

Journal of Multidisciplinary Dental Research

ISSN 2277-3525

Special Edition 2023

SPECIAL EDITION QUEST - 2023



A publication of the International Dental Educationists' Association (IDEA)

JOURNAL OF MULTIDISCIPLINARY DENTAL RESEARCH

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Research in dentistry plays a pivotal role in advancing knowledge and enhancing healthcare outcomes. The involvement of students in dental research not only nurtures their intellectual growth but also feeds innovation, pushing the field forward. As I recently, in March 2023, had the privilege of witnessing the remarkable research presentations by Indian students, at the occasion of QUEST 7.0 at Coorg Institute of Dental sciences, I was deeply impressed by their exceptional talents, interesting topics, well-elaborated studies, and valuable outcomes. This experience has strengthened my belief in the importance of engaging students in research endeavors for the development of knowledge and the progress of dental healthcare.

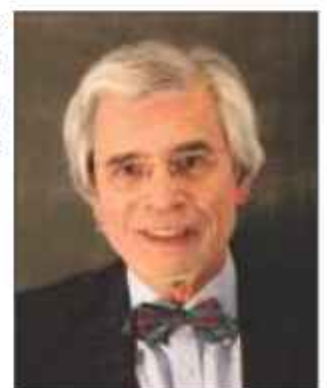
Engaging students in research cultivates a sense of curiosity, critical thinking, and problem-solving skills. It encourages them to explore dental issues, propose novel hypotheses, and develop innovative approaches to tackle challenges within the field.

Research provides a unique opportunity for students to bridge the gap between theoretical knowledge and practical application. By actively participating in research projects, students gain firsthand experience in data collection, analysis, and interpretation, preparing them for real-world scenarios in dental practice.

Involvement in research fosters collaborative teamwork, enabling students to work alongside experienced researchers, mentors, and clinicians. This interdisciplinary collaboration enhances their communication skills, professional networks, and exposure to different perspectives, further enriching their educational experience.

Students bring fresh perspectives and innovative ideas into our labs. Their active involvement in research expands the frontiers of dental knowledge, thrusting ideas and discovery. This progress directly contributes to the improvement of oral healthcare.

As I reflect on the exceptional talent and dedication demonstrated by the students I had the privilege of evaluating, I am filled with optimism for the future of dentistry in India. Their commitment to research exemplifies a potential pool of future leaders. I extend my heartfelt wishes to all the students I encountered, hoping for their continued success, and perhaps a place in prestigious research laboratories if not directly in dental healthcare.



Prof. Dr. Dr. Ralf J. Radlanski
Charité - Campus Benjamin Franklin,
Universitätsmedizin Berlin

Mr. K M KUSHALAPPA ORATION LECTURE

Mr. K. M. Kushalappa was a pious, generous and selfless soul. He was a self-made person who gave up his rights on his family home and property and purchased the School Estate, Siddapur where he lived with his wife and family.

He had a modern approach to life and appreciated available technology and adapted himself to change during his time. He always had a ear for the grievances of people around him especially his neighbors and people of his clan. He was always there for people in difficulty and helped nurture and educate children of his community.

He was active in the politics of Coorg with his primary goal being to keep Coorg as an independent state under the Indian Union. He took active part in the co-operative movement in Coorg and helped in establishing co-operative institutions like 'Federation' in Coorg which are doing laudable service even today.

During the depression days in 1937 when Coffee was in the doldrums he took to the export business and succeeded in keeping himself afloat. He was a true Gandhian and followed the dictates of Gandhiji. He made the family follow the principles of the Mahatma.



The K M Kushalappa Oration for QUEST 2023 was delivered by Dr. Ralf Johannes Radlanski. He is a German Anatomist, Orthodontist and University Professor. Ralf J. Radlanski studied medicine and dentistry at the Universities of Göttingen (Germany) and Minneapolis (MN, USA). He received his post graduate education at the Institute of Anatomy at the University of Göttingen and he underwent a residency in orthodontics at the medical faculty of Göttingen University. Since 1992 he is Director of the Dept. of Craniofacial Developmental Biology at the Center for Dental and Craniofacial Sciences, Charité - University Medicine Berlin (Germany). He is a guest professor at the University of California at San Francisco (USA), at the University of Turku (Finland), and at the University of Basle (Switzerland). His scientific work is focussed on the visualization of prenatal craniofacial developmental processes, as well as on microstructural research. With this background, he has continuously contributed to practical orthodontic questions. He works as an orthodontist in a private practise in Berlin Mitte. Dr. Radlanski is the author of the world best seller 'The Face' (together with Karl H. Wesker), and of over 100 scientific articles and contributed to about a dozen textbooks, and has given lectures in Europe, Africa, Asia, and the USA. Dr. Ralf is the current President of the Eur Asian Association of Orthodontists (EAO).

Mrs. PONAMA KUSHALAPPA ORATION LECTURE

Mrs. PonamaKushalappa was a quiet, generous and helpful person who stood by her husband in trial and triumph.

She always believed in service before self and kept the wellbeing of others in mind. In the course of her life time quietly and with dignity she provided solace to society at large by providing food, shelter and education at School Estate.

She made a welcome home and kept an open house for many a relative. She was inspired by Annie Beasents' message of selfrude and education. She stood by her husband through the most tumultuous times in Coorg's economic and political crisis and was a source of inspiration and strength to her family and society.



The Ponamma Kushalappa Oration for QUEST 2023 was delivered by Dr. Jan V. Raiman. He completed his Dental studies at the Georg-August-University, Göttingen (1978 – 1983). He did his postgradual Training for Orthodontists with Dr. Med. Hoerer in Erlangen from 1983 to 1985. He also did his Post gradual training for Orthodontists at the Philipps University in Marbur from 1985 to 1987. Since 1987 he has started his own practice in Hannover Kleefeld. He is certified for the Invisalign system, Lingual Technique (Incognito, Orthorobot) and WIN Lingual System. He was theFounding and board member (until 1995) of the Association of Orthodontist Hanover/ Germany.

Dr. Jan V. Raiman was a speaker at international congresses and courses in Poland, the Czech Republic, Slovakia, Ukraine, Italy, South Tyrol, Hungary and Kazakhstan. He has organised EAO International Orthodontic Symposium (IOS) in 2000, 2002 and from 2004 until 2019. He has also organised various advanced training seminars. He was the Editor of the professional journals Dental Tribune and Ortho Tribune (Czech & Slovak Edition) from 1998 to 2010. He is a member of German Society of Orthodontics (DGKFO), Federal Association of German Orthodontists (BDK), American Association of Orthodontists (AAO), and Czech Association of Orthodontists. He is the current President of the German Association of Craniomandibular Disorders (CMD Dachverbände.V.) and Vice-President of the Eur Asian Association of Orthodontists (EAO).

THE HENRY GRAY ORATION LECTURE

Born in Belgravia in 1827, the Father of Modern Anatomy, Dr Henry Gray is the worlds most noted anatomist and surgeon who revolutionised the study and practice of the subject with his illustrated book, Anatomy- Descriptive and Surgical. His textbook- Grays Anatomy, has never gone out of print and till date serves as the cornerstone for the study of Anatomy as the quintessential 'Medical Bible'.

The study of Craniofacial Anatomy & Biology in the context of dental education in India has always been regarded as basic science curriculum. The Coorg Institute of Dental Sciences felt the need to highlight the importance of understanding Craniofacial Anatomy & Development and apply the same to clinical practice. The Henry Gray Oration was started to place particular emphasis on this very matter and form a link between the learning of Craniofacial development and clinical correlation.



The Henry Gray Oration lecture for Quest 2023 was delivered by Col Rajat Mitra, a graduate from Dr R Ahmed dental college, Kolkata in 1991. He completed his Masters in Orthodontics & Dentofacial Orthopaedics from the prestigious Armed Forces Medical College, Pune in 1998. He has a meritorious service in Army Dental Corps for more than 30 years and presently he is the Commanding Officer & Classified Specialist in Military Dental Centre, Bangalore. He was a post graduate teacher and examiner in Maharashtra University of Health Sciences & Delhi University and has more than 35 publications in reputed national & international journals to his credit. He was a guest speaker in several IOS national conferences. Due to his distinguished service and professional excellence Col Rajat has been conferred with the following awards: Force Commanders Commendation Card in UN Peace Keeping Mission in Ethiopia & Eritrea in 2006, A letter of appreciation from Govt of Eritrea in 2006 for humanitarian service, Dr H D Merchant research award in Preventive Orthodontics in 2019, The Chief of Army Staff Commendation Card in 2021.idential Award, Vishisht Seva Medal (VSM) for his exceptional services of a high order.



Dr. HC. Peter Borbely
Chair Professor,
Department of Orthodontics,
University of Debrecen, Hungary



Prof. Dr. Dhirawat Jotikasthira
Professor and former Chairman,
Department of Orthodontics,
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at the University of Texas
School of Dentistry at Houston.



Dr. Ivana Dubovska

Teacher and researcher at the Orthodontic Department of Dentistry and Oral Sciences, Faculty of Medicine and Dentistry at the Palacky University in Olomouc, Czech Republic.



Dr. Simona Dianiskova

President Elect of European Regional Organization of the FOi, Director of the Foreign affairs committee of the Slovak Chamber of Dentists, Director of the Revisory Committee of the Slovak Orthodontic Society



Dr. Shadi S. Samawi

Secretary General and Treasurer of the Jordanian Orthodontic Society and the Jordanian Commission for Oro Facial Pain and Dysfunction.

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A NOVEL BORDER MOULDING TECHNIQUE IN PROSTHODONTICS

Author : Aryasree Puthalath and Sangeetha Vasudevan

Guide : Dr.Bhavana and Dr.Ashika

Institution : Coorg Institute of Dental Sciences



The objective of border moulding procedure is to get peripheral seal to achieve a retentive denture. An exact border moulding record is influenced by the material and technique. Different border moulding materials have different qualities which helps in recording fine details of tissues. A border moulding technique is a shaping of the impression material by the manipulation or action of the tissues adjacent to the border of impression. Green stick compound has been the material of choice for border moulding as, it has thermoplastic mechanical properties and has fast and uniform plasticity. Recently polycaprolactone (PCL) has been introduced. This is biocompatible, reusable and cost-effective material. In this paper we will compare the accuracy of the impression made with green stick compound and polycaprolactone.

A SURVEY ON MUSCULOSKELETAL DISORDER AMONG DENTIST IN KODAGU

Author : Spoorthy.J

Guide : Dr Sona G Therathil

Institution : Coorg Institute of Dental Sciences



Introduction: Occupational health hazards are common in many sectors and are on the increase. Dentistry, particularly is a high-risk profession for the development of MSDs as it is characterized by high visual demands which result in the adaptation of fixed postures. Excessive and incorrect standing or sitting positions causes excessive tightening and straining of some tissues, generating high muscle tensions which cause painful disorders of the musculoskeletal system and the peripheral nervous system. Such Incorrect posture can cause pain in the neck, back, shoulder, elbows, etc.

Aim and Objectives: The aim of the study is to evaluate the prevalence of musculoskeletal disorders among dentists

Methodology: This is a descriptive cross-sectional survey conducted among undergraduates and post-graduate students of a private dental institute. A close-ended questionnaire consisting of 16 questions is prepared in English consisting of demographic details and questions related to signs and symptoms of musculoskeletal disorders. This study will evaluate association between the demographic variables and the prevalence of various musculoskeletal disorders found among dental students.

The data will be entered in Microsoft excel 365 statistical analysis will be done using SPSS 25. Descriptive statistics will be calculated using mean standard deviation and frequencies inferential statistics will be performed using Chi-square test and appropriate parametric or nonparametric tests

Implications: The study is conducted to evaluate the prevalence of musculoskeletal disorders among dentists. It also investigates the associations between demographic variables and musculoskeletal disorders. This data will provide important insight into the occupational hazards related to dental practice and the need to prevent them.

HEPATITIS B ANTIBODY LEVELS AMONG HEALTH CARE WORKERS AT COORG INSTITUTE OF DENTAL SCIENCES



Author : Parnika Misra
Guide : Dr. Vanitha J
Institution : Coorg Institute of Dental Sciences

Introduction: Hepatitis B is a potentially life-threatening liver infection caused by the hepatitis B virus (HBV). It is a major global health problem. A safe and effective vaccine that offers 98% to 100% protection against hepatitis B is available.

The lack of awareness about the importance and dangers of hepatitis B often stems from dental schools.

Several blood tests are available to diagnose and monitor people with hepatitis B. They can be used to distinguish acute and chronic infections.

Aim: The goal of this study was to Assess the presence of antibodies against the hepatitis B antigen in the blood samples to health care professionals at Coorg Institute of Dental Sciences.

Materials and method: Blood samples were collected from 300 health care professionals at Coorg Institute of Dental Sciences. ELISA mode of antibody titre testing was then performed and the results sent in for statistic reports.

