
Materials and method: Computers are becoming an integral part of the practice of dentistry. Smaller, smarter and more ergonomic computing devices will support an increasing proportion of dental practice activities. Technology will make practice management more efficient, mainly by reducing transactional overhead.
Result: CBCT acts a map, IMPLANTS aids a confidence in persons, LASERS reduces time of treatment with no pain plus accuracy. INTRAORAL SCANNERS blooms the diagnostic power and accuracy.
Summary and conclusion: Dentistry must actively shape the application of technology. It can do this by developing a cadre of experts in dental informatics, relying on sound research principles, effectively disseminating best practices and developing strategic objectives for the implementation of technology. Computer technology is an essential ingredient for state-of-the-art patient care. Dentists must stay current with this rapidly developing field to make appropriate choices in their use of technology.

P19
Stem Cells: the Call for Action
Praveen Jain
Peoples College of Dental Sciences and Research Center, Bhopal

Aim and purpose: The stem cells have been isolated from dental pulp, human exfoliated deciduous teeth, and apical papilla and so on. These stem cells have provided exciting results like dentin-pulp regeneration, periodontal regeneration but ambiguity still prevails. This poster aims at outlining the different dental stem cells and their potential applications in dentistry.
Materials and method: Stem cells can self-renew and produce different cell types, thus providing new strategies to regenerate missing tissues and treat diseases. In dentistry, adult mesenchymal stem/stromal cells (MSCs) have been identified in several oral and maxillofacial tissues, which suggests that the oral tissues are a rich source of stem cells, and oral stem and mucosal cells are expected to provide an ideal source for genetically reprogrammed cells such as induced pluripotent stem (IPS) cells.
Result: Additionally, appropriate sources of stem cells for regenerative dentistry have been outlined with regards to differentiation capacity, accessibility and possible immunomodulatory properties.
Summary and conclusion: Stem Cell research is lagging at the base level in dentistry as compared to the medical field. In vitro studies and clinical trials on animals have yielded possible clinical applications. Further research is the need of the hour and more variety of stem cells need to be isolated and incorporated in practice.

P20
Analysis of Occlusion and Articulation in Bruxism and Bruxomania
Mariana Dimova
Department of Prosthetic Dentistry, Faculty of Dental Medicine, Medical University Sofia, Bulgaria

Aim and purpose: To be analysed common features of occlusal relationships in patients with bruxism and bruxomania at maximum intercuspation (MIP) and eccentric jaw movements.
Materials and method: 30 patients (22 women and eight men, mean aged of 42, 8 ± 13, 3) with bruxism and/or bruxomania are examined with the system T-Scan III. Sequence of records is - at maximum intercuspation (MIP); in manual leading to central relation and in eccentric jaw movements. In the same sequence is investigated control group – 30 people (15 women and 15 men) aged between 21 and 45 who didn't have bruxism and/or bruxomania and dentition is preserved.
Result: In the control group 85% of cases there is a balance of forces in both halves of the dental arch. In patients with bruxism is established uneven distribution of forces in MIP and articulation blockages (95%). There are three major reasons that impede spontaneous bilateral closing- force outliers (93% of cases); low force outliers (82%) and presence of intertceptive contacts and sliding occurring in the beginning of occlusion time until MIP (in all patients).
Summary and conclusion: In order to achieve a balanced occlusion in patients with bruxism and/or bruxomania required are correct diagnosis, registration and removal of preliminary contacts, articulation blockages and infraocclusion. Occlusal analysis is objective and an indicator of subsequent treatment only when it is a combination of clinical, instrumental and computerized occlusal analysis.

P21
Magnet as a Dental Material
Akanksha Shukla
Manipal College of Dental Sciences, Manipal

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Aim and purpose: Aim is to review the studies about the different types of magnets used in dentistry, their physical properties, their biological safety and gross reviews reported by different authors so far.
Materials and method: Since 1953, aluminium-nickel-cobalt (Al, Ni, Co) magnets were used in dentistry. In 1965, samarium-cobalt (SmCo) alloy magnet developed with superior magnetic properties was compared with conventional magnets. Recently developed neodymium-iron-boron (NdFeB) magnet offers the highest magnetic energy per unit volume. Various studies have been conducted to test the relative effectiveness of these magnets as a dental material by various authors. This review paper compiles the cell culture, animal and human studies so conducted. A thorough review of various studies has been done. The applications of magnet as dental materials are also analysed critically.
Result: Magnets are potentially very helpful. But there are a number of problems that severely affects their performance. Overall magnetic force system is a total force system with a favorable benefit to risk ratio. In dentistry, magnets and the magnetic force systems are better device for theoretic and academic purposes.
Summary and conclusion: The main idea of all these discussions is to review the works of various authors, to team from them, enjoy them and to think differently for better force generating systems.

P22
Single Implant Placement in the Esthetic Zone in Patient with Chronic Periodontitis
Viktor Culev
Private practice, Rijeka, Croatia

Aim and purpose: Male patient aged 50 years, with no systemic illnesses, smoker (15 cigarettes per day), diagnosed with chronic periodontitis, lost the upper right central incisor.
Materials and method: After initial periodontal therapy with no bone augmentation at the site, a dental implant was placed.
Result: An individual abutment was made by laser welding titanium alloy on balance implant abutment and metal-ceramic restoration was placed. Unfortunately, patient was not included in supportive periodontal therapy (SPT), i.e. there were no regular check-ups.
Summary and conclusion: Nowadays, 9 years after implant placement, there is no sign of bone loss or soft tissue retraction. The implant is functional land provides a good Aesthetic appearance, although the patient was a smoker, diagnosed with chronic periodontitis, was not included in SPT, there was a major vertical alveolar ridge deficiency at the implant site, and no bone augmentation was performed prior to or during the implant placement procedure.

P23
Lllt Attenuates Inflammation in Diabetic Rat Salivary Glands
Ujjal Bhawal, Noboru Kuboyama, Alynesimes, Cintia Y. Fukuoka
Nihon University School of Dentistry

Aim and purpose: Inflammation is the key pathogenesis of renal damage in diabetes. Increasing evidence shows that low-level laser therapy (LLLT) plays a critical role in attenuating inflammation. The aims of the present study were to investigate whether LLLT can prevent diabetes-induced salivary gland dysfunction and the underlying mechanisms.
Materials and method: A single intraperitoneal injection of streptozotocin (STZ, 50 mg/kg) was administered to develop a diabetic rat model. The rat submandibular glands were exposed to diode laser with energy density of 20 J/cm² (660 nm/70 mW). At the time of sacrifice, the body weight, and blood glucose level were examined. The pathological changes and inflammation were also measured.
Result: STZ-induced diabetic rats exhibited severe pathological changes in the salivary glands. Exposure of the rats to LLLT significantly improved proliferation through cAMP/CREB/ERK signaling pathway, meanwhile, attenuated inflammation through nuclear factor kappa B (NF-?B) pathway in the diabetic salivary glands. The LLLT-induced anti-inflammatory effect was associated with up-regulation of High mobility group box 1 (HMGB1) expression and function.
Summary and conclusion: These results suggest that LLLT significantly reduced diabetes-induced inflammation characterized by pathological and biological changes in salivary glands.

P24
Forensic Odontology and It`s Evolution
Aditi Shah[1], Hemang Shah[1], Aishwarya Rao[1], Shweta Patil[1], Timsi Rajani[1], Saloni Dalal[2]
[1]Terna Dental College and Hospital, [2]Dr. D. Y. Patil Dental College and Hospital

Aim and purpose: Forensic odontology involves dentist's participation in assisting legal and criminal issues.
Materials and method: Formal teaching in forensic odontology has existed for over a 100 years. Over the last century, forensic odontology has evolved and, today, it is an integral part of undergraduate dental training in many countries. Dentists have been trained in the specialty, and dedicated departments have been established in institutes and universities around the world.
Result: The established importance of Forensic Dentistry for human identification, mainly when there is little remaining material to perform such identification (e.g, in fires, explosions, decomposing bodies or skeleton ionized bodies), has led dentists working with forensic investigation to become more familiar with the new molecular biology techniques. Detailed curricula in forensic odontology, and a general standard exists in teaching forensic odontology, however, coverage of recent advances in forensic science may be lacking.
Summary and conclusion: An alternative approach to teaching the subject should be adopted highlighting the importance of molecular biology in forensic sciences. Moreover, it is stressed that teaching be undertaken by qualified forensic odontologists.

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Poster Session 2 (P25-P48)

Theme: Preventive Dentistry

P25

Remineralisation Potential of Glassionomer Cements

Matea Lapasbarisic, Vesna Barac Furtinger
College of Medicine, AlImam Muhammad Ibn Saud Islamic University

Aim and purpose: the aim of this study was to determine a quantity of re-mineralization ions that releases glass ionomer cements.
Materials and method: In this study 39 third molars were included divided into three groups. Each group consisted 13 molars and was treated with three different kind of material: GC Equia, Ketac Molar Easymix 3M and Medifil X Media promedica. Each group was thermocycled in 5 and 55 degrees at 1000 cycles and after that was put for 14 days in 1 l distilled water and ion chromatography was done.
Result: The results shown that GC Equia releases most fluoride ions 4, 26 mg/l, Medifil X Media Promedica 0, 4366 mg/l and Ketac Molar Easymix 0, 329 mg/l. All materials release also nitrit, sulfat, phoshat and chlorid ions. All three materials releases the same nitit,sulfat and phoshat ions (0.7 mg/l, 0.5 mg/l and 3.2 mg/l) and the most chlorid ions releases Ketac Molar Easymix.
Summary and conclusion: GC Eqiua releases most fluoride ions so it can be used as reservoir of fluoride ions in mouth and contribute to re-mineralization.

P26

Effect of Wear on Bacterial Adherence to Material Surfaces

Fusun Ozer
University of Pennsylvania, School of Dental Medicine

Aim and purpose: This pilot study compared Streptococcus gordonii adherence to saliva-coated surfaces of enamel (E) and different dental materials such as; amalgam (A), composite (C), lithium disilicate (LD, IPS e.max), and zirconia (Z) with and without wear of the surfaces.
Materials and method: Three sample specimens from each material were prepared and underwent 220,000 cycles of wear, under 5 kg (49 N) chewing force with zirconia antagonists in a chewing simulator. Specimens were sterilized under UV light. They were then immersed in filtered saliva, which had been collected from one donor. After washing with Phosphate-Buffered Saline (PBS), the specimens were placed in individual wells containing 1×108 cells/ml of S. gordoniii PBS. Immersed specimens were incubated at 30°C for 2 h and washed twice again with PBS, left in Karnovskys fixative for 24 h, dehydrated, coated with gold-pt.
Result: There was not any statistically significant difference between the bacterial adherence values of worn and unworn surfaces of the materials ($p > 0.05$). Among the materials, Z showed the lowest (worn-56.5, unworn-46.5) bacterial attachment. Bacterial attachment to E was the highest (worn-174.4, unworn-152.5) followed by LD (worn-160.4, unworn-120.2), A (worn-130.5, unworn-109.6) and C (worn-74.4, unworn-49.8).
Summary and conclusion: The roughness of material surfaces influenced bacterial adherence.

P27

Effect of the 3ds on the Prevention of Dental Caries

Akira Ida, Hiromi Nomura, Nobuhiro Hanada, Yoshiaki Nomura
Department of Translational Research, School of Dental Medicine, Tsurumi University

Aim and purpose: High strength of evidence indicated that the odontogenic bacteremia affect to the health of arteries and veins. In order to prevent the odontogenic bacteremia, we recommend applying the 3DS (Dental Drug Delivery System) with drug retainers to our dental outpatients. Therefore, we are being continuously investigated the effect of the 3DS to prevent oral biofilm-related diseases, such as dental caries. In this study, we verified 12 years effectiveness of the drug retainers to prevent the dental caries.
Materials and method: Fifty five patients with middle or high levels of the mutans streptococci in saliva were participated in our study. Chlorhexidine (CHX) 0.2% gel was delivered by the drug retainers.
Result: The DMFT of forty seven people did not change during 12 years. However, number of DMFT of eight people had increased.
Summary and conclusion: In this study, we showed that the 3DS (Dental Drug Delivery System) is an effective tool for caries management. The result is encouraging to lead to hope to prevent other biofilm-related diseases using the drug retainers.

P28

Review on Advancements in Optical Coherent Tomography in Diagnosis

Vibha Suresh, P. Ashwini
Vokkaligara Sangha Dental College, Bangalore, Karnataka

Aim and purpose: To create opportunity for a preventive approach to management of caries and other dental problems, it is important to keep abreast of developments in diagnostic systems. This paper reviews about the uses and recent advancements in the application of OPTICAL COHERENT TOMOGRAPHY (OCT) in dentistry. OCT is an emerging technology for performing high resolution cross-sectional imaging for in vivo conditions. Older methods rely on subjective assessment and hence, do not help in the early detection of dental problems like caries. Hence, OCT offers greater sensitivity than current investigation methods. In this paper, relevant images are also presented. Applications of OCT include early caries detection, to assess material defects, microleakage and tooth filling interface, and others. The recent advancements in OCT are- Monitoring remineralisation of enamel subsurface lesions by OCT, OCT as an auxiliary tool for screening radiation related carie, Dental OCT and others.
Materials and method: The methodology involves in presenting a review of the available literature related to OCT from last 10 years.

