

Journal of Multidisciplinary Dental Research

pISSN: 2277-3525
eISSN: 2582-7901

Special Edition 2025

SPECIAL EDITION QUEST - 2025



IDEA



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

JOURNAL OF MULTIDISCIPLINARY RESEARCH

Chairman of the Editorial Board	Dr. Sunil Muddaiah , Dean, Coorg Institute of Dental Sciences President - IDEA
Advisor to the Editorial Board	Dr. Anmol Kalha , Associate Director and Advisor MAX Hospitals, New Delhi.
Principal Editor	Dr. Shanthala B M , Secretary, IDEA
Managing Editor	Dr. Amit Walvekar , Professor and Head, Coorg Institute of Dental Sciences
Deputy Editors	Dr. A Karthik , Senior Lecturer, Coorg Institute of Dental Sciences Dr. Anusha , Reader, Coorg Institute of Dental Sciences
Editorial Board	Dr. L P Samaranayake , Vice Dean, University of Sharjah, UAE Dr. W M Tilakaratne , Professor, University of Malaya, Malaysia Dr. Aruni Tilakaratne , Peradeniya University, Sri Lanka Dr. Mohamed Ibrahim , Dean, Universiti Teknologi MARA, Malaysia Dr. Satoshi Nagasaka , Professor, Tsurumi University, Japan Dr. Raghunath Puttaiah , Tenured Professor, Texas A&M College of Dentistry, USA Dr. Chu Chun Hung , Associate Dean, Hong Kong University, China Dr. Young Guk Park , Vice-Chancellor, Kyung Hee University, School of Dentistry, Seoul Dr. Chung H. Kau , Chair, Department of Orthodontics, University of Alabama, USA Dr. Peter Borbely , Department of Orthodontics, University of Debrecen, Budapest, Hungary Dr. Bapanaiah Penugonda , Associate Professor, New York University, USA Dr. Rupesh P L , Professor, Vice President- IDEA
Subject Editors	Dr. Basavraj S Salgundi , Professor and Head, Coorg Institute of Dental Sciences Prof. Mohamed Ibrahim , Dean, MAHSA University, Malaysia. Dr. Kavitha A P , Professor & Head, Coorg Institute of Dental Sciences Dr. Girish T N , Professor, Coorg Institute of Dental Sciences Dr. Asmin P K , Senior Lecturer, Coorg Institute of Dental Sciences

It is indeed with pleasure that I write this editorial letter once again for the special issue- Quest 2025. As always our aim at IDEA is to encourage young minds to focus and cultivate their interest in research and to provide them with an international platform to present their ideas and findings.

This installment of Quest saw the same, if not more enthusiasm, as did the previous ones with more than 900 delegates in attendance from various parts of the globe. They showcased their research, reviews, cases and cutting edge innovations to an internationally acclaimed panel of judges.

We dedicate this issue to the many young dentists who presented at Quest 2025, and hope this stimulates them and others to advance their research in the field and provides them with a forum to foster critical research appraisal and while providing a bridge between theory, basic science and dental research.

Quest 2026 is expected to attract more than 1000 student delegates from India, Sri Lanka, Hong Kong, Japan, Hungary, Scandinavia, Egypt, Thailand and Malaysia. I do hope that this special edition will encourage the student fraternity to better their scientific temper and stimulate original research.



Dr Sunil Muddaiah

Chairman, Editorial Board

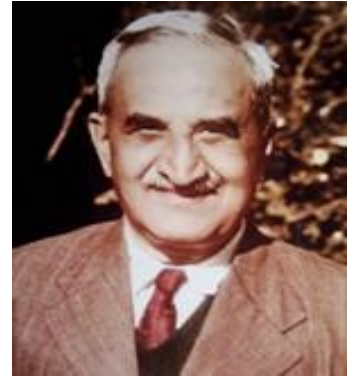
Oration

Mr. K. M. KUSHALAPPA

Mr. K. M. Kushalappa (May 27th 1895 – January 5th 1970)

This illustrious son of the Princely state of Coorg rose to become a philanthropist – educationist -freedom fighter.

He co-founded the social movement in Coorg (in 1930) through “Federations” which provided quality household products and food at affordable cost price for the local population.



K. M. Kushalappa founded schools in Ammathi and other areas in Coorg without fees for meritorious students (1940-1950).

He was part of the Indian freedom movement (1930 -1947) under Mahathma Gandhi and later the Coorg movement (1949-1955).

He lived at the School Estate Siddapur (which was the original residence of the German missionary. Rev. Richter who founded the Mercara Convent and was the author of the Coorg Gazetteer).