Key words: Hepatitis B, ELISA, antigen-antibody reactions, colorimetric analysis

POTENTIAL HEALTH BENEFITS FROM THE HUSK OF COCOAPOD



Author : Shreya S C
Guide : Dr. Shanthala and Dr. Malvika
Institution : Coorg Institute of Dental Sciences

Background: Cocoa pod husk is the main by product from the cocoa industry which has an abundant compounds like phytochemicals and antioxidants. It also has an anti-microbial activity and nutritive value like dietary fibers and proteins.

Aim: To determine the anti-microbial activity of cocoa pod husk extract against Streptococcus mutans

Methodology: Collection of cocoa berry from the cocoa plant was done. The cocoa pod husk was separated from the berry. The pod husk was air dried. The dried cocoa pod husk was blended into powder using electric blender.

Conclusion: The cocoa pod husk showed significant antimicrobial activity against Streptococcus mutans

EVALUATION OF KNOWLEDGE, ATTITUDE AND PRACTICE OF DENTISTS REGARDING CHILD ABUSE IN KODAGU

Author : Harshakeerthi D
Guide : DrSona G Therathil
Institution : Coorg Institute of Dental Sciences



Introduction - Child abuse have become a international phenomenon that have to be dealt with .There are many children around the world who undergo abuse every day. World wide analysis says that dentist report of about 60% of these cases, while General Doctors report only about 6% cases. This shows the special responsibility of we Dentists in this scenario. There are many children who undergo abuse every day. Since almost half of the cases affect the Head and neck region, dentist have an important role in diagnosing and reporting the same.

Aim -To investigate the knowledge attitude and practice of dentists in detecting and reporting child abuse and neglect.

Methodology - A structured close end questionnaire consisting of 15 questions regarding child abuse and neglect were administered to Dental students of a private dental institution through Google form. Data was entered in Microsoft excel 365 and analysis was done in SPSS version 25.0

Result - 40 response were obtained out of which 21.5% were male and 78.5%were female .Significant differences was seen regarding the knowledge and attitude regarding child abuse and neglect.

Conclusion - Among the dental student there was a lack of knowledge regarding the same . Since this is worldwide problem we need to address it at the very early stage, so detecting it very important. And the knowledge regarding this should be provided in the institutional level itself.

INTERNET USAGE AND ITS EFFECT ON GROWING CHILDREN

Author : Deepak Das M and Dona T Jose
Guide : Dr.Zareena MA
Institution : Coorg Institute of Dental Sciences



The Internet is not only a source of information but a medium that connects almost every aspect of our life. Internet is widely used by children and adolescents. Advancement of internet technologies, sophisticated mobiles, video game consoles, personal computers for gaming at affordable prices has increased internet usage in children and adolescents. Along with advantages associated with access to information and fast communication there is also a negative side for this. Excessive screen time is associated with poor sleep and risk factors for cardiovascular diseases such as high blood pressure, obesity, low HDL cholesterol, poor stress regulation, insulin resistance and impaired vision. During the lockdown, in children and adolescents, periods without school are associated with decreased physical activity, more screen time, irregular sleep patterns and less appropriate diets. This also have a negative impact on them.

Aim: The paper presentation aims to assess behavioural changes in different age group and parental concern in total screen by recording internet usage practices of the children.

Method: A pilot study of a questionnaire survey was conducted in children reporting to the OPD during the study period by using a stratified sampling method. A questionnaire was given to children's parent/caretaker and a face-to-face interview was conducted.

Results: No significant changes in internet usage and associated behavioural changes were observed.

Conclusion: Internet usage alone would not affect the behaviour of children. Although it could be one of the contributing factors.

INTERPERSONAL COMPARATIVE ANALYSIS OF ORAL EPITHELIAL DYSPLASIA WHO 2022 AND IT'S OUTCOMES ON GRADING ORAL EPITHELIAL DYSPLASIA: A HISTOLOGICAL ANALYSIS

Author : Asfiya Hasnath Bano and Divya A
Guide : Dr. Aklesha and Dr. Shashidara R
Institution : Coorg Institute of Dental Sciences



Oral epithelial dysplasia is a spectrum of architectural and cytological epithelial changes caused by genetic and environmental changes and it's associated with an increased risk of progression to oral squamous cell carcinoma. The diagnosis of OED holds immense clinical and histopathological importance. Even though many changes have been brought about in assessing the microscopic findings of OED, the grading till now remains highly subjective. In March 2022, WHO has reclassified OED and has added few features in cytological and architectural changes such as inclusion of apoptotic mitosis, single cell keratinization in cytological features and inclusion of verruca-papillary architecture, extension of changes along minor gland or ducts, multiple different patterns of dysplasia, multifocal or skip lesions to name a few. The constant alterations are made in order to make the grading system of OED more objective and to minimize interpersonal grading variation. Our study aims to assess the interpersonal analysis of features of OED according to WHO 2022 criteria and also to analyse the outcomes on the overall grading of oral epithelial dysplasia.

Materials and methods: Total sample size: 30 previously assessed cases of OED according to WHO 2017

Methodology: Blinded assessment of 30 OED cases according to WHO 2022 criteria

Assessment: interpersonal variation of OED and outcome on grading of OED

Data tabulation: Data tabulation were done using Microsoft Excel

Statistical analysis: Using IBM SPSS software version 23

AWARENESS, KNOWLEDGE AND PREDICTION OF OBSTRUCTIVE SLEEP APNEA AMONG PATIENTS VISITING THE DENTAL HOSPITAL—A CROSS SECTIONAL STUDY

Author : Megha K B
Guide : Dr. Kavitha. A.P
Institution : Coorg Institute of Dental Sciences



Obstructive Sleep Apnea is a common medical condition that occurs in approximately 5% to 15% of the population. It is associated with daytime sleeplessness, lack of concentration and fatigue, likely due to fragmented sleep. Most of the people attribute tiredness as the cause of their snoring.

There is substantial scientific evidence that patients with obstructive sleep apnea have an increased risk of hypertension and there is increased incidence of multisystem disorders. Recent studies have shown that OSA may be implicated in coronary heart disease, transient ischemic attack, stroke, cardiac arrhythmias and heart failure.

OSA remains largely undiagnosed mainly due to lack of awareness among general population. This study is planned to assess the awareness and knowledge of OSA and prediction of OSA among patients visiting the dental hospital.

COMPARATIVE STUDY OF LIP PRINTS AND TOE PRINTS FOR PERSONAL IDENTIFICATION – A FORENSIC ANALYSIS

Author : Anna Lorraine and Varshitha KS
Guide : Dr. Aklesha Behera
Institution : Coorg Institute of Dental Sciences



Cheiloscopy is derived from Greek word “Cheilos which” meaning lips. It is the study of characteristics patterns of elevations and depressions on the labial mucosa. The patterns are unique for every individual like fingerprints and thus can be used to determine personal identification. Toe prints contain ridge patterns similar to fingerprints which are unique to an individual and thus can be a potential marker for personal identification. The aim of the study is to correlate the impressions of lips with that of right toe prints to achieve a probable forensic personal identification.

Materials and methods: Total sample size: 15 females, 15 males (30 in total)

Methodology: Cheiloscopy was performed using lipstick and tape method. Toe prints were procured using ink pad. Right big toe prints were only taken.

Assessment: Overlapping patterns of lip and toe prints were assessed and scoring shall be made.

Data tabulation: Data tabulation were done using Microsoft Excel.

Statistical analysis: Using IBM SPSS Software Version 23

LOST AND FOUND – AN ATTEMPT AT FACIAL RECONSTRUCTION

Author : N Pratheeksha Kalappa
Guide : Dr. Shashidara R
Institution : Coorg Institute of Dental Sciences



Introduction: Identification of a person based on skeletal remains is a frequently applied method in mass disasters, accidents and criminal investigations where human remains are charred, skeletonized or decomposed. In such situations there can be mishandling of the remains or there can be post mortem orofacial structures. Reconstruction of the lost facial and related structures can be useful in such cases not just for identification but can also have anthropological significance.

Aim: To reconstruct lost facial features with the information gained from the remaining structures using artificial intelligence and machine learning. This will allow us to have recreated model with all features present to make a final facial identification.

Materials and methods: Badly destroyed skulls were scanned using CBCT and lateral cephalograms. After this Artificial Intelligence (google mediapipe) was used to reconstruct lost facial structures. Also the remaining structures like the teeth, the tooth sockets, root fragments were helpful in the course of this study.

Discussion: The fact remains that the scale of the catastrophe, the time taken to recover the remains and other environmental factors play a role in the quality of the recovered remains.

With a firm understanding of these and training of the AI software may allow us to have recreated model with all features present to make a final facial identification or extrapolate on inferences regarding the lifestyle of the individual in cases of anthropological significance.

HIDE AND SEEK – AN ATTEMPT TO IDENTIFY LATENT BITE MARKS USING DIFFERENT WAVELENGTHS OF LIGHT

Author : Pratheeksha N Kalappa
Guide : Dr Shashidara R
Institution : Coorg Institute of Dental Sciences



Introduction: In recent years the number of suspected bite mark cases examined by forensic odontologists is increasing. Human bite mark analysis is the most demanding and complicated part of forensic dentistry. For proper identification and analysis of bite marks it is important to consider all factors affecting it over a period of time and also to visualize it well.

Materials and Methods: The sample consisted of students of a dental institution who were willing to take part in this study. Institutional review board clearance was acquired and all aspects of the study were explained in detail to all the participants. They were made to create a self-inflicted bite mark on the skin of their forearm. The bite mark was photographed at 0 hr and also after it disappeared visually using three different lights of varied wavelengths. The acquired marks were traced using digital software and the ease of the same was analyzed.

Discussion: Although bite mark evidence has been used across the globe in many criminal prosecutions, there are questions being raised about the accuracy or reliability of bite mark as evidence. This is not really true.. If we consider all the factors that could affect bite mark analysis including proper visualization of bite marks there will be a lower chance of mismatches and wrongful convictions. Being better informed will increase the credibility of bite marks as evidence.

ALIGNERS-THE CHOICE OF NEW GENERATION

Author : Padavi Lokesh
Guide : Dr Goutham Reddy
Institution : Coorg Institute of Dental Sciences



The questionnaire based survey of dental students on aligner treatment.

Aim: The present survey is conducted to evaluate the awareness about orthodontic aligners and perception about the treatment modalities that can be performed with them among the dental students.

Subject and method: This is a web based survey and a questionnaire consisting of 19 questions which is sent among dental students through Google forms.

Conclusion: Survey concludes that most dental students have knowledge regarding aligners, purpose of aligners, treatment possible with aligners, better maintenance using aligners etc

EVALUATION OF EFFICACY OF VARIOUS TREATMENT MODALITIES FOR TMD's- A HOSPITALBASED RETROSPECTIVE STUDY

Author : Ashira M and Navya Aravind Nambiar

Guide : Dr. Kavitha. A.P

Institution : Coorg Institute of Dental Sciences



Background: Temporomandibular joint is a biarthrodial joint formed by the condylar process of the mandible that articulates with the glenoid fossa of the temporal bone. Temporomandibular disorders (TMD's) is one of the most common cause of chronic musculoskeletal pain. TMD's include disorders of the masticatory muscles, the TMJ and the associated structures. The symptoms may range from dull continuous pain to significant agonizing pain that affects quality of life. The symptoms tend to be intermittent, fluctuate over time and are often self-limiting. Myofascial pain is the most common TMD and may present with or without difficulty in mouth opening. Treatment goals for TMD's are to control pain and to restore mandibular motion. Treatment modalities include education, self-care measures, physical therapy, habit reversal, intra-oral appliance like occlusal splints, pharmacotherapy, Transcutaneous electrical nerve stimulation, ultrasound, low level laser therapy. No single treatment modality has proven to be superior due to its multifactorial etiology that produces varied results, hence a combined treatment approach produces a better outcome.

Aims and Objectives: To evaluate the efficacy of various treatment modalities for temporomandibular disorder.

Materials and Methods: 35 patients who were diagnosed with TMD's and have undergone treatment for the same are included in the study. The sites involved and the nature of treatment delivered along with the VAS scores will be recorded before and after the treatment. The Data obtained will be tabulated and will be subjected to statistical analysis.

EFFECTIVENESS OF INDIAN CLASSICAL DANCE AS A HEALTH EDUCATION TOOL

Author : Liana Sibi and Aiswarya
Guide : Dr.Sona
Institution : Coorg Institute of Dental Sciences



Introduction: Indian classical dance uses the body as a medium of communication. Using the vehicles of hastas, mudras and expressions, the dance provides an excellent medium of nonverbal communication overcoming the limitations of verbal communication especially in a linguistically diverse country like India. The present study attempts to use Indian classical dance to communicate health message.

Aim: The aim of the study is to check the effectiveness of delivering tobacco and alcohol related health education through the medium of Indian Classical Dance

Methodology: A dance video conveying message on tobacco and alcohol usage and its ill effects was prepared using three Indian Classical Dances (Bharathanatyam, Mohiniyattam and Oddissi). A conventional health talk video on tobacco usage and its ill effects was also prepared. A questionnaire consisting of twenty close ended questions and one open ended question was administered to the patients who come to the dental college for treatment.

Result: The dance video was found to be more interesting to the subjects than the health talk video, whereas the subjects felt that the health talk provided more information.