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Summary and conclusion: It gives an insight into the current trends in use of diagnostic tools such as Optical Coherent Tomography in early detection of various dental and other problems for further improvement in methods of diagnosis.

P29

Oral Health Promotion in Infants through Dental Pass

Wen-Sheng Rong, Xiaoyi Ding, Xiulan Zhao
Chinese Stomatological Association

Aim and purpose: To investigate the impact of oral health promotion through dental pass on young mothers and their children in China.
Materials and method: Young mothers and their infants aged from 3 to 6 months were invited to participate in the programme. A "Dental Pass" was distributed to mothers by the project stakeholders. Upon this appointment, mothers were given instructions and education on oral health and teeth cleaning method for infants. A clinical examination, including the number of erupted teeth of children and tooth status of the children, was then conducted by trained dentists at intervals to monitor oral health. In addition, a face-to-face interview was conducted by a trained interviewer to collection oral health care information of new mothers.
Result: At baseline, 710 pairs of mother-child were recruited. At 1-year evaluation, 673 pairs of mother-child completed clinical examinations and questionnaires. Although no significant difference in caries incidence was found between the children in two groups, it was showed that higher percentage of parents in the active group (62.3%) cleaned their children teeth at least once a day, while only 8.6% in control group. And 87.5% of mothers in active group believed that fluoride toothpaste was helpful to their teeth, 82.4% of them were using fluoride toothpastes, while in control group, only 48.6% of them using fluoride toothpastes.
Summary and conclusion: Oral health promotion on young mothers with dental passes was effective in improving their oral health knowledge, increasing the using of fluoridate toothpaste, and encouraging their oral hygiene procedure for children.

P30

Caries Management by Risk Assessment

Citra Kusumasari
University of Indonesia

Aim and purpose: Caries management by risk assessment (CAMBRA) is a methodology of identifying the cause of disease through the assessment of risk factors for each individual patient and then managing those risk factors through behavioral, chemical and minimally invasive procedures. As this approach has been qualified through various experts, researchers and advocated by numerous professional organizations, it has now become a new standard of care which should be incorporated into the dental hygiene process of care Minimally invasive, evidence-based processes of care have been identified as key strategies to prevent disease life-long and include the following aspects: assessment, determination of risk, and formation of treatment or prevention strategies. Evidence-based resources will provide clinicians the foundation needed to develop and implement CAMBRA as well as formulate clinical protocols. The philosophy behind CAMBRA matches that of dental hygiene-prevention goes a long way in achieving optimal oral health. Take the lead in our practice. Access and utilize these resources to further our role as the preventive expert and maximize our value to patients.
Keywords: caries, minimally invasive, CAMBRA.

P31

Assesing Risk Level of Dental Caries Using "Cambra"

Aatif Haroon, Bilal Hussain Khan, Faizan Syed Muhammad, Hamza Syed Muhammad, Saima Butt, Sara Ikram Khan
Pakistan Dental Community

Aim and purpose: 1. to evaluate risk of caries using CAMBRA in a specific population. 2. To determine whether ADA Caries Risk Assessment form (CAMBRA) is applicable in our society or not.
Materials and method: Dental students under the guidance of two calibrated and trained dentists went to Delhi Colony at certain Welfare Association, Karachi. It was a cross sectional study in which 221 individuals were assessed, 172 were above age 6 and 49 were below age 6. They were examined and responses were obtained by using validated questionnaire of CAMBRA. The data was analyzed manually.
Result: 1. the overall risk of dental caries in the population we visited was moderate. 2. The CAMBRA form was helpful to determine the risk factors of dental caries. But it should be modified as it lacked certain variables and could not be used in a community like the one we visited.
Summary and conclusion: The result shows that the people in the area we visited are at moderate Risk of dental caries. Therefore future preventive programs should be implemented for this particular society.

P32

The Prevalence of Malocclusion and Its Association with Caries Among 12–18-year-old Disabled Adolescents with Special Healthcare Needs

Sajith Vellappallly[1], Abdulaziz Al Kheraif[1], Mohamed Hashem[1], Sukumaran Anil[1], Seby Gardens[2], Madhusudan Krishna[3]
[1]*Dental Health Department, College of Applied Medical Sciences, King Saud University, Riyadh, Saudi Arabi,* [2]*Dept of Public Health Dentistry Mahe Institute of Dental Sciences Union Territory Of Pondicherry India,* [3]*Krisha Devaraya College of Dental Sciences, Bangalore, Karnataka, India*

Aim and purpose: To assess the prevalence of malocclusion among 12–18-year-old disabled adolescents in Chennai, Tamil Nadu, India, by using the Dental Aesthetic Index (DAI) and to determine the association of malocclusion with dental caries.
Materials and method: This cross-sectional study included 243 children with various mental disabilities with or without physical

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infirmities. The Dental Aesthetic Index (DAI) and the dentition status were recorded using the World Health Organization Oral Health Surveys – Basic Methods (1997) Pro-forma. The Decayed (D), Missing (M) and Filled (F) components of the DMF index were calculated using the Dentition Status and Treatment Need (DSTN). A Chi-square test, ANOVA, and t-test were used to derive inferential statistics.

Result: The mean DAI score ±standard deviation was 39.0 ± 12.3. A total of 123 (50.6%) subjects (74 males and 49 females) had DAI scores of 36 and above, which indicated a handicapping malocclusion requiring mandatory orthodontic treatment. Sixty-nine (28.4%) subjects (36 males and 33 females) had DAI scores between 31 and 35, which indicated severe malocclusion, for which orthodontic intervention was desirable. Incisal segment crowding (84.8%) was the most common aspect of the malocclusion. The mean DMFT score was 4.36 ± 3.81, and 82.8% of the subjects had a DMFT score >0. There was no statistically significant correlation between the mean DAI and DMFT scores ($r = 0.090$, $p = 0.15$).

Summary and conclusion: The prevalence of malocclusion and dental caries was found to be high. However, there was no positive correlation between the severity of malocclusion and dental caries among the surveyed disabled adolescents.

P33

Diabetes Mellitus and Dental Caries; a Cross Sectional Study

Syed Hammad Rizvi, Bilal Hussain Khan, Faizan Syed Muhammad, Hamza Syed Muhammad, Rabia Siddiq, Seerat Ul Urooj Alam

Pakistan Dental Community

Aim and purpose: Diabetes mellitus according to World Health Organization (WHO) is a silent epidemic which affects large number of people around the world and is directly related to the oral health status of the patients. This study aimed to investigate the dental caries prevalence and its relation with the level of risk among type II diabetes mellitus patients.

Materials and method: A cross sectional study was conducted on 80 diabetic patients of any age group. The patients were chosen via convenience sampling technique. Data was collected by using a Proforma based on demographic information and ADA caries risk assessment. Data was analyzed using SPSS version 16. Cross tab correlation was used to relate the level of risk (low, high and moderate) with the prevalence of caries.

Result: Descriptive analysis was done which showed that Majority of the participants were at the high level caries risk, which is 89% and the subjects with low risk were 11%. The prevalence of dental caries was 4.8 which were high.

Summary and conclusion: The prevalence of dental caries in type 2 diabetic patients was found to be high. And the relation between level of risk and caries prevalence was also high. The reason for high risk may be that there blood sugar level is high and there are many problems with their salivation too which increases the chances of caries and hence they are having a high risk.

P34

Microinvasive Dentistry – Don't Drill, Just Fill

Harsh Haren Shah

Affiliation missing

Aim and purpose: Non-invasive (preventive) measures involving fluoridation, dietary control and oral hygiene instruction, as well as invasive restorative methods are the standard treatment options for interproximal caries. Intermediate treatment options similar to pit-and-fissure sealing on occlusal surfaces that has been shown to be effective in preventing and inhibiting caries have not yet been established on interproximal surfaces. Recently, the application of resins on interproximal carious lesions has been studied and improved, leading to the development of new materials which infiltrate and seal the carious lesion improving the inhibition of caries progression. This poster thus aims at explaining this new approach towards caries treatment highlighting its varied applications, mode of action, procedure, benefits and the final outcome.

Materials and method: The poster entails the use of revolutionary products such as Icon which are infiltrative resins. These resins are set to create a revolution in preventive dental procedures.

Result: Clinical data show this new technique complements existing treatment options for interproximal caries by delaying the time point for a restoration and consequently closing the gap between noninvasive and invasive treatment options.

Summary and conclusion: Preventive Dentistry might be viewed with a different perspective in the near future. Invasive procedures may soon become obsolete due to these revolutionary materials.

P35

Orthodontic Rehabilitation of Permanent Ankylosed Teeth: A Systematic Review

Sonia Ghoul[1], Rym Kammoun[2], Yasmine Bizid[2]

[1]*Faculty of Dental Medicine, University Of Monastir, Avicenna Avenue,* [2]*Laboratory of DentoFacial Clinical and Biological Approach ABCDF, Faculty of Dental Medicine, Monastir, Tunisia*

Aim and purpose: Introduction: The rehabilitation of ankylosed permanent tooth is treated in different ways in the literature and presents different degrees of failure or success. The purpose of this systematic review-type study was to analyze the literature related to orthodontic rehabilitation of the ankylosed permanent tooth to determine its effectiveness.

Materials and method: The research was conducted on MEDLINE using the Boolean equation: "Tooth Ankylosis / therapy" [Mesh] AND "Orthodontics" [Mesh]. After the selection of articles, data were extracted and analyzed.

Result: Seventeen articles were selected. All the studies were descriptive as case reports and case series. Failures were noticed in all the papers describing cases of permanent ankylosed tooth treated with orthodontics only while 21 successful orthodontic cases were noticed when orthodontics were associated with distraction osteogenesis or dislocation. Among these 21 cases, four over corrections and three cases of relapse were described for the treated teeth by orthodontics associated with distraction.

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Summary and conclusion: The orthodontic approach alone is not recommended for the treatment of ankylosed permanent tooth. Orthodontics associated with dislocation or distraction osteogenesis should better be considered. The complications however, are expected for cases of distraction. It is also necessary to achieve long-term follow-up in the coming case reports and to conduct interventional studies for evidence.

P36

Newer Caries Diagnostic Aids – A Boon or a Bane

Sonali Kiri, Vishnu Rathore
[1]*K. M. Shah Dental College and Hospital, Sumandeep Vidyapeeth*

Aim and purpose: Newer diagnostic aids – a boon or a bane?
Materials and method: It is now universally recognized that the development of new technologies for early detection and quantitative monitoring of dental decay at an early stage of formation could provide health and economic benefits ranging from timely preventive interventions to reduction in the time required for clinical trials of anticaries agents. The use of technologies as adjunct to clinical visual examination for caries diagnosis will facilitate preventive care in dentistry to lower treatment cost as well as reduce the cost and time. Some of the Novel Technologies aren't Optical Coherence Tomography (OCT), Midwest Caries I.D. and Soprolife which will be enlightened in my E-poster.
Result: The new technologies use digital imaging, fluorescence methods, reflectance, electrical conductance and impedance and ultrasound transmittal properties of enamel with demineralization to monitor changes in caries lesion over time.
Summary and conclusion: The differences in caries presentations and behaviour in different anatomical sites make it unlikely that any one diagnostic modality will have adequate sensitivity and specificity of detection of carious lesions for all sites; a combination of diagnostic tools will help us diagnose lesions earlier and detect failing restorations sooner, all to avoid more costly, destructive dental procedures and truly take dentistry into the preventive rather than the reactive mode. Until now diagnosing cavities on biting surfaces of teeth has been difficult. Fortunately we now have new technology and advances in the field of dentistry to diagnose dental caries at an early stage.

P37

Incidence of Impaction in Retrognathism

Annis Thomas, Aishwarya Subramanian, Arun B. Chitharanjan, Vignesh
Sri Ramachandra University, Porur, Chennai

Aim and purpose: To study the incidence and classify the impaction of third molar in patients with retrognathic jaws Impacted tooth is defined as a tooth which is completely or partially unerupted into oral cavity due to its position against another tooth, bone or soft tissues so that its further eruption is unlikely. The most commonly seen impaction is that of the 3rd molars. There are various theories put forward to explain the causes of impaction namely, hereditary theory, Mendelian theory, Phylogenic theory, etc. Impaction is most commonly caused due to the lack of space in the dental arch or due to mal-alignment of the teeth. However impaction can also be caused due to the reduced size of the jaw or due to any skeletal deformity of a person. It is commonly classified based on the position of the impacted tooth.
Materials and method: Patients of age 25 years and above will be analysed cephalometrically and divided into three groups.
Group I: Orthognathic (Control)
Group II: Retrognathic Maxilla
Group III: Retrognathic Mandible
These three groups will be compared with each other to study the incidence of the impaction in each of these groups and also study in which malocclusion is the incidence of impaction highest. OPG of the patients will be studied and Winters Classification will be used to assess the impaction.

P38

Special Care for Special needs

Mohita Sinha
Maulana Azad Institute of Dental Sciences, New Delhi

Aim and purpose: Special needs individuals are children or adults who are prevented by a physical or mental condition from full participation in the normal range of activities of their age groups. Over the past 20 years or so, the absolute number and proportion of special needs children in society has increased. They comprise of a group of individuals who depend heavily on their families & others for their needs & welfare. They suffer from malocclusions which are more severe& more skeletally based than in general population. Conditions leading to poor neuromuscular coordination such as cerebral palsy or Down's syndrome exhibit increased prevalence of specific dental features, which can adversely affect the function of oro-facial structures. The concern for facial appearance has generated demand for orthodontic treatment of this group.
Materials and method: The present poster aims to discuss the major obstacles that may preclude the delivery of orthodontic treatment or are encountered during treatment, as in many cases etiology can't be removed, the different treatment modalities that may be employed to overcome the behavioral limitations, and to provide guidelines, which may allow orthodontists to gain therapeutic access to these patients. It is based on the previous published reviews and our clinical experience in the treatment of this compromised minority group.
Summary and conclusion: In the light of the successful treatment modifications that are possible and the satisfaction at the outcome that is attainable, denial of treatment because of disability is no longer justifiable and is ethically indefensible.

P39

Relationship between Orthodontic Forces and Occurrence of Denticles

Anisha Mishra, Arun B. Chitharanjan, R. Sukanya, R. Lokamithra
Sri Ramachandra University, Porur, Chennai

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Aim and purpose: To evaluate the prevalence of pulp stones in orthodontic patients and to establish the association of the orthodontic forces with the formation of pulp stones.
Materials and method: Pre and post OPG (Orthopantomogram) of 100 patients in the age group of 15–30 years comprising of 35 males and 65 females were taken and studies were made visually to detect any radio-opaque area in the pulp chamber of each tooth which corresponded to the presence of pulp stones.
Result: Out of the 100 OPGs, 21% showed denticles in the premolar and molar teeth in both their pre and post OPG and 3% showed denticles only in the post OPG in the molars.
Summary and conclusion: Denticles are primarily physiological entities and are increased in size and shape due to local or systemic pathologies. From the study, it was shown that 15% (out of the 24%) of the cases showed denticles predominantly in the molar and premolar region (especially the mandibular 1st molar). Hence orthodontic forces may not be the major reason for the presence of pulp stones.

P40

Esthetic Orthodontic Appliances-"Visible Versus Invisible"

Saumil Dwivedi, Gaurav Gupta, Kamna Srivastava
Babu Banarsi Das College of Dental Sciences

Aim and purpose: Aesthetics has always been a catchword among patients. Special aesthetic demands of the patients who have professional and social commitments pose a great challenge to the orthodontic community. These patients cannot accept 'visible braces even for a short time. This poster will cover various aesthetic orthodontic appliances for correction of malocclusion in such patients.
Materials and method: Various aesthetic orthodontic appliances like aesthetic brackets and wires, lingual appliances and Invisalign for correction of malocclusion will be discussed. The superior aesthetics of ceramic and plastic brackets and aesthetic wires compared to conventional stainless steel bracket and metallic wires are well accepted by patients particularly adults. Lingual orthodontic technique involving the placement of braces on lingual surface of teeth leaving labial surface untouched thus making it invisible to the outside world was developed. A more recent addition to the orthodontists armamentarium is Invisalign.
Result: Aesthetically orientated technique uses a series of clear plastic aligners to treat simple to moderatealignment cases, especially in the adult patient.
Summary and conclusion: Aesthetic Appliances will combine both acceptable aesthetics for the patient and adequate technical performance for the clinician. These will serve as a good alternative to the patients who cannot tolerate visible braces even for a short time.

P42

Save a Tooth: Knowledge Regarding Stem Cells Research, Their Sources and Life Saving Attributes among Dentists of Central India

Vani Singh, Ajay Bhambal, Garima Bhambhani
Department of Public Health Dentistry Peoples, College of Dental Sciences and Research Center, Bhopal

Aim or purpose: The study was carried out to explore the awareness of the importance of the potential health benefits of harvesting stem cells present in the pulp chambers of the pediatric dentition, among the dental surgeons. The study was carried out to explore the awareness of the importance of the potential health benefits of harvesting stem cells present in the pulp chambers of the pediatric dentition, among the dental surgeons.
Materials and methods: The study population comprised of 112 dentists working at six Dental Colleges in Bhopal City. The dentists completed a questionnaire assessing their knowledge about stem cells, their sources, utility and location of banking facilities.
Result: Our study throws light on the current scenario regarding knowledge of stem cells, their sources and usage. This study showed insufficient knowledge among the dentists regarding primary dentition as rich source of adult mesenchymal cells, stem cell banks in India and their usage in various medical and dental fields. They should be abreast with the latest and innovative techniques and treatment modalities. This study showed dentists had poor knowledge regarding stem cells implications.
Conclusions: Stem cell technique is on a boom and dental stem cells are emerging as potential source. Sadly, poor awareness and education about this life saving stem cell research has paved way for wastage of millions of vital sources, in the form of teeth. Although it's a new technique in India but still it's crucial for dental surgeons to be aware of the latest technique and educate their patients about the same. We should be aware of the facilities provided by the private and public sectors. It's the apt technology for investing healthy smile for the generation next.

P43

Portuguese Dentists' Attitudes Regarding their Mission Approaching Obesity: Questionnaire Results

Eunice Carrilho[1], Anabela Baptista Pereira Paula[2], Frederico José Da Silva Gomes[2], Manuel Marques Ferreira[2], Alice E. Curran[2]
[1]Faculty Of Medicine, University Of Coimbra Portugal, [2]School Of Dentistry, University Of North Carolina, Chapel Hill, USA

Aim and purpose: The aim of this paper is to know Portuguese dentists' role in addressing obesity. As the incidence of obesity continues to rise in Portugal, health care providers must coordinate prevention and interventional efforts for maximum effect.
Materials and method: To translate and validate the original version of the *Dentists' Role In Addressing Obesity* questionnaire from English into Portuguese, provide cultural adaptation for Portuguese dentists and apply the questionnaire to a random sample of 400 Portuguese dentists.
Discussion: In all, 141 dentists responded. Overall, 22.0 percent of respondents offered a form of counseling services and 58.9% reported that they were interested in offering obesity-related services. A paucity of trained personnel (58.9%) was cited by the respondents as a major barrier, followed by patients' rejection of weight-loss advice (32.6%) and fears of offending patients (29.1%). Ninety-two percent of respondents agreed that dentists would be more willing to intervene if obesity was linked to oral disease.

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Summary and conclusion: Health care providers must coordinate prevention and interventional efforts for maximum effect. Given the positioning of dentists willing to assist in such an effort, it appears reasonable for experts in obesity intervention in conjunction with dental educators, to develop intervention models to be implemented within the scope of dental practice. In summary, the results have limitations of generality. The limitation of the number of respondents, allow us to study a future strategic approach with a more representative sample.

P44

Promoting Woman Empowerment – A Gateway to Build Healthy Nation

Rinki Malik Hans
Vyas Dental College, Jodhpur

Aim and purpose: Despite human rights advances and improvements in certain areas of health and development, women continue to experience inferior health out comes across a number of conditions hence, the purpose of this paper is to identify the factors associated with role of women in improving family health.
Materials and method: The data was retrieved from Websites of the WHO, UNICEF and demographic health surveys of India for this systematic review. A total of 128 articles were retrieved from PUBMED. Key-words used were woman empowerment, health, India.
Result: World Economic Forum indicate that India is one of the worst countries in the world in terms of gender inequality and a literacy level of 66%. According to WHO and UNICEF reports, 43% of women get married before the age of 18 years and total number of girls denied of basic primary education is 34.54%. India currently has one of the highest rates of malnourished women among developing countries with an infant mortality rate of 46.07% and almost 33% of un-immunized children found in India.
Summary and conclusion: Regular counseling can bring a positive change in women's attitude towards mental, social and physical aspects of health for themselves and their families which will help in building- up a healthy nation.

P45

Reaching Out – Dental Education Through Social and Community Engagement

Robert Witton[1], N. Brown[2], W. Smith[1]
[1]*Social Engagement and Community Dentsitry*

Aim and purpose: The aim is to use the community to provide experiential learning opportunities for dental undergraduate students to develop an awareness and understanding of health, and to develop their leadership, professionalism and communication skills in a "real" environment.
Materials and method: Students in small study groups in year 1 and 2 of the BDS programme undertake supervised community outreach. Year 1 students visit a community organisation to discuss and explore how user groups access the services available. In year 2, students provide oral health support to community organisations by undertaking an intervention project. Both units are supported by a dedicated community engagement team.
Result: The units provide students with important insight through civic engagement, and in doing so bring a sense of realism to important oral health challenges and the wider responsibilities of being a dental professional which cannot easily be taught in the classroom. This provides unparalleled contextual learning and experience. The units receive excellent feedback from students and partners organisations alike.
Summary and conclusion: We are the only dental school in the UK to have created a link between the formal education of dental students and a community approach. This approach maps to 59 of the 144 learning outcomes in the UK's GDC document "Preparing for Practice" and gives students a wider range of skills and experiences to draw upon which will help them deliver dental care in a rapidly changing health environment. These education goals also provide service to local communities. Formal evaluation has demonstrated benefit to both groups.

P46

Odontogenic Bacteremia: A Secondary Endpoint of Dentistry

Nobuhiro Hanada, Hidenobu Senpuku, Erika Kakuta, Hiroaki Takeuchi, Takatoshi Murata, Yoshiaki Nomura
Department of Translational Research, School of Dental Medicine, Tsurumi University

Aim and purpose: Bacterial control is a crucial part of almost every dental practice. The aim of this study is to clarify the actual circumstance of oral bacteria and odontogenic bacteremia.
Materials and method: Biofilms were collected from the tooth surface. Pseudomonas aeruginosa was analyzed by the FISH method. Periapical granuloma tissue of five subjects was collected in order to detect Porphyromonas gingivalis by the FISH method. Peripheral blood samples of ten subjects were collected at the time before and after the scaling treatment. Bacteria in the blood were determined after the blood culture. We also measured TNF-a in blood.
Result: FISH analysis showed the positive signal of Pseudomonas aeruginosa in oral biofilms. FISH analysis also indicated the presence of P. gingival is in periapical granuloma tissue. Gram-positive cocci and gram-negative bacilli were detected in the peripheral blood after the scaling treatment. Pathogenic bacteria were not detected in the peripheral blood of the subjects. The TNF-values' were within the normal reference range.
Summary and conclusion: These findings suggest the importance of bacterial control in the clinical practice. It is required not only traditional physical therapy but also chemotherapeutic control of bacteria. Controlling of oral bacteria and prevention of bacteria may be a secondary end point of dentistry.

P47

Smoking Cessation Counseling: Attitudes of Indian Dental Students

Sudhanshu Saxena
Hitkarini Dental College and Hospital, Jabalpur, Madhya Pradesh, India

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Aim and purpose: The study was aimed at evaluating the awareness, attitude, practices, and perceived barriers of Indian dental students in relation to smoking cessation in the dental care setting.
Materials and method: A cross-sectional survey that included a convenience sample of dental students was conducted. An anonymous self-administered questionnaire that contained questions relating to awareness, attitude, practices, and perceived barriers to smoking cessation activities in the dental clinic was hand-delivered to clinical year dental students in 2014. Descriptive statistics were conducted for all questions. Chi-square test was applied for further data analysis. $p < 0.05$ were considered statistically significant.
Result: Only five percent of the respondents always ask their patients about their smoking habits, and 48% have heard about smoking cessation programs. Only three percent agreed that it is their professional responsibility to educate patients to quit smoking. Perceived barriers reported were lack of time (82%), lack of necessary materials (74%), and lack of knowledge of smoking cessation (69%).
Summary and conclusion: Since most of the dental students had poor attitudes and negative perceptions of smoking cessation activities, there is need to include smoking cessation training in the dental curriculum in India.

P48

Contemporary Concepts in Oral Hygiene Methods

Dhaman Gupta, Susan Thomas
Vyas Dental College, Jodhpur

Aim and purpose: Advancement in dental technology can offer you modern solutions to dental problems. The driving force behind recent oral hygiene advances is a desire to plaque control that can be performed in a more efficient, effective, comfortable manner. It is important for the clinicians to be able to recommend a preventive program me for oral health. To maintain good oral hygiene is the responsibility of both the patient and the dental professional. The aim of this poster is to update the knowledge on recent advances in oral hygiene products.
Materials and method: The articles were retrieved through a search of PUBMED CENTRAL and PUBMED site by using keywords – Oral hygiene, Dental care, Dental plaque, Gingivitis. Total 553 articles were retrieved from these data bases out of which 26 were used.
Result: Studies have shown that there are various advances in oral hygiene aids which are rechargeable toothbrush, chewable toothbrushes, toothpaste containing casiene-phosphopeptide amorphous calcium phosphate, herbal mouthwash and mouthwash containing the specified targeted antimicrobial peptide.
Summary and conclusion: Advanced oral hygiene measures like specialized toothpastes, mouthwashes and many other oral hygiene aids which are made specially to help in maintaining good oral hygiene. If used appropriately are capable of virtually preventing caries, most periodontal disease and maintaining oral health. The challenges for oral hygiene promotion are effective delivery of these measures cost effectiveness and combined with effectual motivation of individuals and communities to aspire to good oral health.
Keywords: : oral hygiene, dental care, dental plaque, gingivitis.