ASSESSMENT OF USEFULNESS OF CHEILOSCOPY AS AN AID FOR PERSONAL IDENTIFICATION

Author : Harshit Jain
Institution : MR Ambedkar Dental College and Hospital

The study focuses on the assessment of the usefulness of cheiloscopy in personal identification and gender determination in forensic dentistry. Traditionally, identification was based on features such as dactylography and DNA fingerprinting, but lip prints offer a unique and individual characteristic similar to fingerprints and palatal rugae. Previous articles highlight the permanent and unchangeable nature of lip grooves and their recovery after undergoing alterations like minor trauma or disease. The research includes an overview of the history of forensic identification, the unique features of lip prints, and the prevalence of different patterns in different populations. The research was conducted on a sample of 100 individuals from south India, and their lip prints were recorded using dark-coloured non-glossy lipstick and lip liner. The study aims to assess the usefulness of cheiloscopy as an aid for gender determination and personal identification. It concludes that cheiloscopy techniques can be valuable in forensic sciences as they are equal in value to other methods of forensic identification.

EVALUATION OF RIDGE DIMENSIONAL CHANGES OF THE SOCKET AFTER EXTRACTION WITH AND WITHOUT COMPRESSION

Author : Nity Priya

Institution : Mithila Minority Dental College and Hospital



Introduction: Extracting teeth with minimal injury to the surrounding alveolar bone is needed to prevent harmful effects including cellular osteitis, loss of crest size, etc. Today, more emphasis is placed on technology that maintains ridge size, particularly at sites where tooth replacement is planned with dental implants. One such method that has a solid rationale but lacks evidence to support it is compressing the socket after extraction. Here we compare the alveolar ridges that are squeezed after extraction compared to those uncompressed and evaluate the ridge width and height as they are the main outcome measures. And also determine if post-extraction socket compression negatively affected residual ridge dimensions when compared to sites that were not compressed post-extraction. And assess the rate of closure or soft tissue occurrence of adverse events.

Methodology: A single-masked randomized design is used in this pilot study. Informed consent will be obtained from each subject prior to the study, including consent to share their health data. Subjects who met the eligibility requirements for inclusion in the study will then be randomly assigned into two groups either the socket compression group or no compression group. Randomization of subject. Measurement and evaluation pattern Done by 1. Using a digital OPG X-ray, measure the width and height of the ridge. 2. Using callipers, measure the ridge's width. 3. Wound opening using periodontal probes calibrated to North Carolina #15 standards.

Results: Study is still ongoing.

CHANGE IN VITAL SIGNS OF ELDERLY PATIENT DUE TO PRELIMINARY DENTAL IMPRESSION PROCEDURE

Author : PN Pranav Reddy

Guide : Dr Poonam Khinnavar

Institution : Bapuji Dental College and Hospital, Davanagere



Accurate impressions are crucial to ensure sufficient support, retention, and stability for complete dentures. Despite the increased use of intraoral digital impressions (scans) in the field of prosthetic dentistry, conventional impression techniques are still more reliable to obtain master casts of edentulous arches. Conventional impression procedures have been recommended to be executed in two stages as preliminary and definitive impressions. While irreversible hydrocolloids and stock trays are generally used in the preliminary impressions, poly (vinyl siloxane), polyether, polysulfide rubber, and zinc oxide-eugenol impression paste have been used with individual trays for definitive impressions. However, a noninvasive procedure such as impressions might also be stress inducing as a part of a dental treatment. Moreover, during impression procedures, inserting a standard impression tray loaded with a non negligible amount of impression material into the mouth might temporarily decrease the volume of the oral cavity, leading to a partial obstruction of the oropharyngeal aperture, and causing disturbance by provoking the gag reflex. It may affect medical conditions of patients with serious systemic disorders such as malignant hypertension, cardiovascular diseases, and chronic obstructive lung disease. Moreover, 25% of all ischemic cardiovascular disorders could develop without any signs. Therefore, this paper presentation depicts the effect of preliminary impression procedures on arterial oxygen saturations (AOSs) with pulse rates (PRs) of edentulous patients.

PATIENT'S ATTITUDE TOWARDS RUBBER DAM

Author : Sparsha C Gowda and Spoorthy J

Guide : Dr.Nanjamma

Institution : Coorg Institute of Dental Sciences



Aim: Patients' safety and convenience of working in dry operating field is the pre-requisite of any dental procedures. Rubber dam isolation has always proven clinically to be the best till date. The reasons for not usage of rubber dam are placement difficulty, time consumption, patient's rejection, lack or insufficient training. Hence this study records patients' opinion and preference regarding their experience of rubber dam use during their next visit.

Materials and methods: A questionnaire study containing 10 questions which was then circulated among 121 patients who consented to participate in this study. The patients answered the questionnaire during their second appointment.

Results: Almost 84% patients preferred its use and considered it was being placed for their benefit. More male patients preferred its use (84.3%) compared to female patients(81.1%).A significant difference ($p=0.000$) is seen patients' preference in 21-30 years category and mean time taken among the procedures showed significant difference($p=0.027$) with maximum time taken for Root canal procedure of 7.72 minutes.

Conclusion: Patients are generally not aversive towards rubber dam. Hence frequent use for all the procedures increases the acceptance of rubber dam.

EVALUATION OF KNOWLEDGE, ATTITUDE AND PRACTICES TOWARD MATERNAL AND INFANT ORAL HEALTH AMONG PREGNANT WOMEN IN KODAGU DISTRICT

Author : Mariya M Jos
Guide : Dr. Sona G Therathil
Institution : Coorg Institute of Dental Sciences



The mouth is an obvious portal of entry to the body, and oral health reflects and influences general health and well being. Maternal oral health is known to have a significant impact on her as well as her child's oral health. The normal physiological changes during pregnancy make it a period of vulnerability in terms of oral health. Knowledge and attitude towards oral health among pregnant women can thus be a strong predictor of not only her own oral health but also her future child's oral health. Oral health promotion should include education of women and their health care providers on ways to prevent oral disease from occurring, and referral for dental services when disease is present.

Objectives: 1. To determine the knowledge of pregnant females on maternal and infant oral health.
2. To evaluate the attitude of pregnant females towards maternal and infant oral hygiene.
3. To assess the practices of pregnant females regarding maternal and infant oral health.

Methodology: A cross-sectional questionnaire-based survey was conducted among 47 expectant mothers in Kodagu district. The study participants were selected from a government hospital OPD during a period of 1 month. In advance of the study, participants were briefed and their consent obtained voluntarily. The questionnaire was prepared in English and in local language (Kannada).

The questionnaire has three parts. The first part contains questions on the demographic background of the expectant mothers which include the age, educational qualification and trimester. The second part contains questions on oral health and hygiene during pregnancy, and the third part focuses on infant oral health.

The study evaluates the effects and relationships between demographic factors such as age, educational qualifications, and trimester on the knowledge, attitude and practices of expectant mothers toward infant oral health and their own oral hygiene practices.

The data was entered in Microsoft Excel 365. Statistical analysis was done using SPSS 25. Descriptive statistics was calculated using mean, standard deviation and frequencies. Inferential statistics was performed using Chi-square test and appropriate parametric or nonparametric tests.

Results and Implications: This study was conducted to evaluate the knowledge, attitude and practices toward maternal and infant oral hygiene among pregnant women in Kodagu district. The important gaps in oral health knowledge and practices has come to light. The data obtained provide insight into how to improve women's oral and general health, pregnancy outcomes, and their children's dental health.

CAN YOUR PATIENTS UNDERSTAND YOU? KNOWLEDGE, ATTITUDE AND PRACTICE OF DENTAL UNDERGRADUATE STUDENTS IN JARGON USAGE IN THEIR REGULAR PRACTICE-CROSS SECTIONAL STUDY

Author : Sushmitha A N

Guide : Dr Denzy Lawrence

Institution : Bapuji Dental College and Hospital, Davanagere



Background: Jargon is widely used in the health-care field, particularly in medical/dental records. Although the use of standard medical jargon can be seen as professional, efficient shorthand, a lack of awareness regarding the standard medical abbreviations and incessant and overzealous use of slang among the healthcare professionals can act as a barrier to effective communication and understanding among patients and peers.

Aim: The aim of the study was to assess knowledge, attitude, and practice of dental undergraduate students in jargon usage in their regular practice in Davanagere City.

Materials and Methods: A cross-sectional questionnaire-based survey consisting of 14 questions was carried out among dental undergraduate students of both dental colleges in Davanagere City. Both descriptive and inferential statistics (Chi-square test and Pearson correlation) were computed.

Results: The majority of respondents used jargon while taking a case history. Nearly 86.2% of dental final year, 56.9% of dental interns, used jargons when there was a lack of time ($P = 0.002$). 41.1% of BDS final year, 63.1% of BDS interns were aware of standard abbreviations ($P = 0.001$). Nearly 78.5% of dental final year, 83.1% of dental interns felt that the use of abbreviations should be permitted in case history taking ($P = 0.027$).

Conclusion: The study showed the widespread use of jargon in case history taking among respondents. Although the majority of respondents were comfortable with jargon usage, there is a lack of knowledge regarding standard abbreviations.

EVALUATING THE SCHOOL TOBACCO POLICY AMONG TEACHERS IN KARNATAKA

Author : Ananya KY
Guide : Dr. Sona G Therathil
Institution : Coorg Institute of Dental Sciences



Introduction: Tobacco use is so addictive among youth and is one of the global epidemic which requires constant monitoring. Tobacco use accounts for eight to nine lakh adult death annually in India. India enacted a national legislation “Cigarettes and other tobacco products act” in 2003 (COTPA) to protect health of non smokers and reduce tobacco consumption.

Aims and Objectives: To evaluate the school tobacco policy among the teachers of different schools in Karnataka.

Methods and Methodology: A 9 question based questionnaires were given to the teachers of different schools and the response was taken.

The Data was collected, coded and fed in SPSS software for statistical analysis.

Results: The results showed that 35.1% of participants were from rural school and 64.9% were from urban school. Among govt and private school 29.7% were from govt and 70.3% were from private school. 100% participants showed that there was action taken if tobacco consumption was found in school.

Conclusion: The involvement of school teachers can be an important part of intervention to improve anti-tobacco campaigns on campus. The study calls for the implementation of projects or activities to improve anti-tobacco policy awareness in the school environment as part of school tobacco control strategy among teachers for a tobacco free generation.

Keywords: Anti-tobacco legislation, school policy, COTPA.

EVALUATION OF EFFICACY OF THREE MOUTHWASHES IN THE REDUCTION OF AEROSOL CROSS-CONTAMINATION DURING DENTAL PROCEDURES

Author : Gayathri S Chandran and Ashira . M

Guide : Dr. SalinNanjappa

Institution : Coorg Institute of Dental Sciences



Microorganisms are small essential living creatures which are invisible to naked eye. They are present everywhere and affect each and every aspect of human life. The human oral cavity has the second largest and diverse microbiota harbouring over 700 species of bacteria and other numerous microorganisms such as viruses, fungi and protozoa. The human oral cavity contains microorganisms which are beneficial and harmful such as *Streptococcus mutans*, *Lactobacillus* species and *Actinomyces* species and so on. In dentistry, aerosols are chiefly generated by high-speed instruments working in mouth and such procedures are called aerosol generating procedures. The spread of infection through aerosols and splatters has been considered as one of the main concerns in dental practice especially during Covid 19 pandemic. Nowadays mouthwashes are widely used as adjuvants to oral hygiene. Many studies have shown that pre-procedural mouth rinsing for 30 seconds to 2 minutes with antiseptic mouthwashes can effectively reduce aerosol contamination during aerosol generating procedures.

Chlorhexidine is one of the most commonly prescribed antiseptic agent in dentistry. It has significantly contributed in reducing the viable microbial content of aerosol when used as a pre-procedural rinse. The use of betadine as pre-procedural mouthwash has also contributed in reducing the number of viral particles and bacteria in aerosols, potentially decreasing the risk of cross infection during Covid 19 procedures. The use of herbal products is on the rise in the oral care market due to their added advantages. Some studies have shown that pre-procedural rinsing with herbal mouthwashes such as aloe vera and lemon mouthwashes with antiseptic, anti-oxidative and anti-inflammatory properties are equally effective in reducing the viable microbial content. Herbal products are proven to be safe alternatives to conventional modes of treatment with minimal or no side effects. So, dentists play a vital role in maintenance of oral hygiene and also in prescribing the best mouthwash to the patients.

The aim of our study is to check the efficacy of various mouth rinses in reducing aerosol cross-contamination when using dental devices in a dental set up.

ESTIMATION OF PATTERN OF KERATINISATION OF OKC AND OOC USING AYOUB SHKLAR STAIN

Author : Diya and Neha
Guide : Dr. Akilesha and Dr. Vanitha
Institution : Coorg Institute of Dental Sciences



Introduction: The Odontogenic cyst constitutes a major component in head and neck pathology. Developmental odontogenic cysts are derived from the epithelium of developing dental compartments. In regular dental practice odontogenic cysts of inflammatory origin are encountered more often but few developmental odontogenic cysts such as odontogenic keratocyst and orthokeratinised odontogenic cyst are easy to diagnose are often difficult to manage pertaining to their aggressive behaviour. OKC although classified as a cyst shows features of aggressive growth pattern like any tumor and has a propensity to reoccur. On the other hand, OOC shows which isn't that aggressive shows higher percentage for malignant transformation.