Poster Session 3 (P49–P79)

Theme: Dental Treatment and Restorative Dentistry

P49

Management of Maxillary Anterior Ridge Deficiency using Cancellous Bone Xenograft Blocks

Soulafa Mohamed Belal
Periodontology, Oral Medicine, Oral Diagnosis and Radiology, Faculty of Dentistry, Tanta University

Aim and purpose: Vertical & horizontal bone augmentation of severely atrophic anterior maxilla using bovine bone blocks.
Materials and method: A 23 years old female presented with generalized aggressive periodontitis affecting almost all her dentition. Her chief complaint was at anterior maxillary region where esthetic was compromised. Radiographic examinations confirmed the clinical findings and showed a massive bone loss for almost all the root length of all the six anteriors. A traumatic extraction of the hopelessly six anterior was carried out; the case was leave for 2 months to obtain good soft tissue coverage upon surgery. Three bovine cancellous bone blocks were used & fixed with three screws, space between the blocks were filled with particulate xenograft bone, and all covered by two collagen membranes.
Result: Follow up done along 9 months & a second surgery was done & according to the quality of bone which revealed that the bone was not ready to place the final implant & upon the patient wish we decided to place two mini implants & modifying her partial denture into an over denture till compilation of bone integration.
Summary and conclusion: Bovine bone blocks undergo slow remodeling over time and become incorporated into the native bone. It maintains its volume over a long period of time. This ensures the stability of bone height of the augmentation site until the implants are functionally loaded and natural remodeling takes place.

P50

Demonstration the Association Between Ca Vi Exon 2 Genetic Polymorphism and Dental Caries Among Saudi Population

Husein Al-Omer[1], Gihan Eh Gawish[2], Abdulrahman Alghofaili[3]
[1]Department of Restorative Dentistry, Prince Abdulrahman Advanced Dental Institute (PAADI), Prince Su, [2]Molecular Genetics Medical Biochemistry Department Collage Of Medicine AlImam Muhammad Ibn Saud Islamic University Riyadh Saudi Arabia, [3]Prince Abdulrahman Advanced Dental Institute PAADI Prince Sultan Military Medical City Medical Services Department Ministry of Defense Aviation Saudi Arabia

Aim and purpose: Dental caries is a major oral health problem in Saudi Arabia. The numbers are increasing and the status is worsening despite all kind of efforts to control caries. Recent research has indicated that salivary CAVI has a remarkable role in protecting teeth from caries. Analysis of SNPs in relation to caries has high potential to detect this affect. The aim of this study was to investigate the association between CAVI Exon2 genetic polymor-

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phism and dental caries among Saudi using modern molecular genetics technology.
Materials and method: Two hundred forty four healthy young adult Saudi with caries and saliva free lact (n = 124) and without caries (n = 120) participated in this study. The occurrence of caries in individuals was measured by using the DMFT (number of decayed, missing, and filled teeth) index. The oral hygiene and gingival status were assessed using the simplified Oral Hygiene Index OHI-S (Greene-Vermillion) and gingival index GI (Leo-Silness). Salivary total protein, CA activity, and salivary buffering capacity were determined. Furthermore, salivary pH was measured and salivary flow rates (SFR) were calculated. Lactobacillus and Streptococcus mutans counts were also determined. Genepolymorphism of CAVI Exon 2 was determined by PCR and DNA sequencing.
Result: Two SNPs were detected which are responsible threonine to methionine change in codon 55 (T55M) and tyrosine to serine in codon 71 (Y71S). We found that CA activity were significantly different ($p < 0.05$) between the Saudi with caries and without caries.
Summary and conclusion: We concluded that two SNPs found in this study may be specific polymorphisms affecting Saudi population.

P51
Caries Removal Made Easy
Aakruti Patel
K. M. Shah Dental College and Hospital, Sumandeep Vidyapeeth

Aim and purpose: Dental caries is the most prevalent disease affecting hard tissues of the oral cavity. Therefore through the poster, the different novel technologies of caries removal are focused.
Materials and method: Various technologies for caries removal have been portrayed such as the technologies that work with smart use of drill or no drill with minimal discomfort and invasion. Smart use of drill by means of comfort burs, polymer bur and methods of no drilling includes heal ozone, photo activated disinfection, erbium laser, fluid abrasion and plasma jet.
Result: The above mentioned newer technologies have shown better results because of the varied advantages such as less pain/ no pain, time efficient, minimal invasion and others.
Summary and conclusion: These newer technologies illustrate effective results and will be of greater use in future.

P52
Repair or Re-restore: Dilemmas of Faulty Restorations
Eshan Verma, Apurv Jhawar
Manipal College of Dental Sciences, Manipal

Aim and purpose: Restorative dentistry has shown progressive evolution in terms of material science and superior aesthetics, however, longevity of restorations still remains questionable and they tend to fail over time. Today's dilemma is whether to re-restore or repair faulty restorations. This review paper will discuss the various situations in which repair trumps replacement in terms of cost, time and tooth conservation.
Materials and method: Key search words were used on Pub Med – such as "Minimal intervention dentistry", "repair and refurbishment of faulty dental restorations" and articles were found from various journals for literature review.
Result: Traditionally, re-restoration has been the most accepted treatment modality in such situations; with the advent of Minimal Intervention Dentistry- alternative cost effective, time saving, conservative procedures such as marginal sealing, refurbishment and repair have come to light. Moreover, repair of such faulty restorations have shown to increase their life span, thus delaying the need of complicated treatments (if at all required).
Summary and conclusion: Not all defective restorations can be repaired; replacement may seem to be the only reasonable solution. The decision should be judiciously made, weighing the pros and cons for both replacement and repair after thorough investigation of the extent of the failure in the existing restoration. This concept has the potential to radically change the way we practice dentistry. However, insufficient evidence is currently at hand, and will require the execution of further randomized control trials in order to incorporate this into everyday clinical practice.

P53
Endo-perio Lesions-a Case Series
Janhavi Sanjeev Rane
Terna Dental College and Hospital

Aim and purpose: The aim of this paper is to present the diagnosis and management of different types of endo-perio lesions and emphasize the importance of the correct treatment sequence.
Materials and method: In this case report, primary periodontal, primary endodontic and true combined lesions as classified by Simon and Goldberg in 1964 were treated with sequential endodontic and periodontal treatment. Follow-up radiographs were taken to evaluate the various hard and soft tissue changes.
Result: It was seen that the follow-up radiographs showed complete healing of the hard and soft tissues and showed that these treatment modalities had a significant predictable outcome.
Summary and conclusion: Endodontic-periodontal lesions present challenges to the clinician as far as the diagnosis and prognosis of the involved teeth are concerned. The differential diagnosis of endodontic and periodontal diseases can sometimes be difficult but it is of vital importance.

P55
Clinical, Immune and Biochemical Parallels in the Treatment of Chronic Periodontitis
Anatoliy Godovalov, Irina Zadorina, Liliya Bykova, Ludmila Mozgovaya
Acad. E.A. Wagner Perm State Medical Academy

Aim and purpose: The main clinical signs and result of treatment of chronic periodontitis are the most dependent on the activity of immune cells than on direct influence of microorganisms, the path-

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ogenic potential of which is variable and can be controlled by factors of immune protection.
The objective of the study was to determine the concentration of protein components in contents of root canals (RC) of teeth in the treatment of chronic periodontitis.
Materials and method: 22 RC of teeth was treated with temporary filling with "Radent" material, which contains calcium ("Raduga-R", Russia) in 20 patients with chronic apical periodontitis. The following aspects were determined in RC: concentration of C-reactive protein with use of immuno enzyme method; albumin level in the reaction with bromocresol green; alkaline phosphatase activity with the kinetic method ("Vektor-Best", Russia).
Result: In the direct time (7–10 days) from the start of treatment the discomfort in the causative tooth was observed only in two clinical cases (9.9%). Total protein concentration in RC contents was not significantly changed, but albumin fractions increased (77.49 ± 6.17 - before, 115.60 ± 15.97 g/l - after treatment; $p < 0.05$), that indicates increased inflammation exudative phase, and C-reactive protein also increased (0.081 ± 0.013 mg/l - before, 0.119 ± 0.024 mg/l - after treatment; $p < 0.05$). The content of alkaline phosphatase which activates osteoblasts was not significantly changed.
Summary and conclusion: The study showed a significant change in some protein fractions in contents of RC of teeth pointing to the reinforcement of defensive reactions in the tissue of chronic periapical inflammation under favorable clinical presentation.

P56

Nanodelivery Systems of Antimicrobials in Periodontal Therapy- A Review

Kiran Shankar, Arun Sadasivan, Elizabeth Koshi
Sree Mookambika Institute of Dental Sciences, Kulasekharam, Tamilnadu

Aim and purpose: Antimicrobial drugs are the greatest contribution of the present century to therapeutics. The purpose of antibiotic/ antimicrobial chemotherapy is to aid the host defenses in controlling and eliminating microbes that temporarily have overwhelmed the protective host mechanisms. Nanotechnology & nano medicine provide platform for advanced therapeutic strategies of various infectious diseases.
Materials and method: Periodontal diseases are considered infections of the periodontium, because there is a bacterial etiology, an immune response and tissue destruction. It is generally accepted that anti-infective therapy is the corner stone of periodontal treatment which includes mechanical debridement, fastidious oral hygiene programme and anti- microbial regimen. Excessive use of antibiotics & antimicrobial agents increased the number of drug resistant pathogens, leading to urgent need for advanced therapeutic strategies. Nanotechnology & nanomedicine provide platform for advanced therapeutic strategies of various infectious diseases, as nanomedicine due to small size & targeted designed nanosized particles, permit passage through many previously impermeable biological membranes, often resulting in targeted delivery of antimicrobials.
Result: This provides a promising insight into the commercial applications of nano materials in the management of periodontal diseases especially as local drug delivery agents. A large number of materials scientists have devoted their efforts to the development of new nano materials; however, a need exists for them to collaborate more closely with dentists and dental scientists.
Summary and conclusion: It is envisaged that this trend will be further improved in the future as more and more nanotechnologies are commercially explored. Current status and future prospects of most promising nano delivery systems for antibiotics and antimicrobials delivery are discussed. There is a bacterial etiology, an immune response and tissue destruction. It is generally accepted that anti-infective therapy is the corner stone of periodontal treatment which includes mechanical debridement, fastidious oral hygiene programme and anti- microbial regimen. Excessive use of antibiotics & antimicrobial agents increased the number of drug resistant pathogens, leading to urgent need for advanced therapeutic strategies. Nano technology & nanomedicine provide platform for advanced the rape utic strategies of various infectious diseases, as nanomedicine due to small size & targeted designed nano sized particles, permit passage through many previously impermeable biological membranes, often resulting in targeted delivery of antimicrobials.

P57

Application of Phonophoresis in the Complex Therapy of Parodentium Diseases

Raushanbek Alymkulov
Kyrgyz Russian Slavonic University, Bishkek, the Kyrgyz Republic

Aim and purpose: To analyze the substantiate application of phonophoresis of "Antoxid" (patent No 960 of the KR) to increase the efficiency of complex treatment of periodontium diseases.
Materials and method: Clinical trial of "Antoxid" by applying phonophoresis method included complex examination and treatment of 22 patients with severe/moderate periodontitis. The control group consisted of 24 patients where traditional treatment was conducted. In the 1st examination group, 16.7% were patients aged 20–29 years; 20.8%- aged 30–39 years; 30.6%-patients aged 40–49 years; 31.9% -were 50–59-years old patients. After termination of exudation, "Antoxid"phonophoresis procedure was conducted for 5–7 min at upper and lower jaws. The treatment course was 6–8 exposures day after day.
Result: The stable remission was revealed promptly in 19 patients (86.4%). The general health improved in 100% patients examined. In the 1st group of "Antoxid"phonophoresis application, the remission occurred in 6 months and was 83.3%, and in 12 months it was 81%. In the 2nd group, remission was obtained in 57.7% patients. The patients with remission in 6 months made 54.2%, the patients with remission in 12 months made 51%. The results of examination of bone tissue density in 1st group patients showed 12.3 ± 0.33 mx in 6 months and 10.2 ± 0.12 accordingly in 12 months that testified compaction of bone tissue. In the 2nd group, some increase in bone tissue density was observed in 6 months up to 15.3 ± 0.4 mx, in 12 months there was tendency to worsening of the index which was 15.9 ± 0.3.

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Summary and conclusion: The application of "Antoxid" by phonophoresis method is an effective component in the complex therapy of patients with severe-moderate periodontitis.

P58

The Effect of Nd: YAG Laser Irradiation on Human Gingival Fibroblasts

Etsuko Murakashi
Department of Periodontology, School of Life Dentistry at Tokyo the Nippon Dental University

Aim and purpose: Nd: YAG laser (laser) has been widely used for various dental treatment procedures. Especially, there is a report that low-level laser irradiation enhanced the periodontal wound healing ability. However, the biological effects of low-level laser irradiation on cultured cells derived from periodontal tissue have not been determined. The aim of this study was to investigate the biological responses such as cell proliferation activity and heat shock protein 47 (HSP 47) expression of after low-level laser irradiation.
Materials and method: HGF was cultured in each 96-well plate, and low-level laser irradiation was performed. The variable parameters were pulse energy (100, 200, 400 ml), pulse rate (5 pps) and duration of irradiation (1 and 10 s). The cell proliferation activity after low-level laser irradiation was assessed using the modified MTT method. HSP 47 expression after low-level laser irradiation was observed by immunofluorescence.
Result: The cell proliferation accelerated in output of pulse energy dependent manner. However there was no significant difference in duration of irradiation between 1 and 10 s. Furthermore, the HSP 47 expression was observed in 1 and 10 s duration of irradiation.
Summary and conclusion: From these results, low-level laser irradiation may be useful for enhancing gingival wound healing effect in vitro.

P59

Conventional Versus Laser Assisted Periodontal Surgery of Gingival Overgrowth in Kidney Transplanted Patients

Ionut Luchian, Ioana Martu, Monica Tatarciuc, Silvia Martu
Grigore T. Popa University of Medicine and Pharmacy, Iasi, Romania

Aim and purpose: Da Silva et Al. claim that gingival overgrowth is one of the most frequent alterations at the oral level of the kidney transplanted patients. After Cota et Al. gingival overgrowth in renal transplanted patients varies in accordance with the type of the immunosuppressive treatment that's why the integration between the medical and the dental team may be an important approach in the post-transplant maintenance routine.
Materials and method: Our study included 10 patients with kidney transplant and gingival overgrowth in the anterior area of the mandible. The sample population was randomly divided into two groups named A and B with an equal number of patients. The patients included in the group A benefited of classical removal of the overgrowth using a scalpel and the patients included in the group B benefited by laser-assisted surgery using a 940 nm wavelength diode laser. The same team operated all the patients that were included in the current research. All removed tissues were sent to Anatomic Pathology examination.
Result: The classic periodontal surgery was more difficult, less precise and took more time than the laser assisted one. In the same time during the laser assisted surgery we had less bleeding and less post-operative discomfort. Although epulis surgical removal has a high rate of recurrence we had none at 3 months follow up in the patients treated with the laser. In group A he had two recurrence cases in which we had to redo the surgery.
Summary and conclusion: The laser assisted periodontal surgery technique proved to be minimally invasive, efficient and predictable for a successful result.

P61

Regenration- in this Generation

Khushboo Mansoori
Peoples College of Dental Sciences and Research Center, Bhopal

Aim and purpose: The aim of my poster is to present a brief over view on Regenerative Endodontics.
Materials and method: Root canal vascularization, Stem cell therapy, Tissue engineering, Scaffold implant.
Result: Millions of teeth are saved each year by root canal therapy. Although current treatment modalities offer high levels of success for many conditions, a regeneration therapy would be the most desirable. Regenerative endodontic procedures are biologically based procedures designed to replace diseased or necrotic pulp tissues by healthy pulp tissue to revitalize the teeth. The proposed therapies include root canal vascularization, stem cell therapy, 3-dimensional cell printing, tissue engineering, scaffold implant, injectable scaffold and gene therapy.
Summary and conclusion: Regenerative technique is one of the most challenging topic in modern dentistry. It is highly imperative to understand how the various procedures can be optimized and integrated to produce the outcome, that of a regenerated pulp-dentin complex. The future development of regenerative endodontic procedures will require a comprehensive research program directed at each of these components and application.

P62

Save the Root

Paras Mull, M.K. Manjunath
Dept. of Conservative Dentistry and Endodontics, JSS Dental College and Hospital

Aim and purpose: Root fractures in permanent teeth are uncommon injuries among dental traumas, being only 0.5–7% of the cases. (Majorana A et al) The purpose of this review is to describe etiology, classification, diagnosis and various treatment options in the management of horizontal and vertical root fractures with emphasize on recent developments.

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Materials and method: An evidence-based methodology involving framing a well defined PICO (problem, intervention, comparison and outcome) question related to management of root fracture (Horizontal and vertical) will be conducted. A keyword search of PubMed database and Cochrane Database of Systematic Reviews (June 2014) will be performed. The primary outcome measure will be to evaluate the present literature on management of root fractures in order to determine the most appropriate treatment modality (S Biner et al).
Result: Both prospective and retrospective studies will be assessed and only results with strongest designed studies available will be used.
Summary and conclusion: Dental trauma affects the hard tissues and cause pulpal and periodontal lesions. These conditions are of great relevance to dental practitioner, since they cause functional and aesthetic disturbances. Fractures involving the dentin, cementum and pulp of tooth are categorized as root fractures. The sequelae of root fractures can be complex because of the combined damage to the pulp, dentine, cementum, bone and periodontal ligament. Many factors like patient age, degree of root development, fragment mobility, dislocation and separation between fragments have significant influence upon the pattern of healing. Recommended treatment protocols for root fractured are formulated on the strength of research evidence.

P63
Parental Cigarette Smoking and Oral Health of Children
Sumit Gaur
Department of Pedodontics and Preventive Dentistry, Manipal College of Dental Sciences, Manipal University

Aim and purpose: To study the impact of parental cigarette smoking on the oral health of children.
Materials and method: 50 children, inclusive of both the sexes, aged 6–12 years were evaluated after a written informed consent from the parents and approval from the institutional ethical committee. They were divided into parental smoke exposure (PSE) (n = 25) and non exposure groups (NE) (n = 25). Data on oral hygiene, dietary habits, socio demographic variables, parental smoking behaviour were obtained through structured questionnaires, completed by the parents. They were examined by trained dentists. Clinical parameters assessed were Plaque index (Silness and Loe), gingival index (Loe and Silness), Probing depth and decayed, missing, filled teeth (DMFT) index.
Result: The PSE group had deeper probing depths (2.68 ± 0.48 mm) as compared to the NE group (2.00 ± 0.60). The intergroup comparison using the paired t test showed that there was a highly significant difference in the pocket depth between the groups ($p = 0.001$). Further, intergroup comparison using the Mann Whitney test showed that the PSE group had significantly increased number of decayed teeth as compared to the NE group ($p = 0.021$). Intragroup comparison within the PSE group using Karl Pearson correlation showed that the number of cigarettes exposed/day had a significant effect on dental caries ($p = 0.033$) and probing depth ($p = 0.041$).
Summary and conclusion: The results from this study confirm that parental smoking has a detrimental influence on the oral health of children. Therefore, dentists should increase the awareness regarding the harmful effects of parental smoking in the presence of children.

P64
Permanent Stainless Steel Examination (evaluation) At the School Oral Health Program
Ammar Jarrad, Sabiha Al Mutawa, Yousef Al Duwairy, Pramod Soparkar, Huda Nazar, Jitendra Ariga
Forsyth Institute, School Oral Health Program Specialist In Dental Public Health Kuwait

Aim and purpose: To evaluate the success of the permanent ssc on young patient.
Materials and method: This cross-sectional survey was done among convenience sample of 561 children at the SOHP. Four calibrated dentists followed a criteria performed an oral examination. Examination was done on dental chair using mouth mirror, light source, and x-ray was taken for the examined teeth. Data collected included demographics, oral hygiene, oral hygiene practices, BPE, and radiographic examination.
Result: In this study, 561 children included in which 59% were females and 41% were males. The mean age at examination was 10.4 ± 6.2 years. Forty one percent of children brushed their teeth. At 1-year evaluation, the mean DMFT was 7 ± 4.2. Half of children had poor oral hygiene. Only, 1.4% of the examined teeth had pocket depth <3.5 mm and >5.5 mm. Radiographic examination revealed that most did not have interproximal bone resorption (92%). Also, showed that 72% of teeth did not have impingement on biologic width and 26% had good marginal adaptation.
Summary and conclusion: The present findings shows that all indicators related to the success of permanent ssc among children was satisfactory except for the marginal adaptation that could be attributed to the continuous tooth eruption and the lack of the use of oral hygiene practices; brushing, flossing; and use of topical fluoride. An oral health promotion program should be implemented to the children with permanent ssc.
Keywords: stainless steel crown, marginal adaptation, oral hygiene, pocket depth.

P65
Biological Restoration in Complicated Crown Fracture
Syedameerhaider Jafri
North West Armed Forces Hospitals, Kingdom of Saudi Arabia

Aim and purpose: To describe biological restoration in complicated crown fracture.
Materials and method: Traumatic injuries of teeth are relatively common in children and adolescents, and it is one of the common reasons for seeking immediate dental treatment, not only because of physical injuries but also due to psychological & emotional reasons. Management of such traumatic dental injuries is a great challenge for the dentist. Depending on the clinical situation, treatment of fractural anterior teeth can be done using various techniques & materials. But no such restoration can match the esthetic

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and function of natural teeth. So, one of the options proposed for management of dental fracture was fragment reattachment.
Result: Eleven years-male-child reported to the dental department with the complaint of broken teeth. On clinical examination, it was found that maxillary right central incisor crown was fractured exposing the pulp and the parents had brought the two fractured tooth fragments. There was also a fracture running obliquely from labial to palatal surface, and this palatal fragment was loosely attached. It was decided to do endodontic treatment followed by fragment reattachment. All the three fragments were attached using bonding agent. Then pulp chamber of both tooth and fragment were filled with composite and then fragment was reattached properly, matching the fractured margin. Patient was followed for 15 months, which showed excellent result.
Summary and conclusion: Fragment reattachment is more natural way of restoring fractured tooth. It maintains the natural tooth color, contour, translucency, surface texture and thus it is more esthetic. Also it has positive psychological and social response with greater patient's acceptance.

P66
Conservative Management of Keratocystic Odontogenic Tumor: A Case Report
Nagehan Duygu, Anil Ozyurt, Cagdas Cinar, Mehmet Bani
Faculty of Dentistry, Gazi University

Aim and purpose: Keraocystic odontogenic tumor, formerly known as odontogenic keratocyst is a benign unicystic or multicystic intraosseous neoplasm. Treatment modalities include aggressive surgical procedures and more conservative approaches that significantly influence the lesions recurrence potential. The purpose of this case report was to demonstrate a conservative approach in the treatment of a keratocystic odontogenic tumor, located in the maxillas region, using marsupialisation.
Materials and method: An 11-year-old boy was referred to Gazi University, Faculty of Dentistry, and Department of Pediatric Dentistry with complaint of the facial swelling. Panoramic radiograph showed a large cyst with a radiolusent area involving the maxillar left permanent canine. Cone-Beam Computed Tomography (CBCT) was used for detailed information for the location, borders and size of the large lesions. Odontogenic keratocyst was diagnosed by use of fine-needle aspiration biopsy. In this case, deciduous canine was extracted and a window was created through the socket to decompression the lesion by marsupialization technique. Then, a removable appliance was placed in the cystic cavity. This appliance was used for 5 months.
Result: After 3 years of follow up, gradual reduction of the radiolucent area and in a bit of spontaneous eruption of the impacted canine were observed; but the tooth didn't erupt in the oral cavity. Odontogenic keratocyst didn't showed recurrence. Orthodontic treatment was initiated for tooth eruption.
Summary and conclusion: In conclusion, marsupialisation might be the first treatment option for conservative management of odontogenic keratocyst involving interrupted permanent teeth in children.

P67
A Comparative In Vitro Assessment of the Extrinsic Staining Potential of Children Iron Syrup and Iron Containing Infant Formula on Natural Teeth
Fahad Alenazi, Abdullah Alasmari, Abdullah Alotain, Hamad Alenazi
Bahra Dental College

Aim and purpose: To study the effect of Iron supplements when mixed with fortified iron containing formula on the discoloration of teeth.
Materials and method: An in-vitro experimental model was used in which 40 maxillary first premolars, extracted for orthodontic reasons and obtained from patients who signed the consent forms, were the experimental study materials. The teeth were stored in artificial saliva from the time of extraction until they were used. These teeth were then randomly divided into four groups of ten teeth each as follows: Group 1- Control, Group 2 –Iron Syrup, Group 3 – Infant Formula, Group 4- Combined Groups. Baseline shades of all teeth were measured using a wave dispersion spectrophotometer. The shade were measured at 4, 8, 24,48 and 72 h; as per the protocol developed by Lee et al. (2008). The ?E values across groups were then subjected to statistical analysis using the one-way and two-way ANOVA.
Result: When seen at 4 h, the control group showed the least staining while the iron syrup mixed with the infant formula showed the highest staining, At 8 h the color change (from baseline) of the iron syrup was the highest and was significantly higher than the other two groups. The Scheffes post hoc test showed that at the intervals of 8, 24, 48 and 72 h, iron syrup stained significantly more than the infant formula and the infant formula combined with iron syrup groups.
Summary and conclusion: Iron in all forms has some form of staining potential when tested in-vitro. b) the staining potential of iron syrup is reduced when combined with iron fortified infant formula.

P68
An Unusual Management of External Root Resorption
Aybarshan Yilmaz, Umut Bengi, Vehbi Bal
Pediatric Dentistry and Dental Public Health Department, Faculty of Oral and Dental Medicine, Cairo University

Aim and purpose: This study aimed to present the oral, extra oral and radiological symptoms and treatment of external resorption due to dental trauma.
Materials and method: From the analysis of a 10-year-old patient who attended our clinic, we have found out that she had hit the maxillary left central incisor at school. Her examination was revealed a mobility grade 1. After periapical radiography and CT scan, it has been detected pathologic on the 1/3 of apex and mid-root external resorption on the tooth. Dental pulp was extirpated. It was dressed by poliantibiotics pad. Root canal was filled with MTA 2 weeks later. Full-thickness flap was elevated. Granulation tissues were removed and bone defect area was cleaned mechanically. External resorption and apical 1/4 of the root was filled with

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glass ionomer restorations. Defect area was filled with hydroxyl apatite bone graft. Platelet Rich Fibrin was used as a membrane over the bone graft, replaced on the collagen membrane. Mucoperiostal flap was sutured with 5/0 polypropelen. The suture was removed after 10 days.
Result: The patient's tooth has been checked out regularly every 6 months. After 18 months, there wasn't any pathological changes in checking results.