Histopathologically, both are keratotic lesions but OKC shows corrugated para keratin layers and OOC shows extensive amounts of orthokeratinization.

Aim: The aim of our study is to access the pattern of keratinization with AyoubShklar stain a modified mallary stain uses acid fuchsin, aniline blue and Orange G to stain keratin along with association of staining pattern with that of size and duration of lesion.

Material and methods: 10 OKC and 3 OOC histopathologically confirmed cases were pursued from the achievers of the department of oral pathology and microbiology CIDS

We made a section of 3.5mm and stained by AyoubShklar stain

Presence or absence of keratin staining intensity characteristics of keratin and pattern of keratinization were assessed and scored.

Statistical analysis: The data assessed were tabulated using Microsoft Excel

Statistical analysis was performed using IBM SPSS version 23

FREE PAPERS

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ROLE OF STEM CELLS IN TOOTH REPAIR AND REGENERATIONS

Author : Likitha J. Sosale
Guide : Dr. Shnaprasad S
Institution : Bapuji Dental College and Hospital



A cell that can divide to give rise to both a new copy of itself and at least one specialized, differentiated, cell type is a stem cell. Human teeth and their supporting structures are prone to physical, chemical and microbial alterations leading to loss of tissues which cannot be completely regenerated on its own. Conventional restorative and Periodontal dentistry replaces lost tissue but does not focus on regeneration and maintaining the tooth and its vitality.

As tooth exhibit limited repair in response to damage, the dental pulp stem cells probably provide a source of cells to replace those damaged and to facilitate repair. Stem cells isolated from different parts of the tooth, such as the pulp of both exfoliated (children's) and adult teeth, periodontal ligament, dental follicle that surrounds the unerupted tooth and growing roots, play more dynamic roles in tooth function and development. Dental stem cells can be obtained with ease, making the man attractive source of autologous stem cells for use in restoring vital pulp tissue removed because of infection, in regeneration of periodontal ligament lost in periodontal disease, and for generation of complete or partial tooth structures to font biological implants.

ARTIFICIAL INTELLIGENCE IN DENTISTRY

Author : Nawar Jabeen PTP
Guide : Dr. Hemalatha and Dr. Subair K
Institution : Mahe Institute of Dental Sciences and Hospital



Background: Artificial intelligence is a relatively newer technology in the field of medical world. This science uses the machine – learning algorithm and computer software to aid in the diagnostics in medical and dental fields. It is a huge talking point in the field of technology which is spreading it's wings in all possible sectors at a great speed.

Content: In dentistry, artificial intelligence is creating a revolution in all sections from collection of data, creating algorithms for orthodontic procedures, diagnostic records in the aspect of radiographic data, three dimensional scans and cone beam computed tomography, CAD CAM systems for restorative and prosthetic purposes. Similarly, continuous research is being done in the field of AI's application in dentistry. This paper provides an insight into applications of AI in different fields of dentistry.

Conclusion: Given the success of AI, it has been proved that AI can learn beyond human expertise. New technologies are developed rapidly in dental field. Dental practitioners can identify AI as a supplemental tool to reduce workload and improve precision and accuracy diagnosis, decision-making, treatment planning, prediction of treatment outcomes, and disease prognosis.

Keywords: Artificial intelligence, Dentistry, AI

VARIATIONS IN FACIAL ARTERY

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Guide : Dr. Vidya
Institution : Coorg Institute of Dental Sciences



This is a literature review documentary variation in facial artery. Then PUBMED database was searched with keywords facial artery. Facial artery is the main artery of the Muscles and skin of the face the facial artery is a branch of external carotid artery and arises at the level of the greater cornus of the hyoid bone superior to the Lingual artery. The parameter of origin, branching patterns termination and variations were analysed and compared with sex and Laterality. The branching pattern of facial artery was classified into six types, with subtypes for types 1 and 2 subtypes 1.A.

The typical branches of the facial artery in the facial region, besides the muscular branches, are the inferior and the superior branch, the nasal septal branch, the lateral nasal branch, and the angular artery as the terminal branch. Preparative knowledge on the individual anatomically variations in facial artery patterns may did maxillofacial surgeons in reconstructive planning to effectively manage facial injuries arterial involvement, dermatologists in aesthetic procedures and radiological anatomy professionals in the field of malignancies for the treatment of various facial tumors by embolism. In formation on variations in the facial artery may also contribute to damage risk mitigation during cosmetic procedures such as neurotoxin or filler injections.

CAD/CAM IN PROSTHODONTICS

Author : Jilna AC and Navjyod TP
Guide : Dr Ashika and Dr Bhavana
Institution : Coorg Institute of Dental Sciences



Advances in computer-aided design (CAD)/ computer-aided manufacturing (CAM) technologies and their ease of application enabled the development of novel treatment concepts for modern prosthodontics. This recent paradigm shift in fixed prosthodontics from traditional to minimally invasive treatment approaches is evidenced by the clinical long term success of bonded CAD/CAM glass-ceramic restorations and complete dentures. Today, defect oriented restorations, such as inlays onlays, and posterior crowns are fabricated from glass-ceramics in monolithic application. The variety of CAD/CAM ceramic restorative systems is constantly evolving to meet the increased demands for highly aesthetic, biocompatible, and long-lasting restorations. 3D printing of the trial pattern for the prosthesis help minimizes the labor /skill intensive part of facial prosthesis fabrication. This poster depicts the various applications of CAD/CAM in prosthodontic.

Keywords: aesthetics dental; ceramics; clinical outcomes; computer-aided design; minimally invasive dentistry.

VIRTUAL ARTICULATOR

Author : Sangeetha M
Guide : Dr.Ashika
Institution : Coorg Institute of Dental Sciences



Virtual reality is a computer based technology linked with the future of dentistry and dental practice. The virtual articulator is one such application in prosthetic and restorative dentistry based on virtual reality that will significantly reduce the limitations of the mechanical articulator, and by simulation of real patient data, allow analyses with regard to static and dynamic occlusion as well as to jaw relation. It is the purpose of this article to present the concepts and strategies for a future replacement of the mechanical articulator by a virtual one. Also, a brief note on virtual reality haptic system has been highlighted along with newly developed touch enabled virtual articulator.

VARIATIONS IN FACIAL NERVE

Author : Susanna Parakkattu and Merin C Baiju
Guide : Dr.Vidya
Institution : Coorg Institute of Dental Sciences



This literature review aims for documenting the variations in facial nerve. The PUBMED and MEDLINE databases were searched from November 2019 to January 2022 with the keywords "Facial nerve anatomy", "Variation of facial nerve" "branches of facial nerve" Facial nerve is the 7th cranial nerve. It is called the queen of the face. The branching of facial nerve was described by Davis et al in 1956. The anatomic variation of the facial nerve is very important in the field of maxillofacial surgery due to its complex course on the face. One of the major issues faced by a maxillofacial surgeon is facial nerve paralysis. Awareness about differences in the anatomy of the facial nerve is useful in assisting the surgeon to preserve facial nerve during parotidectomy. Identification of the branching pattern during surgery reduces the risk for iatrogenic facial nerve injury. This study concludes the various branching pattern of facial nerve which will aid in better treatment and prognosis of the patients

“AI IN DENTISTRY- USING A DIGITAL PLATFORM TO CONSULT REDUCES IN PROCURING PREVENTIVE CARE GEAR-A REVIEW”

Author : Ritcha Mendalin and Rishikesh E P
Guide : Dr. Rashmi and Dr. Radhika
Institution : Coorg Institute of Dental Sciences



Artificial intelligence is a relatively newer technology in the field of medical world. This science uses the machine – learning algorithm and computer software to aid in the diagnostics in medical and dental fields. It is a huge talking point in the field of technology which is spreading it's wings in all possible sectors at a great speed. Observing the shortcomings during the pandemic, tele dentistry using artificial intelligence as the helping tool is introduced for mass oral health. Advantages include reduction of screening time, reduce the exposure to viruses, instant care anytime and anywhere.

A software (A.I MODEL) detected oral health conditions like caries, stains, calculus, gingival recession, gingivitis, oral mucosa changes (inflammation, pigmentation, and ulcers). Artificial intelligence can certainly be tool in making significant progress in delivering better health care to the patient but in no way can replace human knowledge, skills and power of judgement.

STEM CELLS IN PROSTHODONTICS AND DENTISTRY

Author : Malavika T M
Guide : Dr. Ashika
Institution : Coorg Institute of Dental Sciences



What are stem cells?

- * Stem cells are the body's raw materials – cells from which all other cells with specialized functions are generated.
- * The stem cells have been successfully isolated from a variety of human and animal tissues, including dental pulp.
- * The neuronal cells can be used for dental therapies and can provide better treatment options for patients. The stem cells based therapies could help in new advances in treating damaged teeth, including bone regeneration and treating neural injury as well.

Clinical application of stem cells

- * In dentistry, it could help in regeneration of vital structure like bone, cementum and PDL fibres and dental pulp.
- * Recent advances in the field of biomaterials have led to a transition from non-porous biologically inert materials to more porous, osteoconductive materials.
- * Adult mesenchymal stem cells have been used for tissue engineering of mandibular condyle.
- * Bio-engineered teeth can be derived from cultured tooth bud cells. The developed bio-engineered tooth had a well-defined pulp chamber, odontoblasts, pre-dentin, and dentin.

Challenges

- * Vast unequal resources, uneven opportunities are the major hurdles in achieving substantial success in the field of genetics.
- * According to the WHO “Genetic services for the prevention, diagnosis and treatment of disease should be available to all, regardless of the cost factor and should be provided first to those whose needs are the greatest.
- * This paper presentation provides an overview of the usage of stem cells in Prosthodontics and Dentistry (Tissue Engineering).

ADVENT OF NANOTECHNOLOGY IN PAIN PERCEPTION

Author : Archana and Gayathri
Guide : Dr.Vidya
Institution : Coorg Institute of Dental Sciences



This literature review aims for various nanotechnologies available in the field of oral and maxillofacial surgery for pain control. The PUBMED and MEDLINE databases were searched from January 2015 to January 2022 with the keywords “Nanotechnology”, “transdermal patches”, “pain perception” and “computer controlled anaesthesia”.

Nanotechnology is the direct manipulation of materials at a nano scale that has revolutionized the field of diagnostic imaging, medicine and oral surgery. Local anesthetic injection is one of the most anxiety-procedure for both children and adult patient, with the advent of nanotechnology we have computer controlled local anesthetic delivery system (CCLAD) that has led to decrease in patient anxiety. Nanotechnology has also led to the invention of nanorobots that could be used by the surgeon to even bring about accurate changes in cellular and molecular level. Post extraction pain has often been a nemesis for dental surgeons, with clinicians perpetually striving for an analgesic modality that would provide profound analgesia and would be best tolerated by the patient. With the advent of Transdermal drug delivery system drugs can be delivered through the skin portal to systemic circulation at a predetermined rate and clinically maintain the effective concentrations over a prolonged period of time. This study concludes that the use of nanotechnology in the field of oral and maxillofacial surgery has led to decrease in patient anxiety, post operative pain perception and adverse effects caused by systemic administration of drugs.

OZONE - 'A NEW VISTA IN DENTISTRY'

Author : Alfina V K and Anna Lorraine
Guide : Dr. Chandru T P
Institution : Coorg Institute of Dental Sciences



In the era of antibiotic resistance, we need a naturally occurring substance like Ozone to treat infection without any toxic side effects. Interest of Ozone use in Medicine and Dentistry is due to its Anti-microbial, Disinfectant, Biocompatibility and Healing properties. Application of ozone in oral care comes as a new and alternative treatment modality in dentistry. Ozone, a free radical has an effective role in management of oral diseases. Considering the important benefits related to oral disease, this review mainly emphasizes on utility of ozone in oral health care management, therapeutic potential and its clinical applications in oral pathologies, periodontology, endodontics, oral surgery, prosthodontics, restorative dentistry, wound healing, tooth mineralization. It also provides detailed information about Ozone delivery systems like “The OzoTop”, and limitations of this system in terms of ozone toxicity; intoxication and contradictions of the same.

REINVENTING POLYMETHYL METHACRYLATE AS BONE SAVER

Author : Mohammed Jadeer C.Jand Mariya M Jos

Guide : Dr Gaurav Sharma

Institution : Coorg Institute of Dental Sciences



Polymethylmethacrylate (PMMA), a synthetic resin produced from the polymerization of methyl methacrylate, has been commonly used for prosthetic dental applications including the fabrication of artificial teeth, denture bases, denture relining, dentures, obturators for cleft palate, orthodontic retainers, etc... Recently it is found to be useful as bone cements, contact & intraocular lens, filler material for bone cavities & skull defects as well as vertebrae stabilization in osteoporotic patients. In addition to this, the silver nanoparticles and zeolites present in the PMMA have been a topic of research due to having strong antimicrobial properties through photocatalysis. This property has been incorporated in treatment of staphylococcus activated bone diseases in head and neck region especially osteomyelitis. This systematic review aims to highlight the significance of PMMA as a bone saver material against staphylococcal infection.