P69
The Magic of Orthodontics-invisalign
Rajat Dharmesh Kumat
Terna Dental College and Hospital

Aim and purpose: The aim of this poster is to show case the Invisalign technique in the treatment of patients with restorative and aesthetic concerns.
Materials and method: After taking the patient's records and impression making, 'Polyurethane' from methylene diphenyl diisocyanate and 1,6-hexanediol are used for making the invisalign trays. The way the system works is by wearing a set of Invisalign trays (called 'Aligners') for 2 weeks at a time. The teeth then typically move 1/10 mm per tray. After the teeth are moved into the desired position, the retainers are used for retention.
Result: All required dental movements can be enacted with no relevant counter-effects thanks to high-quality biomechanical features of the aligners. Also, maintenance of oral hygiene and comfortable management of the removable appliance is achieved. Finally, very high patient satisfaction can be recorded.
Summary and conclusion: Invisalign technique indeed shows good effectiveness in successfully performing complex orthodontic treatments.

P70
Our Time, Judgment and the Perfect Proportion
Ishita Umre
Dental Aesthetics, Smile India

Aim and purpose: My aim is to make easy judgment between direct composite veneers and lab fabricated composite veneers/ componeers for smile design case; taking chair side time and aesthetics into consideration.
Materials and method: Composites and bonding agents. Study conducted on human beings between age group of 20–60 years. Study based on image analysis over 3 years.
Result: Componeers used for diastemas that ranged more than 2 mm always left a black triangle in the inter-papillary region.
Summary and conclusion: I conclude for mild to moderate (1–2 mm) diastemas- componeers; and for severe diastemas (<2 mm) - direct composite veneers using a silicon key of a wax mock up model is a great option; taking chair side time and "the perfect proportion" into consideration.

P71
Colors in Dentistry
Larter Doye, GS Amarthnath, Anand Mrilingaiah, Hariprasad Ananth, Mohammed Hilal, Vinaya Kundapur
MR Ambedkar Dental College & Hospital, Bangalore

Aim and purpose: The knowledge of the concept of colour is essential for achieving good aesthetics. This review compiles the various aspects of colour, its measurements and shade matching in dentistry.
Materials and method: The basic fundamentals of colour and light, the radiation spectrum and the optical characteristics of the object is to be understood before evaluating and selecting the proper colour shade for the restoration.
Result: The success of restorative dentistry is determined on the basis of functional and aesthetic results.
Summary and conclusion: To achieve aesthetics, four basic determinants are required in sequence of position, contour, texture and colour.

P72
Esthetic Touch to Single Tooth Loss and Mobility with Fiber
Huseyin Tort
Gulhane Military Medical Academy, Department of Restorative Dentistry and Endodontics

Aim and purpose: Fibers are used in dentistry for splinting and adhesive bridge. It doesn't only provide a good aesthetic result due to lack of metaling redients, but it is cost-effective, and can be applied in a single session, as well.
Materials and method: A 45-year-old male patient was admitted to our clinic due to aesthetic problems associated with a missing tooth. The oral examination revealed a missing tooth, number 41, and mobility in the lower anterior teeth due to periodontal problems. The patient neither wanted to have his teeth cut for a bridge construction, nor chose to have implants due to surgical process. Therefore, the periodontal therapy and adhesive bridge construction were scheduled in same session. Nano-composite material in the same color as the patient's teeth was used together with strip crowns to form the pontic. Grooves were carved on the teeth and the lingual surfaces of the body we prepared, in order to place the fibers. Acid and adhesive were performed. Fiber was placed on the flow able composite and the LED light was applied. In order to complete the construction of the adhesive bridge, the pontic was placed. The restoration was given final form by adding composite. Treatment was completed by the finishing and the polishing procedures.
Result: In a patient, who didn't wish to undergo a surgical procedure such as implants or a prosthetic treatment, fiber-reinforced adhesive bridge was applied. With this conservative treatment, both the aesthetic expectations were fulfilled and the periodontal treatment was completed by splinting the teeth.

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P73

To Prepare or Not to Prepare for Laminate Veneer

Nabeel Al Nahhas
Gulf Medical University

Aim and purpose:

Prepare or Not to Prepare in Laminate Veneer: The option for correction of anesthetic teeth are numerous; among these treatments, porcelain veneers have received substation attention from the profession and patients. In recent years bonded porcelain restorations have geometrically expanded in their clinical use. Increased patient demands for esthetics coupled with the desire by the profession for conservative treatments have fueled this expansion.

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Prepare or Not to Prepare in Laminate Veneer: The option for correction of anesthetic teeth are numerous; among these treatments, porcelain veneers have received substation attention from the profession and patients. In recent years bonded porcelain restorations have geometrically expanded in their clinical use. Increased patient demands for aesthetics coupled with the desire by the profession for conservative treatments have fueled this expansion.

P74

Difference between Clinicians and Patients Evaluations of Maxillary Anterior Restorations

Knezovic Zlataric Dubravka[1], Zagar Maja[1], Kristek Zoric Ela[2]
[1]*School of Dental Medicine, University of Zagreb, Croatia,*
[2]*Affiliation missing*

Aim and purpose: Dental aesthetics has become an important discipline in dentistry as patients have started requesting highly aesthetic restorations on maxillary anterior teeth. The purpose of this study was to compare clinical assessment and patient's evaluation of some aesthetic restorations on maxillary anterior teeth.

Materials and method: Patients also assessed general impression of their maxillary anterior teeth restorations and rated it as satisfactory or unsatisfactory. Results were compared with clinician's assessment. Logistic regression analysis was used to determine factors that influenced the patient's satisfactory or unsatisfactory overall impression for maxillary anterior teeth restorations.

Result: All-ceramic crowns were evaluated as best and the composite fillings as worst match with the tested natural tooth. Participants were less satisfied with colour of their restorations. Women rated restorations worse than men. In assessing aesthetic parameters of composite fillings, faceted acrylic and metal-ceramic crown solder patients were less satisfied, but more satisfied with all-ceramic crowns than younger ($p < 0.05$). Younger patients were more satisfied with their restorations than older subjects in general ($p < 0.05$). General impression of restorations was better when patient positively assessed composite fillings. Dentist's assessment of aesthetic parameters of maxillary anterior teeth restorations is always stricter than the patient's one.

Summary and conclusion: Patients and clinicians aesthetic evaluation of restorations and general impression of dental aesthetics is a combination of objective parameters and subjective impression. Therefore a dentist must follow some general guidelines and adapt them to patient's wishes.

P75

Computer Aided Smile Design 3d (case) – Perfect Tool for Esthetic Restorations

Vlad Naicu
Bucharest Dental School, UMF Carol Davila

Aim and purpose: This article is proposing a system that combines data from digital 2D pictures and 3D Dental design software (Exocad) for designing and simulating a perfect smile.

Materials and method: 12 Digital pictures as in AAED recommendations were used for 2D imaging for one aesthetic case Optic impression with 3d intraoral scanner Trios were made and the 3D models were converted to .stl files. The 3D models were imported in Exocad, with Trusmile function enabled, and dental design was made according to the aesthetic rules. 2D snapshots were taken from the CAD Scene file and imported as new layers in 2D initial images, according to the proper rotation angle and dimensions. (Using Windows Pos Pro software – free image editor).

Result: The results were saved as 2D images .jpg, analyzed according to the aesthetic rules, and showed to the patient for feedback. When the 3D design fits perfectly all the aesthetic demands the restorations were manufactured and cemented.

Summary and conclusion: It is very useful to combine the information's of 2D images and 3D design software for obtaining the perfect aesthetic smile.

P76

An Innovative Rigid Tray Technique for Replacement and Reattachment of the Anterior Composite Tooth Pontic: (a Case Report)

Saied Mostafa[1], Atefeh Atofi[1], Michael Meharry[2], Reza B. Kazemi[2]
[1]*Mashhad Dental School, Mashhad University of Medical Sciences (MUMS),* [2]*University of Connecticut Health Center, School of Dental Medicine, Farmington, CT, USA*

Aim and purpose: The aim of this case report paper is to describe a new method using Rigid Tray Technique (RTT) for exact replacement and reattachment of the detached composite tooth pontic.

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Materials and method: The following procedure has been adopted for the treatment of the case based essentially on making a special rigid tray: Temporary stabilization, taking impression, making master cast, using prepared dental stone, making a rigid tray, surface preparation, reattachment, removing the rigid tray and finalizing the restoration and occlusal adjustment.
Result: The novel RTT may sometimes be the best and only way for replacement and reattachment of a tooth detached pontic.
Summary and conclusion: It is an artistic technique for replacement and reattachment of a composite tooth pontic that can be used in restorative dentistry to bring satisfaction to the dentists concerned about their patient's welfare.

P77
Conservative Restorative Management of Worn Dentition Using Dahl Concept
Fariba Motevasselian
Affiliation missing

Aim and purpose: To use adhesive principles with conservative technique to restore worn teeth ensuring favourable pulpal health and sufficient remaining tooth structure.
Materials and method: Tooth surface loss (TSL) is a physiological process that occurs throughout life. However, if the rate of wear challenges the viability of teeth or is the source of concern to the patient, then TSL may be considered pathological. While for some cases passive management and monitoring may suffice, for a proportion of cases active restorative intervention will become necessary.
In the majority of the patients, TSL is accompanied by dento-alveolar compensation to preserve the efficacy of the masticatory system and the inter-occlusal clearance is seldom available to accommodate restoration. One option would be to follow traditional prosthodontic protocols through tooth reduction to conform to the existing occlusion. Alternative approach is to create the necessary space by re-organizing the occlusion by means of arbitrary increase of vertical dimension of occlusion (Dahl concept). It refers to the relative axial tooth movement that is observed when a localized appliance or restorations are placed in supra-occlusion and the occlusion re-establishes over a period of time. With advances in adhesive dentistry a number of options have become available including direct and indirect composite resin and cast adhesive alloy.
Result: A composite restoration was proved to be a viable option to treat worn teeth in a 2 years follow up.
Summary and conclusion: Treatment using adhesive materials has the advantages of retaining and protecting remaining tooth structure, reversibility of the procedure, ease of repair and reduced costs.

P78
Principles of Smile Designing
Vasant Gupta, Vishal Agarwal
NIMS Dental College and Hospital

Aim and purpose: The aim is to combine various principles which helps in achieving aesthetic smile.
Materials and method: Golden, vertical, horizontal,lip line, rickett's plane,ideal smile arc,reverse smile arc, smile zone, symmetric buccal corridor.
Result: Principles of smile designing govern how naturally attractive your smile is or isn't. When art, science, form, and function are blended by nature or experienced cosmetic dentist, results can be simply amazing. Experienced dentists understand and use these principles to transform dull average smiles into successful confident smiles.
Summary and conclusion: Smiles say a lot about who a person is, how confident they are and even how successful they are. Like beauty smile is more than skin deep and your face seems to known if your smile feels confident or not. There are many elements other than having white teeth that make for a radiant and confident smile. While most people don't know exactly what constitutes a nice smile, most will recognize a nice smile when they see one. While nature is kind to some, others are not that lucky. Fortunately we have principles of smile designing that dictate whether a smile is attractive, average or awful. They can be used to create wonderful smiles regardless of the starting condition. My poster deals with principles of smile designing hence transforming lives.

P79
4 Smiling Aesthetic Dentistry
Niharika Mishra
Peoples College of Dental Sciences and Research Center, Bhopal

Aim and purpose: Our Aim is to enhance the beauty of smile with the help of various treatment modalities available in aesthetic dentistry. And educate the people about appearance related dental services.
Materials and method: BLEACHING- Lightening of the colour of the tooth through the application of a chemical agent. BONDING- to fix the appearance of a chipped tooth with the help of tooth colour materials. VENNERS- Thin sheet of composite or porcelain is fixed to the visible area of the tooth. RESHAPING- It includes crown lengthening and reduction of the gingival exposure.
Result: Aesthetic dentistry refer to a host of dental treatment designed to enhance the smile and correct chipped, cracked discolored and unevenly shaped teeth. The purpose of cosmetic dentistry is to improve the appearance of the teeth using bleaching, bonding, veneers and reshaping. From porcelain veneer to tooth colored fillings patient can choose from a variety of cosmetic solution to restore the health and vitality of their smile. But it is also important to know the benefits and risk and what you can expect during the process and what it will cost.
Summary and conclusion: In recent time, there has been on increased public demand for appearance related dentistry services. We are now facing more and more challenging cases in achieving the most natural results. While doing that, the priority becomes trying to be minimally or non invasive. For these minimally invasive results, we need to make a very sound treatment plan. A nice smile is reflection of our health and personality. "It is rightly said that invest in your smile, you wear it every day."

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Poster Session 4 (P80–P100)

Theme: Oral Surgery and Oral Medicine

P80

Rehabilitation of Tooth with Implant by Immediate Loading: Case Series

Kamleshwar Singh, Arun Ramchandran, Kamleshwar Singh, Kaushal Agrawal
KGMU, Lucknow

Aim and purpose: Implant treatment protocols have evolved over the past few decades. Conventional implant protocols have been based on the achievement of primary stability and prolonged healing periods.
Materials and method: This case series explains the protocols for implant placement in restoring missing teeth in the posterior region by immediate functional loading.
Result: Immediate loading of dental implants results in a significant reduction in treatment time and morbidity for patients by avoiding second stage surgery, resulting insignificantly higher patient satisfaction. In addition, adaptations and relining procedures for removable prostheses during preprosthetic healing of implants are no longer necessary, reducing chair side time for the clinician.
Summary and conclusion: The patients were successfully rehabilitated with dental implant therapy, with no evidence of pain, swelling of discomfort in the implant placement site. They report of comfort in mastication and was happy with the appearance and fit of the temporary prosthesis.

P81

Cytotoxicity of Curcumin-pems Film-coated Acrylic Resin on Gingival Epithelial Cells

Pimlada Promsakha Na Sakonnakorn, Onauma Angwaravong, Thidarat Angwarawong, Vilailuck Srethagaroon, Prasit Pavasant
Khon Kaen University

Aim and purpose: After the maxillofacial surgery, complications may occur such as infection, inflammation. There are studies of curcumin extract showing a number of good properties for example anti-inflammation, antimicrobial activity and promote wound healing. However, there is no recent study of acrylic resin property modification with curcumin. Therefore, the cytotoxicity of curcumin coated on acrylic resin by polyelectrolyte multi layers film or PEMs on gingival epithelial cells was examined in this present study.
Materials and method: The curcumin coated on acrylic resin by PEMs at the concentration of 0.01, 0.1, 1 and 10 mm were produced in this study. The yellow color intensity of the solution coated on the resin was subsequently examined by a spectrophotometer and the toxicity to gingival epithelial cells seeded on acrylic resin was analyzed by Alamar blue assay.
Result: The concentration of curcumin solution resulted in the increase in yellow color of the acrylic resin coated with curcumin. The cytotoxicity test showed that the concentration of 10 mm of curcumin had significantly less cell viability percentage than other groups at 24 and 48 h while the uncoated and coated resin at the concentration of 0.01, 0.1 and 1 mm exhibited no cytotoxicity and resulted in no significant difference in cell viability percentage.
Summary and conclusion: The curcumin coated on acrylic resin with PEMs at the concentration of 0.01 and 0.1 mm are the appropriate concentrations for further study to examine other therapeutic properties.

P82

Prediction of Implant Position Using Cbct

Adrian Mihail Nistor[1], Alper Tukay[2], Alexandru Diaconeasa[3], Valentina Gadea[3], Grigore Ion Lazarescu[4]
[1]DSAFDSA, [2]Faculty of Dentistry, Bucharest Romania, [3]Private Practice Bucharest Romania, [4]Titu Maiorescu University

Aim and purpose: The prediction of multiple implant position using CBCT with software associated is very important in the treatment plan. According to American Academy for Oral and Maxillofacial Radiology to predict the bone volume it is always necessary to use date from CBCT X-ray. The advantages of different software are to visualize multiple positions of each type of implant.
Materials and method: In this study 43 patients were examined in 3D dimensions using CBCT. The distance between each slice was 1, 0 mm. Before the insertion of each implant, was manufactured stent (maxillary and mandibular) and the slices were superimposed on the each X-ray examination. Digital wax-up created was very useful to predict the bone volume and the precise position of all the implant. Blue Sky Plan 3 software (free) was used to establish the final implant treatment plan.
Result: Manufacturing the surgical guide using the date collected with CBCT X-ray exam and dedicated software are the future in dental implant positioning. The plan is more efficient in the clinical situation when it will be inserted more then 3–4 implants in a row.
The time necessary for finalize the surgical step and also for the prosthetic step was shorter than any other method in all 43 patients. On our experience the time was reduced more than 50%.
Summary and conclusion: The human factor is probably, even in a future, the most important for the creation of the correct DICOM.

P83

Digital Surgical Guide in Dental Implantology

Grigore Ion Lazarescu[1], Alper Tukay[1], Adrian Mihail Nistor[2], Alexandru Diaconeasa Maier[3], Valentina Gadea[3]
[1]Titu Maiorescu University, Faculty of Dentistry, Bucharest, [2]Dunarea De Jos Dental University, Galati, Romania, [3]Private Activity

Aim and purpose: An optimal result in combined dental implants treatment one absolute must is existence of a precise diagnostic and strict respected treatment protocol. During surgical step, the surgical guide proves to be an ideal tool that guarantees optimal results by precise transfer from virtual to physical stage. Implant insertion with surgical guides both allows and requires virtual planning of ideal prosthetic restoration.

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Materials and method: 42 patients were included in this study (28 males and 14 females) with edentulous maxilla. Medical history of each patient was checked prior to surgical insertion of dental implants. Each patient has been consulted and based on accurate CBCT exam and scanning protocol, implant position has determined. Accordingly, surgical guide has been designed and then produced. Various methods of production have been used but 3D printing proved to be the most reliable.
Result: Excellent results on short and long term have been achieved when protocol strictly followed. Implant failure has however been experienced in six cases due to mishandling of the guide in surgical stage by misalignment or due to poor bone quality.
Summary and conclusion: The surgical guide is probably the most accurate technique for inserting dental implants. Triple scan protocol with CBCT, virtual design and 3D printing proves to be very friendly and accurate solution.

P85
How to Retrieval Cement- Retained Implant- Supported Prostheses
Fatemeh Kia
Tehran University of Medical Sciences

Aim and purpose: Cementation is one of the techniques for implant retention but one of the disadvantages of cement-retained implant-supported prostheses compared to screw-retained implant supported prostheses is the lack of predictable retrievability. The technique presenting corporate's a design feature that allows for easy and predictable re-retrieval of cement-retained implant-supported prostheses to facilitate required maintenance and repair or replacement of the prosthesis by the clinician.
Materials and method: The procedure can be performed with either customized implant abutments or prefabricated, machined implant abutments for single or multiple-unit fixed prostheses. The procedure requires a metal alloy abutment-to-prosthesis interface and uses a slot driver to facilitate retrieval of the prosthesis.
Result: The technique which is applied creates a lock and key fit between the slot driver and the retrieval slot within the abutment/prosthesis interface.
Summary and conclusion: The proposed retrieval slot mechanism allows a slot driver, upon rotation within the retrieval slot, to simultaneously apply a coronal force to the prosthesis superstructure and an apical force to the supporting abutment sufficient to break the cement seal and separate the 2 components. So this technique incorporates a design feature that allows for easy and predictable retrieval of cement-retained implants.

P86
Engineer the TMJ Disc
Amey Patil[1], Dharti Chopda[2], Gary Heir[1]
[1]*Rutgers School of Dental Medicine, New Jersey, USA,* [2]*MGV Dental College, Nasik*

Aim and purpose: The aim is to plan revolutionary treatment for TMD sufferers with the help of tissue engineering.
Materials and method: A small amount of tissue is first harvested from a non-critical site. The cells are obtained and allowed to multiply in the lab and then placed on a scaffold. Bio reactors, gels, meshes, growth factors to the culture medium and cells should be responsible for regeneration. Then the construct (combination of cells and scaffold) is either implanted in TMJ immediately or allowed to form the tissue in lab before being implanted.
Result: Static Culture is essential in determining parameters like seeding density of cells, time of culture needed and combination of growth factors to use. Bio reactors can dramatically improve the results from static culture. Alginate gels and FDA approved meshes like Polyglycolic Acid significantly shown success in engineering the collagen and hyaline cartilage. The growth factors have shown the ability to increase the rate of proliferation of cells and to increase the production of GAG and collagen.
Summary and conclusion: Success will depend upon finding the right combination of scaffold material, cell seeding method, bioreactors, mechanical signals, growth factors and chemical signals. Individually narrowing, combining and further optimizing these factors as well as in vitro experiments, animal testing and then clinical trials in humans are necessary to gain FDA approval. Only then tissue engineered disc will available for clinical use. With the help of this engineered disc we can create a gold standard for the success of tissue engineering attempts and revolutionize the way patients are treated for TMJ.

P87
Comparison of Intrusion Achieved with Micro-implant Anchorage System and the Intrusion Arches
Varun Goyal
PGIDS Rohtak Haryana

Aim and purpose: To determine the amount of true incisor intrusion attained with micro-implant and intrusion arch during a 6 month observation period.
Materials and method: The sample of this study consisted of 14 patients with deep overbite. An informed consent was taken, and 7 patients were treated with micro-implants in the maxillary arch and seven patients were treated with intrusion arches.
After a healing period of 2 weeks, the implants were loaded. The second group of patients was treated with an intrusion arch. After the initial alignment of the incisors, an intrusion arch (2×4 appliance) was fabricated and inserted. It was activated to deliver an intrusive force. Lateral cephalograms were taken before the mini-implant and intrusion arch placement i.e. at the end of levelling (T1) and at the end of intrusion 4 months later (T2). Vertical position of the maxillary incisors: perpendicular distance from the midpoint between the incisal edge and the apex of the tooth was measured. It was decided to use Mann-Whitney test. A $p < 0.05$ confidence level was considered significant.
Result: The mean incisor intrusion achieved with micro-implants was 3.29 mm with standard deviation of 1.11 and with intrusion arches it was 1.29 mm with standard deviation of 0.76, the p-value was 0.009. Therefore the difference in the intrusion achieved by mini-implants and intrusion arches is significant.

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Summary and conclusion: We can conclude that the micro-implant technique for true incisor intrusion can be considered superior to the conventional intrusion arches.

P88

Oral Surgery and Oral Medicine; Implantology (4.a.)

Shruti Gupta
Banaras Hindu University

Aim and purpose: Multi-species bacterial biofilms have been implicated as a major etiology leading to peri-implantitis. Increasing popularity of immediate loading protocols for implants have led to development of implant surface treatments which enhance osseo integration potential, such as UV functionalization. The purpose of this in-vitro study was to evaluate and quantify biofilm formation by saliva derived mixed bacterial flora on UV photo functionalized commercially pure titanium surface and to assess the effects of cur cumin on biofilm growth during incubation.
Materials and method: For the present study, an in vitro model was designed for biofilm growth. The study model employed mixed bacterial flora culture isolated from saliva as inoculate, autoclaved titanium specimens as control and UV photo functionalized titanium specimens as test specimens. The model was incubated in aerobic environment at 37°C for 5 days. Possible biofilm inhibitory action of herbal bioactive compound cur cumin was also investigated. Crystal violet assay and scanning electron microscopy were performed to quantify the biofilm growth.
Result: The results showed a significant percentage reduction in the total biofilm coverage over UV photo functionalized specimens (22–78%). Addition of curcumin further added to the biofilm inhibition over UV functionalized specimens (58–98%). The sole biofilm inhibitory activity of cur cumin was depicted by marked depreciation in biofilm extent on control specimens (42–97%).
Summary and conclusion: The study indicates a possible role of UV photo functionalization and cur cumin in inhibition of biofilm formation over commercially pure titanium. A decreased biofilm formation can thus be expected on these UV functionalized titanium implant surfaces if exposed to the oral environment.

P89

Split Ridge Technique- Implant Made Easy for Narrow Ridge

Aditi Shah[1], Saloni Dalal[2]
[1]Terna Dental College and Hospital, [2]D.Y Patil Dental College and Hospital

Aim and purpose: Ridge Split technique is used to Create More Buccolingual Space for Implants in cases with inadequate bone width in atrophic edentulous jaws for successful oral rehabilitation with endosseous dental implants.
Materials and method: Ridge splitting with bone expansion is a technique of manipulation of bone to form receptor site for implant without removing any bone from the implant site. Maxillary bone has inherent quality of flexibility which can be molded to desire location by using series of instrument namely chisels and osteotome. This further improves quality of bone all around implant, at the crest and apex both. After corticotomy of a rectangular buccal segment and a 40-day healing period, the ridge was split, leaving the buccal periosteum attached to the lateralized segment. Dental implants are placed, and the gap between the implants and the bone filled with a mixture of venous blood and a porous algae-derived hydroxyapatite.
Result: All buccal segments fractured as planned at the basal corticotomy during ridge splitting. After 6 months, all implants were stable and surrounded by bone; prosthetic loading with fixed partial dentures.
Summary and conclusion: Ridge splitting technique helps in expansion of narrow ridge with or without fracture of cortical plates. This technique has the advantage of immediate implant loading, in comparison with other ridge widening techniques. It could be considered as a novel technique for implant placement in narrow ridges.