IMPRESSION TECHNIQUES IN FIXED PROSTHODONTICS

Author : Fizza Fathima

Guide : Dr. Bhavana

Institution : Coorg Institute of Dental Sciences



A successful dental restoration is mainly depend on the accuracy of dental impressions. An impression is an imprint or negative replica. There are several impression

techniques developed to produce duplications as accurate as possible. A good quality impression is only obtained when we have a thorough knowledge of materials, their properties and techniques for their best manipulation. The accuracy of an impression depends on the materials used for impression making as well as the techniques. Each technique has got its own advantage and drawbacks. There are many studies being conducted to develop more accurate techniques with various combination of material. The aim of this paper is to review all the techniques of impression making in fixed prosthodontics.

GIC AS A RESTORATIVE MATERIAL

Author : Lithiya Scaria and Nandana Ramesh
Guide : Dr. Zareena MA
Institution : Coorg Institute of Dental Sciences



Background and objectives: The aim of a dental restorative material is to stimulate the biological, functional and esthetic properties of healthy tooth structure. Although the simple, basic restorative materials such as Amalgam and GICs has remained popular. Cention N has been introduced in dentistry which the manufacturers claim to possess best of the properties of amalgam and GIC. Thus, the present study was to evaluate and compare the change in pH profile of conventional GIC and Cention N.

Methods: 50 circular moulds of 10mm diameter and 3mm thickness were made from both the restorative materials Type IX Glass Ionomer cement and Cention N using Teflon moulds. Thus prepared 25 moulds of Type IX GIC and Cention N respectively were stored in the artificial saliva adjusted at critical pH (5.5) in an airtight labeled sterile plastic container at a constant temperature during the entire experimental period and divided randomly into 2 equal groups for the determination of change in pH at the end 1 month time interval using pH meter.

Results: The specimens showed statistically significant change in pH release at the end 1 month in both GIC and Cention N groups.

Interpretation and Conclusion: In this study, Cention N has shown a highly significant increase pH towards alkalinity compared to GIC at the end 1 month time intervals.

Keywords: Glass ionomer cement; pH; Ions; Saliva

OZONETHERAPY-THE MODERN SPECTACLE

Author : Deeksha Sain
Guide : Dr. Renita Castelino
Institution : AB Shetty Memorial Institute of Dental Sciences

The Ozone layer as we know it, has a vital role in protecting mankind from the harsh ultraviolet rays of the sun. A molecule comprising 3 atoms of oxygen, it is formed when sunlight and lightning interact in the atmosphere.

From the discovery of ozone in laboratories by Christian Schonbein in 1839 to the application of the same in dentistry, much later in the 1930s by Dr. E A Fisch, ozone therapy today has progressed in leaps and bounds in serving as an immune stimulating and antimicrobial treatment modality for treating various diseases.

An accurate diagnosis, prognosis and treatment plan is the key to eliminate any disease. In such instances, Ozone therapy serves as the best non-invasive technique to treat various orofacial disorders. It acts as a great treatment modality in various aspects of dentistry, be it pathological or physiological.

Hence, the purpose of this paper is to delve deeper into the role of Ozone therapy in dentistry and understanding its implications as a preferred treatment of choice.

THE EFFECT OF MICRO OSTEO PERFORATIONS ON THE RATE OF ORTHODONTIC TOOTH MOVEMENT - A REVIEW

Author : Yogeeta V H

Guide : Dr. Sharath Kumar N. S.

Institution : Bapuji Dental College and Hospital, Davanagere



Orthodontic treatment is known for having sustainable changes and a high reward value in terms of change in occlusion and facial appearance. Yet it is also known to be time consuming in most cases and the search for increasing the rate of orthodontic tooth movement, while keeping the treatment relatively less painful is underway.

Orthodontic tooth movement mainly relies on coordinated tissue resorption and formation in the surrounding bone and periodontal ligament. Orthodontic forces increase the activity of inflammatory markers like chemokines and cytokines, which in turn aid in the recruitment of osteoclast precursor cells and differentiation into mature osteoclasts, respectively. Many studies have shown the decrease in rate of tooth movement on inhibition of these factors, so it is safe to assume that increasing these factors may increase rate of tooth movement. Animal studies have shown that micro osteo perforations on the alveolar bone can stimulate the expression of these inflammatory markers and an increase in osteoclastic activity and rate of tooth movement.

In this review, we have explored the effectiveness of micro osteo perforations on the rate of orthodontic tooth movement and the pain perception of the patient. We have attempted to understand, if micro osteo perforations during orthodontic treatment can significantly reduce the treatment timeline and be clinically beneficial.

KNOWLEDGE, ATTITUDE REGARDING PERIODONTAL DISEASE LEADING TO ADVERSE PREGNANCY OUTCOMES AMONG ACCREDITED SOCIAL HEALTH ACTIVIST (ASHA) WORKER IN DAVANGERE CITY

Author : Vaishnavi
Guide : Dr Denzy Lawrence
Institution : Bapuji Dental College and Hospital, Davanagere



Background and Objective: Periodontal diseases are linked to adverse pregnancy outcomes. A study was done to assess knowledge and attitude regarding periodontal diseases leading to adverse pregnancy outcome among Accredited Social Health Activist (ASHA) worker in Davangere Taluk.

Method: A cross sectional survey was done involving 280 ASHA workers of Davangere taluk in a field setting. Data regarding demographic details and knowledge and attitude related to periodontal disease leading to adverse pregnancy outcome was collected from research using questionnaire which was tested for validity and reliability. Responses were presented in percentages and person's correlation test was used for data analysis.

Result: Majority of ASHA workers (50-54%) felt that pregnancy and its outcomes were not related to gum diseases and 15-20% of them did not know about it. Around 75-88% felt that pregnancy related outcome like preterm birth, low birth weight baby, gestational diabetes were not linked to periodontal diseases. Very few felt (11-21%) that gum diseases was linked to adverse pregnancy outcomes. There was no significant correlation ($P > 0.05$) between knowledge scores and age, educational level and years of work experience of ASHA workers.

Discussion: The result of the study indicates that the knowledge about periodontal disease leading to adverse pregnancy outcomes among ASHA workers among Davangere Taluk was poor. More focus should be placed in training session on emergency dental treatments and require referral for dental care during pregnancy and conceptual knowledge of periodontal disease leading to adverse pregnancy outcomes.

Key words: Accredited social health activist, PHC.

FREE PAPERS

CASE REPORT

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COMPARITIVE EVALUATION OF INJECTABLE PRF AND STANDARD PRF MEMBRANE IN MANAGEMENT OF PERIODONTAL POCKETS

Author : Mitesh Mukesh Khatavkar and Manjesh Maurya D
Guide : Dr. Rashmi S P and Dr. Radhika B
Institution : Coorg Institute of Dental Sciences



The principal goal of periodontal therapy is to restrain active inflammation during the disease and possibly provide support for the reconstruction of periodontal tissue defects. To enhance the process of regeneration, the adjunctive therapeutic procedures have been added to the conventional therapy since the end of the last century. Platelet concentrates have been shown to enhance periodontal regeneration when used as a treatment on their own or in conjunction with bone grafting materials. The aim of this study is to evaluate the efficacy of injectable PRF (injectable platelet-rich fibrin) and standard PRF membrane in periodontal pockets as an adjunctive therapy to scaling and root planing.

BLACK TO PINK USING YELLOW: A CASE REPORT

Author : Jennifer Peo and Keerthana A M
Guide : Dr. Reshmi T S and Dr. Amit Walvekar
Institution : Coorg Institute of Dental Sciences



Background: Formation of black triangles due to the loss of interdental papilla is one of the utmost perplexing aesthetic problems encountered in the field of periodontics. Several surgical treatment options have been researched to obtain complete papillary fill. but minimally invasive non-surgical procedures have always been the choice of treatment both for the operator as well as the patient. Platelet rich fibrin (PRF) is a form of platelet gel containing a matrix of autologous fibrin. It promotes wound healing, wound sealing, and haemostasis. The platelet cytokines, platelet derived growth factor (PDGF), transforming growth factor beta (TGF-B), and insulin-like growth factor-1 (IGF-1) are gradually released as the fibrin matrix is resorbed, aiding the process of regeneration of lost tissues. Case: A Female patient reported to the Department of Periodontics and Implantology with the complaint of a small black gap in the gum area between her upper and lower front teeth with the presence of deficient interdental papilla. After completion and re-evaluation of scaling and root planing, autologous i-PRF was injected at the base of the interdental papilla using the insulin syringe. Result and Conclusion: A partially complete fill of the interdental papilla was seen postoperatively and at 1-month follow-up. As a result, the use of autologous I-PRF could be considered as a minimally invasive treatment modality for black triangles.

GIANT SUBMANDIBULAR DUCTAL SIALOLITH: A CASE REPORT

Author : Chinmaya G J
Guide : Dr. Poornima. R
Institution : Bapuji Dental College and Hospital



Sialolithiasis is one of the prevailing conditions affecting major salivary gland or its duct in middle aged patients. Sialoliths causes obstruction of parenchyma or ductal system of salivary gland by forming calcified concretions leading to pain, swelling, discomfort associated with mastication and infection of the involved gland.

Submandibular salivary gland sialolith accounts for 80-92% of reported cases followed by parotid gland sialolith accounting for 6-20% of cases. Males are most commonly affected compared to females and children are rarely involved.

Sialoliths vary greatly in size, shape, density, contour and position and they may be solitary or multiple. and Size of salivary stone ranges from < 1mm to 1cm. Giant sialoliths are salivary stones with diameter of 15mm or more in any direction or weighs 1g or more. A very few cases are reported in literature of giant sialolith measuring 2cm or more.

The purpose of my presentation is to report an unusually large sialolith in a middle-aged female patient which is measuring 2cm in size in the left submandibular salivary gland duct.

MISUSE OF ELASTIC BAND FOR MAXILLARY MIDLINE DIASTEMA CLOSURE - DISASTER AND TREATMENT EXPERIENCE VIA A CASE REPORT IN VIETNAM

Author : Ta Thanh Dong and Ly Van Huan
Guide : Prof. Vo Truong Nhu Ngoc
Institution : School of Dentistry, Hanoi Medical University



Midline diastema has been a popular aesthetic problem for children. Several treatment options are available, however, the use of elastic bands without other appliances for closing the diastema still remains a pressing issue in Vietnam, which could be done by the patient's parents either themselves or under the suggestion of dental practitioners. This approach has been warned extensively in scientific documents. Nevertheless, due to the unawareness of its consequences, using merely rubber bands for orthodontic movement has been an unresolved disaster, leading to numerous severe complications. Management of such a problem could be complex with several challenges, specifically for the mixed dentition, as it presents an unfavorable situation for splinting. In this study, we would like to report a specific case regarding the extensively extrusive luxation regarding two upper central incisors due to the use of elastic band, in which treatment experiences for practitioners as well as essential cautions for the community when applying this method are mentioned.

SOCKET SHIELD - AN ESTHETIC SUCCESS

Author : Ananya K Y
Guide : Dr.Reshmi and Dr.Amit Walvekar
Institution : Coorg Institute of Dental Sciences



Introduction: Dental implant restoration is challenging procedure when it involves the esthetics zone,& since implant dentistry is prosthetically driven procedure, care were practiced in restoration of missing teeth in esthetic areas which will full fill the objectives. Socket shield technique is where in partial roots fragment will be retained around an immediately placed implant with the aim of avoiding tissue alterations after tooth extractions.

Aims and objectives: In this we present a case report using socket shield technique as treatment protocols and try to explore different protocols that are practiced in order to achieve high treatment outcome with optimal success

Conclusion: Long term success of implant in esthetic zone requires prudent participation of clinicians to contribute to the knowledge base before the procedure can be routinely prescribed. Long term clinical studies and observations are needed in order to achieve high esthetic results and long lasting implant outcomes using the protocols described by socket shield technique

Keywords: Socket shield technique, esthetics

FREE PAPERS

**TECHNICAL
NOTE**

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RECENT ADVANCES IN LOCAL ANAESTHESIA IN DENTISTRY

Author : Anjali Suresh Kumar and Vyshnavi P. P

Guide : Dr.Vidya

Institution : Coorg Institute of Dental Sciences



Pain and anxiety are the two main reasons that contribute to the avoidance of dental care. Treating of such patients is stressful for the dentist which might ultimately result in the failure of the treatment. Regardless of the practitioner's clinical skills, the dental treatment might become compromised without effective pain control system.

The ability to provide excellent high quality pain control system in dentistry is required such as practical knowledge of the clinically relevant aspects and updates about the recent advances in the field of topical and local anaesthesia. Knowledge of the local and topical anaesthetic agents, and the ability of the clinicians to choose the best delivery methods has become very important in today's dentistry. Therefore, an attempt to compile the literature studies on available recent updates of local anaesthesia in general as well as paediatric dentistry is made for better understanding of the procedure and its practical implications.

Although local anaesthesia remains the backbone of pain control in dentistry, researches are going on to seek new and better means of managing pain. Most of the researches are focused on improvement in the area of anaesthetic agents, delivery devices and technique involved. Newer technologies have been developed that can assist the dentist in providing enhanced pain relief with reduced injection pain and fewer adverse effects. This overview will enlighten the practicing dentists regarding newer devices and methods of rendering pain control comparing these with the earlier used ones on the basis of research and clinical studies available.

HARVESTING DENTAL STEM CELLS AND BANKING

Author : Swathi JS

Institution : MR Ambedkar Dental College



Adult stem cells have attracted scientific attention because they are able to self-renew and differentiate into several specialized cell types. In this context, human dental tissue-derived mesenchymal stem cells (hDT-MSCs) have emerged as a possible solution for repairing or regenerating damaged tissues.

Ever since the identification of stem cells from various dental tissues like deciduous teeth, dental papilla, periodontal ligament and third molars, storing them for future use for various clinical applications was being explored.

Dental stem cells were harvested and isolated using various techniques by different investigators and laboratories.

The dental stem cell preservation services, “tooth banks”, focus on the collection of a child's baby teeth, as they are shed naturally, and storage of the stem cells from within the pulp for therapeutic use in later years should the child require them.

This article explains the technical aspects of harvesting dental stem cells and its application and its preservation for future expansion.

Key words: Dental stem cell banking, dental stem cells, dental pulp

ROLE OF ARTIFICIAL INTELLIGENCE IN EARLY DIAGNOSIS AND PREVENTION OF POTENTIALLY MALIGNANT DISORDERS AND CANCERS OF ORAL CAVITY

Author : Suhana Surender

Institution : MR Ambedkar Dental College

Oral cancer is considered one of the most common cancer types in several countries. Earlier-stage identification is essential for better prognosis, treatment, and survival.

The application and diagnostic accuracy of Artificial Intelligence (AI) methods used for detection and grading of potentially malignant (pre-cancerous) and cancerous head and neck lesions using whole slide images (WSI) of human tissue slides. AI-based methods were employed for analysis of specific histological features for oral epithelial dysplasia, oral submucous fibrosis, oral squamous cell carcinoma and oropharyngeal squamous cell carcinoma. As image analysis and diagnostic technologies are evolving, various artificial intelligence (AI) approaches, specific algorithms and predictive models are beginning to have a considerable impact in improving diagnostic accuracy for OC. AI based technologies combined with intraoral photographic images or optical imaging methods are under investigation for automated detection and classification of OC. These new methods and technologies have great potential to improve outcomes, especially in low-resource settings. Automated detection of oral cancerous lesions by AI would be a rapid, non-invasive diagnostic tool that could provide immediate results on the diagnostic work-up of oral cancer. This method has the potential to be used as a clinical tool for the early diagnosis of pathological lesions.

Such approaches can be used to predict oral cancer risk as an adjunct to population screening by providing real-time risk assessment.

Overall, the quality of evidence is low, with most studies showing a high risk of bias which is likely to have overestimated accuracy rates. This review highlights the need for development of state-of-the-art deep learning techniques in future head and neck research.

E-POSTERS

ORIGINAL RESEARCH

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SPORTS INJURIES IN THE FACIAL REGION AMONG KODAVA HOCKEY PLAYERS

Author : Kumkum Tharang K.N.
Guide : Dr. Sona G Therathil and Dr. Asmin P.K.
Institution : Coorg Institute of Dental Sciences



Introduction: The Kodava population is well-known for being actively involved in Sports, especially in Hockey, given their inborn athleticism and stature. This small ethnicity in Karnataka hosts a Hockey festival every year, in which different families within the tribe play against each other. The purpose of this study is to check the prevalence of facial injury occurring during while playing Hockey and the awareness and knowledge of the Kodava population regarding protective sportswear and dental treatment.

Methodology: A structured close ended questionnaire comprising 20 questions, out of which 6 questions were regarding the demographic information, 3 regarding prevalence, and 11 regarding awareness and knowledge about protective sportswear such as mouth guards and helmets. This questionnaire was circulated among Kodava hockey players from all over Coorg and also to those residing outside Coorg, through Google forms. Data was entered in Microsoft excel and the analysis was done.

Results: 86 responses were obtained in which the prevalence percentage was high and awareness and knowledge percentage was low.

Conclusion: High prevalence of facial injury while playing hockey was noted among this ethnic group. Awareness and knowledge regarding protective sports gear was average.

A 10 YRS RETROSPECTIVE ANALYSIS OF 63 TONGUE BIOPSIED LESION IN A TEACHING HOSPITAL OF SOUTH KARNATAKA

Author : Jennifer Peo and Arul Jyothi
Guide : Dr Aklesha Behera and Dr Shashidhara R
Institution : Coorg Institute of Dental Sciences



The tongue is a muscular organ which serves numerous important functions such as phonation, deglutition, perception of sensation, such as taste, thermal changes, pain, and general sensation and also has a role in development of the jaws. Tongue consists of principally of skeletal muscle, but it also harbors blood vessels, nerves, fat cells, minor salivary gland and lymphoid tissues, all of which can give rise to both neoplastic and non-neoplastic lesions. Most neoplastic lesions which are associated with tongue are caused due to any associated habits such as tobacco consumption in smoking or smokeless form and in the form of betel quid, Khara, Khaini, Mawa etc. Tongue is also one of the sites which undergoes trauma due to sharp tooth or faulty prosthesis. Candida, bacterial infections are also predominant in the dorsal surface of the tongue. Various epidemiological studies have been done around the globe reporting the prevalence of tongue lesions in different populations. Differences have been reported due to variation in the ethnicity and geographical differences. The aim of this study is to analyse the frequency and distribution of tongue lesions in the population of south Karnataka and to associate it with probable etiological causes. 62 tongues biopsied cases were procured from the department archive from 2012-2022 The data was uploaded in excel for data processing in SPSS version 23 for statistical analysis.

ORAL HYGIENE PRACTICES AMONG 12-15 YEARS OLD STUDENTS IN URBAN AND RURAL AREAS OF BINH DINH PROVINCE AND SOME RELATED FACTORS**Author** : Do Son Tung, Le Van Anh, Khuc Thi Hong Hanh, Hoang Bao Duy**Institution** : School of Dentistry, Hanoi Medical University

A descriptive cross-sectional study conducted on 1106 students aged 12-15 years old in urban and rural areas in Binh Dinh province using self-administered questionnaires to collect information on the subjects' demographics and dental hygiene practices. Results: The prevalence of students in urban and rural areas who have the habit of brushing their teeth twice a day; at least 2 minutes per time and use regular toothpaste is at a high level (over 70%). The rate of using dental floss/mouthwash (29.5% and 28%) and regular check-ups every 6 months (29.4% and 20.9%) are still low. Urban students have 1.95 times higher rate of 6-month medical examination than rural students (OR=1.95; 95%CI[1.43-2.64], $p<0.05$). Factors that increase the rate of oral health practice include the urban living area, female gender, non-poor family, and parents' concern about oral hygiene habits.

Keywords: oral health practice, students, related factors, rural, urban.

ORAL CARE

Author : Phan ThienNga, Truong Hoan My, Nguyen ThiThuyLinh,
Truong Tan Loc, Tran Le Minh Khoa

Guide : Do Thi Thao DDS, MSc, PhD

Institution : Can Tho University of Medicine and Pharmacy, Can Tho, Vietnam



Introduction: To collect customer's information and consult patients to experience oral health services through digital platforms.

Methods: Website and social media were used to reach our customers. Our website aims to show people the right mindset about oral health. Oral treatment services were provided low payment by semi-final and final dental students, and most of patients were able to solve their problems. Moreover, our customers were consulted to choose suitable oral care products, then everyone had their own customized dental hygiene kit.

Results: The project was approached by 12.500 students in Can Tho city which were equivalent to 12.5% of target customers during a 3-month experiment in the first stage. The information about changing toothbrushes every 3-month period was propagandized, which reached 10.000 interactions approximately only on Facebook. Besides that, Oral Care was introduced at several international conferences and gained a high appreciation.

Discussion: Oral Care has been approached by a group of residents in Can Tho city, contributing to changing daily oral hygiene and increasing public awareness of dental care scientifically. Public dental health was being protected and improved. Odonto-Stomatology students in the clinical area were provided with an abundant source of patients, making it easy to connect between customers and interns.

E-POSTERS

LITERATURE

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ARTIFICIAL INTELLIGENCE IN THE FIELD OF ORAL PATHOLOGY

Author : Sangeetha M and Padavi Lokesh
Guide : Dr. Vanitha
Institution : Coorg Institute of Dental Sciences



Over the decades, new equipment was emerged in medical field, and we have witnessed the importance of medical imaging such as computed tomography, magnetic resonance imaging, ultrasound, mammography and X-ray and their contribution in successful diagnosis and treatment of various diseases. Now, we are in era of artificial intelligence (AI), where machines were modelled after human brain's ability to take inputs and produce outputs from given data. AI has a wide range of uses and applications in health services industry. Factors such as increase in workload, complexity of work and potential fatigue of doctors may compromise diagnostic ability and outcome. AI components in imaging machines would reduce this workload and drive greater efficiency. They also have access to a greater wealth of data than human counterparts and can detect cancer with more accuracy than humans. This study presented an overview of AI, its recent advances in pathology and future prospects.

NANOTECHNOLOGY IN PROSTHODONTICS

Author : John Mathew and Riya Rasmin Rahees
Guide : Dr. Ashika
Institution : Coorg Institute of Dental Sciences



In recent years, science has undergone a great evolution, taking humanity to a new era: The era of nanotechnology. Nanotechnology is the field of science and technology pertaining to the creation and use of materials or devices at nanometer scale. Nanoscale is small in size, but its potential is vast. Since 1990s, nanotechnology has been exploited for potential medical and dental applications. Nanotechnology has numerous applications in the field of nanomedicine, nanomaterials, nanorobotics, implantology and biotechnology. It has been shown that the performances of many biomaterials used in prosthodontics have been significantly enhanced after their scales were reduced by nanotechnology, from micron-size to nanosize. Nanomaterials in dentistry can be metals, ceramics, polymers, implant modifications, and composite materials that demonstrate novel properties when compared with conventional materials due to their nanoscale features. Nanocomposites composed of nanomaterials and traditional metals, ceramics, resin, or other matrix materials have been widely used in prosthodontics because their properties, such as modulus of elasticity, surface hardness, polymerisation shrinkage, and filler loading, were significantly increased after the addition of the nanomaterials. The present paper highlights the various applications of nanotechnology in the field of dentistry, especially in prosthodontics.

BONE IN A BOTTLE

Author : Anns Mariya Johnson and Angel Rose Mathew

Guide : Dr. Asmin P K and Dr. Sona G Therathil

Institution : Coorg Institute of Dental Sciences



The bone remodeling process, also called bone metabolism, is unique and occurs when exhausted bone tissue is removed from the skeleton through bone resorption. Bone morphogenetic protein-2 (BMP-2) is a potent growth factor affecting bone formation. While recombinant human BMP-2 (rhBMP-2) has been commercially available in cases of non-union fracture and spinal fusion in orthopaedics, it has also been applied to improve bone regeneration in challenging cases requiring dental implant treatment. However, complications related to an initially high dosage for maintaining an effective physiological concentration at the defect site have been reported, although an effective and safe rhBMP-2 dosage for bone regeneration has not yet been determined. In contrast to protein delivery, BMP-2 gene transfer into the defect site induces BMP-2 synthesis in vivo and leads to secretion for weeks to months, depending on the vector, at a concentration of nanograms per milliliter. BMP-2 gene delivery is advantageous for bone wound healing process in terms of dosage and duration. However, safety concerns related to viral vectors are one of the hurdles that need to be overcome for gene delivery to be used in clinical practice. Recently, commercially available gene therapy has been introduced in orthopedics, and clinical trials in dentistry have been ongoing. This review examines the application of BMP-2 gene therapy for bone regeneration in the oral and maxillofacial regions and discusses future perspectives of BMP-2 gene therapy in dentistry.

“MALO BRIDGE” - AN ALTERNATIVE APPROACH FOR BETTER AESTHETICS

Author : Ritcha Mendalin and Deepak Das M

Guide : Dr. Bhavana and Dr. Basavaraj

Institution : Coorg Institute of Dental Sciences



Dental implants are considered to be an important contribution to dentistry as they have revolutionized the way by which missing teeth are replaced with a high success rate. The key for successful outcome is to have an optimum selection for designing of the implant position and angulations based on the clinical situation, but every clinical scenario will not be the same to achieve an ideal implant positioning; hence, the need of customization of abutment comes into point. Screw-retained implant restorations have an advantage of predictable retention, retrievability, and lack of potentially retained subgingival cement. It is the most aesthetically advanced form of fixed prosthodontic rehabilitation for complete and partially edentulous patients. This prosthesis is combined with 3D- printed CAD-CAM technology to gain the precise fit and added aesthetics. It also has advantages such as elimination of screw access openings, makes it possible to remove and repair the fractured porcelain of the individual crown without removing the whole structure, excellent precision, avoids casting errors, light weight, reduced complexity of laboratory procedures, high definition of morphology, and time-consuming. Thus, this poster depicts the various application of Malo bridges at different case scenarios.