P90

Efficacy of Laser Induced Fluorescence Spectroscopy in Oral Cancer Detection

Vineetha Ravindranath, Keerthilatha Pai, K. Jeena Priya
Manipal College of Dental Sciences Manipal

Aim and purpose: Oral cancer is one of the most common cancers all over the world. It is associated with poor prognosis with 5 year survival rate of approximately 50%. The poor outcome is mainly attributed to the delayed diagnosis leading to loco-regional spread. Early and accurate detection of oral cancer can be extremely difficult even for experienced practitioners and is always a subject of extensive research. Aim of the study is to determine the usefulness of modified Laser induced fluorescence spectroscopy in differentiating oral premalignant and malignant tissues from normal tissues.
Materials and method: Institutional ethics committee approval and informed consent were obtained. Tissue samples were obtained from 20 subjects with histopathologically proven oral premalignant and malignant lesions (study group) and 20 healthy individuals (control group). Age and gender matching were not done. He-Cd laser was used and auto fluorescent signals generated from tissue surface were transmitted to spectroscope-CCD assembly. Spectrum was collected and compared with pathologically certified samples. Principal component analysis was used for spectral analysis.
Result: Variation spectra were reconstructed and plotted in a graph. Malignant spectra scores were seen in the range of −0.08 to 0.07, premalignant in the range of −0.05 to 0.05 and normal was 0.014 to 0.05 with high sensitivity (90.9%) and specificity (100%).
Summary and conclusion: Our study suggested the promising role of Laser induced fluorescence spectroscopy in the detection of oral cancer. Further research with a larger sample size and age as well as gender matching is warranted.

P91

Probiotics in Dentistry: A Review

Akansha Kandoi, Dnyanada Kadav
MGM Dental College & Hospital, Navi Mumbai

Aim and purpose: The aim of the present paper is to summarize the available data on probiotic, mechanism of action, function and

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side effects. The present article can encourage the clinical and day to day use of probiotic containing product for prevention of different oral diseases including dental caries.

Materials and method:

1 A culture concentrate added to a beverage or food (such as a fruit juice).

2 Inoculated into probiotic fibers which promote growth of probiotic bacteria.

3 Inoculated into a milk-based food (dairy products such as milk, milk drink, and yogurt).

4 As concentrated and dried cells packaged as dietary supplements (non-dairy products).

Result: Probiotic containing products consist of beneficial microorganisms, which stimulate health promoting flora thus, suppressing the pathological colonisation and disease spread. Oral benefits include reduction in caries development, achieving periodontal health, reducing oral malodor, reducing the occurrence of pathogenic bacteria in voice prosthetic bio films. Several studies suggest that consumption of products containing probiotic lactobacilli or bifid bacteria could reduce the number of mutans streptococci in saliva. Results have shown that exposure in early childhood when the oral micro flora is been established increase the chance of colonisation of probiotic bacteria and have life long effect on oral cavity.

Summary and conclusion: Although only a few clinical studies have been conducted, the results to date suggest that probiotics could be useful in preventing oral infections, especially dental caries. This article summarizes the currently available data on probiotics and their potential effect on dental caries and other diseases.

P92

Treatment of Erosive Oral Lichen Planus with Topical Tacrolimus

Una Mohammed Elshinnawi, Solafa Elshaarawi
Faculty of Dentistry, Mansoura University

Aim and purpose:

1 To evaluate the efficacy of topical tacrolimus in treating Erosive Oral Lichen Planus.- Studying the changes in peripheral blood lymphocyte sub populations and the incidence of NK cells (CD 16 and CD 56) before and after treatment.

2 Measuring the level of tacrolimus in the blood.

Materials and method: Ten patients treated with topical tacrolimus (Protopic) 0.1% ointment manually applied to lesion sites 2–3 times daily for period of 1 month. During the treatment course patients did not receive concurrent therapy and had not recently received systemic corticosteroids. Clinical evaluation was performed before commencement of treatment then every 2 weeks for a total of 1 month. Each visit consisted of measuring the target lesion size and pain evaluation by visual analog scale (VAS) and a photo was taken in each visit. Blood samples were taken from all patients to assess lymphocyte subpopulations and the incidence of natural killer cells by flow cytometry before and after treatment. Also, to assess the level of tacrolimus one day and then 1 week after the beginning of the treatment.

Result: Eight patients showed complete resolution and improvement while two patients showed substantial improvement. All patients reported rapid relief from pain and burning. Transient irritation at the site of application was seen in some patients.

Summary and conclusion: Treatment with topical tacrolimus 0.1% ointment three times daily induced therapeutic response. Tacrolimus is a strong inhibitor of T-lymphocyte activation, its efficacy in lichen planus supports the concept that T-lymphocytes play an essential part in the pathogenesis of this disease.

P93

Stem Cells- New Avenue in the Field of Regenerative Dentistry

Paras Kumar Jain, Jitendera Solanki, Manoj Kumar Hans, Sumit Bhateja
Vyas Dental College Jodhpur

Aim and purpose: In today scenario, medical and dental professionals face a mammoth task while treating perplexing medical situations like organ failure or tissue loss. In this aspect, stem cells have emerged in a promising way to provide an ideal replacement.. This review focuses on the role of dentists in the recovery and use of the stem cell in both dental and medical regenerative therapies.

Materials and method: The data was retrieve from various dental websites for this systematic review.

Result: There is a great hope that with suitable stem cells, produced in large quantities through cell culture methods and injected into failing tissues and organs, will produce fresh, replacement cells to take over from lost or damage done. This ability to grow and regenerate tissues is the focus of the emerging field of personalized medicine. Keywords used were stem cells, Regenerating teeth, transplantation and tissue engineering.

P94

Stereotactic Body Radiation Therapy (sbrt) for Head & Neck Tumors

Chintan Vinodbhai Dobariya
Ahmedabad Dental College

Aim and purpose: Use of SBRT (Stereotactic Body Radiation Therapy).

Result: This article reviews the role of Stereotactic Body Radiotherapy (SBRT) in a field of oncology and its recent advances. SBRT is increasingly used to treat a variety of head and neck tumors as a result of its highly conformal dose distributions and stereotactic spatial accuracy in delivery. Other previous study reports have shown that SBRT is technically feasible, well-tolerated and compares favorably to other alternatives of salvage therapy in the management of patients with recurrent and/or previously irradiated head and neck cancers. This therapy is also applicable in lung, liver, skeletal metastasis, spine, pancreas, renal and prostate cancers.

Summary and conclusion: SBRT an emerging radiation modality be boon in the field of oncology.

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P95

Ultrasonographic Evaluation of Masseter Muscle Thickness in Partial Edentulous

N.A. Nathira Jabeen, A. Bharat Sundar, S. Shankar Kumar
Sri Ramachandra University, Porur, Chennai

Aim and purpose: To evaluate the effect of unilateral edentulous on masseter muscle thickness.
Materials and method: The thickness of the masseter muscle is measured bilaterally in 30 unilateral edentulous patients and age, gender matched controls using ultrasonographic imaging (linear transducer-7.5–10 MHz) at both relaxed and contracted states of the muscle. The result parameters will be analysed using Mann Whitney U Test.
Result: The studies on the masseter thickness in unilateral partial edentulous patients are found to be sparse in literature. The results are intended to compare the masseter thickness in dentulous and unilateral edentulous patients, and to correlate the duration of edentulousness with the muscle atrophy. Unilateral partial edentulous subjects mainly use the dentate side for chewing. Hence the study results are expected to show variation in the thickness of the masseter muscle in experimental and control groups, indicating the muscular atrophy in the edentulous side.
Summary and conclusion: The masseter muscle atrophy in the edentulous side, when proven will probe further research with a greater sample size and assessment of the muscle thickness after prosthetic rehabilitation.

P96

The Role of Mast Cells and Angiogenesis in Well Differentiated Oscc

Ali Tahir, Omer Sefvan Janjua, Ehsan Ullah
Oral Pathology, Punjab Medical College

Aim and purpose: Mast cells are well known to be involved in allergic, inflammatory and immune reactions. They are also involved in pain, tissue damage as well as repair. However, in the recent past, mast cells have proven to be related to cancer and mediate their effect through release of many cytokines and chemokines, pro-angiogenic factors and via heparin release. Therefore, mast cell function in tumours is being extensively investigated worldwide. The role of mast cells has already been studied in many pathological conditions and malignancies. Some studies suggest the pro-angiogenic and thus pro-tumourigenic role of mast cells in OSCC, whereas some do not support this theory. This study has evaluated the role of mast cells and angiogenesis in OSCC and the findings of this study can prove to be helpful in determining the prognosis and treatment modalities of OSCC in future.
Materials and method: It was a prospective study in which 37 biopsies of well differentiated oral squamous cell carcinoma were obtained. Micro-vessels were stained with monoclonal anti-human CD-34 class II antibody and mast cells were counted using Toluidine blue stain.
Result: When compared with normal oral mucosal tissue, it was seen that micro-vessel density and mast cell density indeed increase significantly in well differentiated OSCC; however, they are not correlated to each other.
Summary and conclusion: This study reports that angiogenesis does increase in OSCC and mast cells also invade the peri-tumour tissue but they are not directly correlated.

P97

Mandibular Osteosarcoma: a Case Report

Mohammed Farouk
Affiliation missing

Aim and purpose: Oral location of osteochondroma is very rare with a predilection of mandibular sites.
Materials and method: From 0.035 to 0.2 cases /100 000 (Ghavami et al 2006).
Result: It usually occurs in children and young adults between 10 and 25 years. Men are the most affected with a sex ratio of 1.43 (Turcott 2010).
Summary and conclusion: Osteosarcoma can be either primitive whose main causes according to recent studies may be a genetic defect, or secondary occurring in the following situations: post-radiation, Paget disease, fibrous dysplasia, aggressive osteoblastoma, chodroblastoma (A.LOUNIS 2011).

P98

Cervico-facial Cellulitis: Descriptive Study at the Center for Dental Consultation and Treatment of Casablanca, Morocco

Haitami Sofia
Faculty of Dentistry of Casablanca, Morocco

Aim and purpose: The dental origins of cervicofacial cellulitis are polymicrobial bacterial infections affecting cell-adipose areas of the face and neck. They exist in several clinical and land forms. Their treatment is twofold: medical and etiological. They have extensive potential can sometimes be severe and life-threatening patient where socio-professional and economic impacts heavy.
Materials and method: We conducted a cross-sectional study from March 2012 to March 2013 which involved all patients consulting for cervico-facial cellulitis at the center of consultation and dental treatment at Casablanca.
Result: The results showed that 54.3% of patients were men. The patient hygiene level was bad because 27.2% do not brushed their teeth and 58% brushed their teeth irregularly. Advanced forms, suppurative and chronic, accounted for 40.7% and 13% of the sample respectively. The main etiology in 81.5% was the dental necrosis. Prescription antibiotic was necessary in 90.1%.
Summary and conclusion: The high cost of care cellulite and the need for hospitalization in some cases could be reduced by a policy of effective and targeted prevention. This is based on a motivation for oral hygiene care and a reconciliation of the population in order to reduce the morbidity and costs associated with these infections.

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P99

Oral Candidal Species Variation and Anti-fungal Susceptibility in Immunocomprimised Individuals

Lalith Prakash[1], Raja Rajeswari[2]
[1]*Sibar Dental College Guntur*

Aim and purpose: To know the prevalence of oral Candidial carriage, the prevalent species and their anti-fungal susceptibility in immunocomprimised individuals [Human Immunodeficiency Virus (HIV) positive patients with and without Highly Active Anti Retroviral Therapy (HAART) and patients with Head and Neck Squamous Cell Carcinoma (HNSCC), on Radiotherapy (RT) & Chemotherapy (CT)].
Materials and method: A total of 300 patients attending to the Government General Hospital, Guntur, were selected for the study. 50 were controls (Group-I). 100 Patients diagnosed positive for HIV and naïve to HAART were Group-II a. 50 patients were HIV positive and already started on HAART (Group-II b). 50 patients with HNSCC, on RT were Group-III a. 50 patients with HNSCC on CT were in Group-III b. After informed consent, oral rinse samples were collected and subjected to various mycological tests.
Result: Out of total 300 cases, 119 were culture positive. Candida albicans was the predominant isolate, followed by Candida tropicalis. Of the 119 isolates tested for antifungal susceptibility, Fluconazole (75.6%) showed highest susceptibility followed by Ketoconazole (71.4%).
Summary and conclusion: Candida infection in immunocomprimised patients are often severe, rapidly progressive and difficult to treat as they are resistant to conventional antifungal agents. Speciation and susceptibility tests are to be strongly recommended to have a good control over the disease.

P100

DNA-the Tiny Code that's Toppling Evolution

Parijat Chakraborty, Sweta Singh
Maharana Pratap College of Dentistry and Research Centre

Aim and purpose: DNA testing is to justice what the telescope is for the stars; not a lesson in biochemistry, not a display of the wonders of magnifying glass, but a way to see things as they really are. DNA can be extracted from the tooth, saliva and oral epithelium. The aim of this abstract to represent the sources and importance of the oral DNA in forensics.
Materials and method: DNA is collected with the help of tools like Smear slides, scalpels, tweezers, scissors, sterile cloth squares, UV light, luminol and swab. Famous methods for the DNA analysis are: RFLP method, PCR method, STR method, mitochondrial DNA analysis, Y-chromosome analysis, ampFLP etc.
Result: Teeth represent an excellent source of genomic DNA. Forensic dental record comparison has been used for human identification in cases where destruction of bodily tissues or prolonged exposure to the environment has made other means of identification impractical, i.e, after fire exposure, air craft inflammation or mass disaster. When conventional dental identification methods fail, this biological material can provide the necessary link to prove identity. Even root-filled teeth supply sufficient biomaterial for PCR analysis in order to be compared with known antemortem sample or paternal DNA.
Summary and conclusion: The application of DNA technology to forensic odontology cases is already a fact. This success provides a basis for re-association of body part that might not be otherwise possible because of decomposition. DNA the language of life yields information beyond our imagination, both in health or disease.

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