OMNICHROMA, THE CHAMELEON RESIN

Author : Asfiya Hasanath Bano and Rajani
Guide : Dr. Nanjamma and Dr. Salin
Institution : Coorg Institute of Dental Sciences



The world of restorative and esthetic dentistry evolves at a rapid rate when it comes to newer and better innovations in order to meet with the ever increasing demand of more natural and life-like appearance of dentition. Composite restorations and new formulations Of bonding agents have led to the evolvement in the adaptations of composite restorations . A new promising product introduced into the market is Omnichroma by Tokuyama Dental Omnichroma, introduced in 2019 by the Tokuyoma Dental was the first composite resin-based material that could match any tooth with any shade, on any patient. In the times where multiple shading of composite restoration is followed as the benchmark for restoring the tooth's anatomy, Omnichroma poses a unique property that allows clinicians to not be concerned by the multiple shades. This provides a quick, easy system that creates attractive and functionally esthetic restoration.

SYNDROMES IN CHILDREN

Author : Divya A
Guide : Dr. Chandru
Institution : Coorg Institute of Dental Sciences



This study reviews all the syndrome in children including complications , treatment and management. The following syndrome are Down syndrome, Turner syndrome, klinefelter syndrome, Angle man syndrome, DiGeorge syndrome, Prander – willisy syndrome, Williams syndrome, Rett syndrome. Some of these syndrome causes malocclusion, less caries, delayed eruption of permanent teeth .

Oral health management of these syndrome includes , when treating down syndrome children's the need for prophylaxis of sub acute bacterial endocarditis. Cleaning child mouth twice a day, wipe gums with gauge for tuner syndrome. Having poor oral hygiene in children's with klinefelter syndrome so scaling, fillings extraction and topical application of fluoride were performed. Child with angle man syndrome should consume less amount of sweets and sugary beverages, regular dental check-up to prevent caries. If child can cope it is recommended that fissure sealant be placed on the permanent molars soon after eruption in William disease. In rett syndrome child can experience a higher level of anxiety so sedative can be given before appointment, and to manage anxiety massage and calm ,soft voice loud voice should be kept to the minimum.

IMPRESSION FREE MODELS

Author : Jyoti Devaramani and Vaishnavi J Reddy

Guide : Dr. Gautham Reddy

Institution : Coorg Institute of Dental Sciences



The diagnostic information from plaster models when converted to digital files are highly accurate, however this approach is also prone to errors.

Eliminating physical impressions altogether is ultimately where technology is leading. This poster highlights the superiority of an intraoral scanner in obtaining digital models for orthodontics. It also shows its ease of use in a dental clinic. Also, the accuracy of digital models is greater, especially for complex measurements like space analysis, Bolton's analysis, when compared to the plaster models.

The most important expectation from a digital model system is its high diagnostic accuracy and reliability. Elimination of the conventional impression and generation of dental models directly from 3D dental anatomy will yield more accuracy. Since, an intraoral scanner emits only optical radiation, exposing the patient to radiation is avoided. These are self-contained in rolling units, making them portable around the office.

EVOLUTION OF TOOTHBRUSHES FROM ANTIQUITY TO PRESENT

Author : Lena Elizabeth Joji and Fathimath Sahala Parvin

Guide : Dr Reshmi T S and Dr Amith Walvekar

Institution : Coorg Institute of Dental Sciences



The search for new toothbrushes, its design and modification always has been challenging. The later were introduced into the society with the hope of overcoming some of the drawbacks caused by the conventional methods of tooth brushing techniques. Toothbrush is an oral hygiene tool used to clean the teeth, gums, tongue. Proxa brush, Soladey-2, The travellers tooth brushes, HyG ionic toothbrush. Sulcus toothbrush, Suction toothbrush, CBT, Fingers brush, I-brush, Twist 'n brush. Double headed toothbrush, Musical toothbrush, End-tufted toothbrush, Chewable tooth brush and speciality toothbrushes like orthodontic, post surgical, denture toothbrushes were introduced to rectify problems caused by conventional toothbrushes. The aim of this poster is to provide a glimpse on evolution of toothbrushes and an overview on different types of advanced toothbrush designs and modifications.

GLOBAL HEALTH AND THE “10/90” GAP

Author : Kruthi K. R

Guide : Dr. Penzy Lawrence

Institution : Bapuji Dental College and Hospital, Davanagere



Global health is the health of the populations in the worldwide context. Its initiatives aim to improve the health and wellbeing of impoverished, vulnerable, and underserved people worldwide. Article 25 of 1948 Universal declaration of Human rights declares that “Everyone has the right to a standard of living adequate for the health of himself and of his family”. The 10/90 GAP was termed around the inequitable distribution of global health resources where by approximately 10% of 35 resources for health research are allocated to 90% of world's health problems, which primarily occur in low and middle income countries.

Unfortunately, the health disparity between high-income and low-income countries, as well as between individuals within a country, often makes this impossible, leaving many people living in unhealthy settings without sufficient access to care.

Through this E-poster we shall attempt to understand the disparity in the distribution of healthcare resources among the global population.

EVERYTHING IS PRETTIER IN PINK

Author : Dr. Divine Nathalie Prato and Dr. Vaishnavi Subash Naik

Guide : Dr. Nidhi Hegde

Institution : A B. Shetty Memorial Institute of Dental Sciences, Deralakatte



The restoration of the anterior region for difficult cases calls for a more thorough strategy and a greater comprehension of the gingiva, the pink part of the smile. That requires the Introduction of pink aesthetic dentistry, an alternative method which is highly aesthetic and shows no signs of failure for an extended period of time. Employing use of pink composites to replicate the supporting periodontal structures that have been lost as a result of periodontal disease and/or gingival recession has proven to be a cost-effective, minimally invasive solution for patients. This technology also creates opportunities for dentists to preserve their patient's oral health.

STEM CELL TECHNOLOGY: SOURCES, AND ITS APPLICATIONS IN ORAL PATHOLOGY

Author : Dia Palangappa and Kavya B N
Guide : Dr. Vanitha
Institution : Coorg Institute of Dental Sciences



Growing evidence has demonstrated that the oral and maxillofacial region is a rich source of adult stem cells. Many intra-oral tissues, such as deciduous teeth, wisdom teeth and the gingiva, are not only easily accessible from the oral cavity but can also often be obtained as a discarded biological sample. Therefore, dental professionals should recognize the promise of the emerging field of regenerative dentistry and the possibility of obtaining stem cells during conventional dental treatments that can be banked for autologous therapeutic use in the future. The discarded oral tissues can also be used to generate iPS cells (induced Pluripotent Stem cells) that can be used not only for the autologous cell-based regeneration of complex oral tissues but also for the patient-specific modeling of oral diseases and the development of tailor-made diagnostic and drug screening tools for alveolar bone augmentation and oral cancer treatment. Studies on the relatively well-characterized stem cells, such as BMSCs (Bone Marrow Stem Cells) and other adult MSCs (Mucosa Stem Cells), should be continued to identify factors responsible for the successful outcome of stem cell-based bone/ periodontal tissue regeneration. The immunomodulatory properties of stem cells under consideration for applications in dentistry should be investigated to facilitate the grafting of the transplanted cells at inflamed sites. Studies on ES (Embryonic Stem cells) /iPS cells may reveal the complex developmental process of oral organs, such as the teeth and salivary glands. Research efforts on adult stem cells and pluripotent stem cells should be concomitantly performed with cross-communication to permit the development of new and effective strategies for regenerative dentistry.

GENES AND CANCER

Author : Sheefali Maruti Naik
Guide : Dr. Shivaprasad S
Institution : Bapuji Dental Collage and Hospital

Cancer is a group of diseases involving abnormal cell growth and can also metastasise to distant sites. Cancers are due to genetic mutations from environmental and lifestyle factors such as tobacco use, diet and obesity, infections, radiation, lack of physical activity and pollution. Genetic damage is one of the important cause of carcinogenesis. Carcinogenesis is a multistep process resulting from the accumulation of multiple genetic alterations that collectively give rise to the transformed phenotype. The genetic changes that contribute to cancer tend to affect three main types of genes: proto-oncogenes, tumor suppressor genes, and DNA repair genes. Proto-oncogenes are involved in normal cell growth and division but when these genes are altered in certain ways, they may become oncogenes, allowing cells to grow and survive when they should not. or example: Complexes of cyclins with CDKs drive the cell cycle by phosphorylating various substrates. Mutations in genes encoding cyclins, CDKs, and CDK inhibitors result in uncontrolled cell cycle progression. Tumor suppressor genes like p53 are also involved in controlling cell growth, division and helps in maintaining the integrity of the genome. In cells with loss or mutations of TP53, DNA damage does not induce cell cycle arrest or DNA repair, and genetically damaged cells proliferate, giving rise eventually to malignant neoplasm. Other example of such mutations are seen in :TERT, Ras, RB gene etc which leads to cancer. So such altered genes are targeted to reverse the neoplastic changes by various methods like gene therapy. The mechanism and treatment of genetic basis of cancer is highlighted in this paper.

EROSIVE POTENTIAL OF MEDICAL SYRUP IN DECIDUOUS TEETH

Author : Likitha C S and Samyuktha K
Guide : Dr.Vanitha
Institution : Coorg Institute of Dental Sciences



Background: The use of liquid medicinal syrup in childhood is high owing to the reasons that children suffer from illness quite often. The acidic component in the formulation may cause erosion to the dental tissue.

Aim: The aim of the study is to evaluate the erosive potential of pediatric liquid medicinal syrup on the deciduous teeth

Methodology: A total of 60 extracted non various deciduous molar were used , 4 syrups (artificial saliva , feriumXT, crocin syrup, ambrolite D) and the teeth were equally divided into 4 groups , the immersion cycle , following which the teeth were examined for surface microhardness at 7 , 14, 21 and 28 days

Results: Antitussives produced a significant and gradual loss of surface microhardness on all days (viz7, 14, 21 and 28 days)but a statistically significant difference was seen only between 7thand 28th day

Conclusion: The knowledge of the erosive potential of commonly used syrup is mandatory as erosion in children teeth may be associated with dental hypersensitivity, loss of occlusal vertical dimension ,eating difficulties ,poor aesthetics, pulp exposures and abscesses. Mouth rinsing with water after taking the medication; addition of calcium ,fluoride or phosphate to formulations ;and consumption of the medication at meal times have been recommended to avoid tooth damage that is caused by the regular use of medication

REPLICATING HUMAN MIND: ARTIFICIAL INTELLIGENCE IN DENTISTRY

Author : Ellina Tewary and Shambhavi Kashyap
Guide : Dr Renita Castelino
Institution : A.B Shetty Memorial Institute of Dental Sciences, Mangalore

Artificial intelligence in its true sense means technology replicating human cognitive capabilities to make diagnosis, treatment planning, prognosis, analysis easier in health care sector. Sometimes clinicians find themselves in ambiguity regarding radiographic interpretations, complex decision makings, diagnosis, treatment planning and managing complications . It also helps in avoiding unnecessary procedures, improves the quality of work, the precision, efficacy especially for novices and non specialists and acts as a assistance to dental experts. Both virtual and physical (robotics) artificial intelligence are applicable in health care. It has wide use of applications in dentistry, particularly in Endodontics to study the anatomy of root canal system, viability of stem cells in pulp, measuring the working length and more. It is a supplemental tool and does not represent clinical care as empathy, human to human communication, clinical intuition cannot be translated into computer language. It's use in dentistry is foreseen in near future but with obvious considerations regarding cost effectivity, accessibility and reliability.

HOW TO OVERCOME FAILURES IN DENTAL IMPLANT DUE TO SCREW LOOSENING

Author : Ranju Aliyaz and Sam Kurien Thomas

Guide : Dr. Indrakumar H S

Institution : Coorg Institute of Dental Sciences



IMPLANT: A dental implant is a material or device placed in a and or on oral tissues to support an oral prosthesis

An implant is a medical device manufactured to replace a missing biological structure, support a damaged biological structure, or enhance an existing biological structure. Medical implants are man-made devices, in contrast to a transplant, which is a transplanted biomedical tissue.

Screw loosening, screw fracture, gold cylinder fracture, prosthetic component and implant fractures are the different prosthetic complications seen after loading the implant.

Screw loosening occurs when the joint-separating forces acting on the screw joint are greater than the clamping forces holding the screw unit together. During tightening the micro roughness of the entire metal contacting surface slightly flattens, reducing the distance between the contacting surfaces.

Key Words: Factors Affecting Abutment Screw Loosening Screw length

END IS THE BEGINNING OF ESTHETIC RESTORATIONS

Author : Rajani

Guide : Dr. Chandru

Institution : Coorg Institute of Dental Sciences



Raise in esthetic outlook from patients has led to search for an ultimate esthetic material for restoring teeth and procedures for using them. Composite resin proved to be the excellent esthetic substance and was customized with respect to the resin matrix and filler. The surface superiority is a key factor in determining the success of composite restorations inadequately polished surfaces contribute to staining, plaque accumulation, gingival irritation and recurrent caries. Successful finishing and polishing of dental restorations not only result in optimal aesthetics but also offer satisfactory oral health of soft tissues and marginal integrity of the restorative interface. Composite resin restorations if finished and polished in proper sequence can last for long time and provide satisfaction to the patient. Each and every step starting from gross reduction to fine finishing and polishing need to be done in correct sequence to achieve optimal results.

E-POSTERS

CASE REPORT

Sl. No.	TOPIC	PRESENTER/S	COLLEGE	Pg. No.
1.	Neoplasms of the salivary gland – case series	Malavika T M	Coorg Institute of Dental Sciences	78
2.	Resin infiltration in the management of molar-incisor hypomineralization (MIH) patient	Nguyen Phuong Huyen Tran Anh Tuan	School Of Dentistry, Hanoi Medical University	79

NEOPLASMS OF THE SALIVARY GLAND – CASE SERIES

Author : Malavika T M
Guide : Dr. Kavitha
Institution : Coorg Institute of Dental Sciences



Salivary gland tumours are a relatively rare group of neoplasms that produce a wide range of clinical features and histopathological appearance. Most often they occur as slowly growing masses generally involving the major salivary glands. Majority of the tumors i.e 70-80% are benign and arise within the major salivary glands and around 20-30% of them originate within the minor salivary glands. Patients often report to the clinician with a spectrum of clinical manifestations predominantly being swelling, pain, ulceration, dryness of the mouth. Generally 70-80% of the tumors that arise in larger glands like the parotid are benign and as the size of the salivary gland reduces the chances of the tumors being malignant also increases. Benign tumors are usually treated with excision. Surgical excision, chemotherapy and Radiotherapy are delivered as the standard treatment protocol for management of malignant tumors.

This poster of Case series provides an overview of the clinical manifestations, diagnosis and management of various salivary gland neoplasms.

RESIN INFILTRATION IN THE MANAGEMENT OF MOLAR-INCISOR HYPOMINERALIZATION (MIH) PATIENT

Author : Tran Anh Tuan

Guide : Nguyen Phuong Huyen

Institution : School of Dentistry, Hanoi Medical University

Background: Molar incisor hypomineralization (MIH) is defined as “demarcated, qualitative developmental defects of systemic origin of the enamel of one or more first permanent molars with or without the involvement of incisors”. The exact etiology of MIH is still unclear but considered to be multifactorial. Resin infiltration provides a non-invasive treatment option for discoloured anterior non-cavitated lesions, which commonly patients can present for aesthetic needs and treatment.

Objective: To report the management of MIH opacities in anterior teeth with resin infiltration technique which can achieve a non-invasive aesthetic result.

Method: The author reports on one case of a 16 years old Vietnamese female patient, presented with the chief complaints of high dental sensibility, masticatory difficulty and discoloration in the upper right first central incisor since their eruption. The treatment proposed to the patient was a conservative approach by the use of resin infiltration.

Results: The treatment provided an aesthetic result that was non-invasive and produced a satisfactory outcome.

Conclusion: Resin infiltration provides a non-invasive treatment option for white spots caused by molar-incisor hypomineralization with a satisfactory outcome as presented in this case.

Keywords: Case report, Molar incisor hypomineralization (MIH), Opacities, Anterior teeth, Resin infiltration.

E-POSTERS

TECHNICAL NOTE

Sl. No.	TOPIC	PRESENTER/S	COLLEGE	Pg. No.
1.	Application of laser in periodontics	Darshana Sunil Das Thrupthi.T	Coorg Institute of Dental Sciences	84
2.	Halitosis	G. Harshitha Shree	Coorg Institute of Dental Sciences	84
	Gentle wave system in endodontics	Anitta Augustine	Coorg Institute of Dental Sciences	85

APPLICATION OF LASER IN PERIODONTICS

Author : Darshana Sunil Das and Thrupthi. T

Guide : Dr. Reshmi and Dr. AmitWalvekar

Institution : Coorg Institute of Dental Sciences



The word LASER is an acronym that stands for light amplification by stimulated emission of radiation. Although initially laser was used for soft tissue procedures, with the invention of new generation of laser, it is also used on dental hard tissues. Hard tissue laser may be considered an effective alternative to conventional lasers, offering clinicians a better field of work that promotes positive outcomes and better treatment outcomes. In addition, you can avoid sharp dental instruments, drilling noise and vibrations during dental procedures.

Laser therapy has influenced periodontal treatments in many aspects.

In this poster we will be focusing on Laser and its applications in periodontics.

Presently, various laser systems have been used in dentistry. This paper reviews on different lasers, their applications and advantage in periodontics.

HALITOSIS

Author : G. Harshitha Shree

Guide : Dr.Rashmi and Dr.Radhika

Institution : Coorg Institute of Dental Sciences



Halitosis is a common condition, affecting around 25% of the general population. The origin of the problem largely arises from intra-oral causes, whereas only a limited number of cases are the result of extra oral or systemic problems. Nevertheless, proper investigation and management of these extra oral causes is important for the total understanding of this phenomenon.

It is very common in general population and nearly more than 50% of the general population have halitosis. Halitosis affects a person's daily life. Management may include simple measures such as scaling and root planning, instructions for oral hygiene, tongue cleaning, and mouth rinsing.

GENTLE WAVE SYSTEM IN ENDODONTICS - REVISITED

Author : Annita Augustine
Guide : Dr. SalinNajappa and Dr.Ponappa KC
Institution : Coorg Institute of Dental Sciences



Introduction: Gentle wave system is an interesting innovation in endodontics that uses multisonic waves to enhance the cleaning and shaping properties of endodontic instruments, requiring fewer files and achieving better preservation of dentinal structure.

Materials and Methods: A home developed gentle wave system was tried after the previous review and the success of this is compared to a commercial system.

Discussion: The Commercial system performed better in all aspects indicating a need to redesign the home developed system.

QUEST WINNERS

ACADEMIC PRESENTATIONS (Virtual Events)

FREE PAPERS

Prize	Name of the Participants	College
ORIGINAL RESEARCH		
1st	Parnika Mishra	Coorg Institute of Dental Sciences, Virajpet
	N Pratheeksha Kalappa	
2nd	Vaishnavi R Mudri	Bapuji Dental College and Hospital
	NavyaNambiar	Coorg Institute of Dental Sciences, Virajpet
	Ashira R	
3rd	Pranav Reddy	Bapuji Dental College and Hospital
LITERATURE REVIEW		
1st	Malavika T M	Coorg Institute of Dental Sciences, Virajpet
2nd	Yogeeta V H	Bapuji Dental College and Hospital
	Mohammed Jadeer C J	Coorg Institute of Dental Sciences, Virajpet
	Mariya M Jos	
3rd	Lithiya Scaria	Coorg Institute of Dental Sciences, Virajpet
	Nandana Ramesh	
CASE REPORT		
1st	Ta Thanh Dong	School of Dentistry – Hanoi Medical University
	Le Van Anh	
2nd	Ananya K Y	Coorg Institute of Dental Sciences
TECHNICAL NOTE		
1st	Swathi J S	MR Ambedkar Dental College

OVERALL PRESENTATION AWARDS- ORIGINAL RESEARCH

Name	Institution
Parnika Misra	Coorg Institute of Dental Sciences
Pratheeksha Kalappa	
Navya Nambiar	
Ashira R	
Vaishnavi R Mudri	Bapuji Dental College and Hospital

E-POSTER

Prize	Name of the Participants	College
ORIGINAL RESEARCH		
1st	Kum Kum Nanaiah	Coorg Institute of Dental Sciences
	Le Van Anh	School of Dentistry – Hanoi Medical University
2nd	Phan Thien Nga	Can Tho University of Medicine and Pharmacy
	Truong Tan Loc	

REVIEW

1st	Samyuktha	Coorg Institute of Dental Sciences
	Likitha C S	
2nd	Divine Nathaile Prato	A B Shetty Memorial Institute of Dental Sciences
	Vaishnavi Subash Naik	
	Kruthi Kr	Bapuji Dental College
3rd	Deepak Das	Coorg Institute of Dental Sciences
	Ritcha Mendalin	

CASE REPORT/TECHNICAL NOTE

1st	Tran Anh Tuan	School of Dentistry – Hanoi Medical University
2nd	Anitta Augustine	Coorg Institute of Dental Sciences

OTHER EVENTS

TABLE CLINIC

Prize	Name of the Participants	College
1st	Yogeeta V H	Bapuji Dental College and Hospital
	Prasad	
	Likitha J Sosale	

GRAY'S ANATOMY

Prize	Name of the Participants	College
1st	Nguyen Tung Đường	School of Dentistry, Hanoi
2nd	Lena Nguyễn	School of Dentistry, Hanoi
	Parikshith N	KVG Dental College, Sullia
	Sushmitha Shree B N	Coorg Institute of Dental Sciences, Virajpet
3rd	Ta Thanh Dong	School of Dentistry, Hanoi
	Kavana P	Coorg Institute of Dental Sciences, Virajpet

DR SHERLOCK

Prize	Name of the Participants	College
1st	Partha Yadav K. P	Coorg Institute of Dental Sciences, Virajpet
	N Pratheeksha Kalappa	
	Sudarshan	
2nd	Prasad	Bapuji Dental College And Hospital, Davangere
	Yogeeta V. H.	
	Likitha J. Sosale	
3rd	Parnika Misra	Coorg Institute of Dental Sciences, Virajpet
	Channabasva H	
	Harshakeerthi D	

PICTIONARY

Prize	Name of the Participants	College
1st	Harshakeerthi D	Coorg Institute of Dental Sciences, Virajpet
	Shabna Ashraf	
	Ritcha Mendalin	
	Namitha M V	
	S Channabasava R H	
2nd	Suhana Surender	M R Ambedkar Dental College
	Rajeshwari K C	
	Swathi J S	
	Harshit Jain	
	J S Jeethendra	
3rd	Athul P V	KVG Dental College
	Engeline Eldo	
	Parikshith N	
	Gagan Gopal G	
	Samruddhi A G	

QUIZ

Prize	Name of the Participants	College
1st	Indhuja	MAHE Dental College, Kerala
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	Prithi S	
2nd	Yogetha VH	Bapuji Dental College And Hospital, Davangere
	Likhita J Sosale	
	Prasad Hadalgi	
3rd	Praveen Kumar Hugar	M R Ambedkar Dental College And Hospital, Bangalore
	Harshit JainJ	
	S Jeethendra	

COLLAGE

Prize	Name of the Participants	College
1st	Kavitha	Mahe Dental College
	Eshwari	
	Vigneshwari	
	Prithi	
	Indhuja	
2nd	Gagan	KVG Dental College
	Dhanush	
	Parikshith	
	Aishwarya	
	Isha	
3rd	Shreya Santhosh	Coorg Institute of Dental Sciences
	Theertha U	
	Taniya Jacob	
	JunaMariya	
	AmruthaMariya	

PEDAGOGY

NON- CLINICAL CATEGORY:

Prize	Name of the Participants	College
1st	Sangeetha	Coorg Institute of Dental Sciences
2nd	Snehapriya	Coorg Institute of Dental Sciences

CLINICAL CATEGORY:

Prize	Name of the Participants	College
1st	Indhuja	Mahe Dental College
2nd	Prateeksha Kalappa	Coorg Institute of Dental Sciences
3rd	Rakshith S	Bapuji Dental College

CONSOLATION PRIZE:

Name of the Participants	College
J.S Jeethendra	M.R Ambedkar Dental College
Sushmitasree	Coorg Institute of Dental Sciences

SPELLATHON

Prize	Name of the Participants	College
1st	Jisha Susan John	KVG Dental College Sullia
	Engeline Eldo	
	Athul P V	
2nd	Prasad Hadalgi	Bapuji Dental College Davengere
	Likitha J Sosale	
	Yogeeta V H	

HEALTH AWARENESS DOCUMENTARY

Prize	Name of the Participants	College
1st	Parikshith Ganiga Dhanush MS Sneha Suresh Senna Baiju Meghana Gowda Binuraj P. Mahesh Krishna Vishal V Isha S.	KVG Dental College Sullia
2nd	Ritche Mendelin Theertha U. Tania Jacob Shreya Santosh Rishikesh E.P.	Coorg Institute of Dental Sciences, Virajpet
3rd	Pranav Rakshit Supriya T Neelufar Samudri Mizba Khanum Niveditha H A Vaishnavi	Bapuji Dental College Davengere

JOURNAL OF MULTIDISCIPLINARY DENTAL RESEARCH

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- ii. *Review articles:* These include articles of special interest or updates with reference to any field of dentistry. The manuscript should ideally include- concepts, epidemiology, etiopathogenesis, clinical features, complementary explorations, diagnosis, prognosis and management, with a summary containing 150 -300 words. Manuscripts for Research and Review should not exceed 12 pages (including references).
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