PROF DATO' DR. MOHAMED IBRAHIM BIN ABU HASSAN, FASC

DSPN, BDS (Malaya), MDSc (Leeds), PhD (Bristol)

FDS RCPS (Glasgow), FICD

Dean & Professor of Restorative Dentistry,

MAHSA University, Malaysia.



Dr Mohamed Ibrahim graduated from University of Malaya in 1984 and obtained his Master's Degree in Restorative Dentistry from the University of Leeds, United Kingdom in 1988. He then furthered his career to a doctorate degree at University of Bristol, United Kingdom in Dental Materials in 1995 and obtained his PhD in 1999. In 2018, he was awarded the fellowship from Royal College of Physician and Surgeons of Glasgow, FDSRCPS (Glasgow).

Dr Mohamed Ibrahim has more 40 years teaching experience first at University of Malaya and then University Technology MARA as the founding dean of the faculty. Currently Prof Dato' Dr Mohamed

Ibrahim is the Dean, Faculty of Dentistry, MAHSA University, one of the biggest private universities with a dental programme

He was Chairman of Malaysian Dental Dean's Council Chairman of Joint Technical Committee of Dental Specialty Programme. He was also appointed member of the Malaysian Dental Council and former council of Malaysia Dental Association.

Internationally, he was the President of SEAADE from 2014-2016 and currently an ex-officio. He is also the Regent of Fellow international College of Dentist (FICD) Region 33 for Malaysia & Brunei apart from being appointed as the Chairman of Education Committee International College of Dentist Section XV. He was also the Council Member of International Dental Collaboration of Mekong River (IDCMR).

Due to his contribution to the University Dr Mohamed Ibrahim were awarded Academic Leader Award in 2013 and Distinguish Academic Award in 2018 by the University. He was awarded the Distinguish Fellow of International College of Dentist in 2016 (FICD). In 2019 Professor Dato' Dr Mohamed Ibrahim was awarded the prestigious Fellow of Academy Science of Malaysia (FASc) in 2019 from Academy of Science Malaysia. He was also granted the state award Darjah Setia Pangkuan Negeri (DSPN) with the title of Dato' by Governor of Penang in 2018.

Topic: " Sustainable Research"

Sustainability in dentistry has emerged as a critical focus in recent years, addressing the environmental, social, and economic impacts of dental practice and research. With global healthcare contributing significantly to carbon emissions and biomedical waste, the dental sector plays a vital role in advancing sustainable practices that protect both human and planetary health. Sustainable research in dentistry aims to minimize environmental footprints while ensuring optimal oral care outcomes. This includes the development of eco-friendly dental materials, biodegradable impression compounds, and recyclable packaging for dental products. Moreover, digital technologies such as CAD/CAM systems, 3D printing, and CBCT imaging are reducing material wastage and improving efficiency in diagnosis and treatment planning. Water and energy conservation in dental clinics, proper waste segregation, and mercury-free restorative options also contribute to greener practices. On a broader level, sustainability extends to social responsibility through community-based oral health programs, preventive education, and equitable access to dental care. Academic institutions and research bodies are increasingly integrating sustainability frameworks into curricula and clinical protocols to encourage environmentally conscious decision-making among future dental professionals. Overall, sustainable dentistry represents a multidisciplinary commitment to innovation, ethics, and environmental stewardship. Continued research and collaboration across materials science, digital technology, and public health are essential to create a resilient and sustainable dental ecosystem that meets the needs of the present without compromising the health and resources of future generations.

MRS. PONAMMA KUSHALAPPA

Mrs. Ponamma Kushalappa (October 30th 1890 –April 10th 1982)

She was the driving force behind her husband Mr. K M Kushalappa success. This daughter of Coorg lived at the School Estate Siddapur.

Mrs. Ponamma Kushalappa was part of social movement in Coorg to improve the lives of the poor and downtrodden. She along with her husband sponsored hundreds of children's education and wellbeing at their home at School Estate, Siddapur.

***PROF. N. B. RAMACHANDRA***

Professor (Retd)

AAGAMI

DOS in Genetics and Genomics, University of Mysore

Prof. N. B. Ramachandra is a distinguished geneticist with over four decades of teaching and research experience in *Drosophila* genetics, human genomics, and molecular evolution. He currently holds the Department of Atomic Energy – Raja Ramanna Chair at the University of Mysore, and serves as Honorary Professor and Chairman of the Institutional Ethics Committee at Sri Sathya Sai University of Human Excellence, Kalaburagi. He is also Adjunct Professor at the Asia Pacific Institute of Embryology, Mysuru; Consultant Geneticist at the All India Institute of Speech and Hearing, Mysuru; and Chairman, Institutional Ethics Committee, Mysore Medical College and Research Institute.



A former Founder-Chairman of the Department of Genetics and Genomics, University of Mysore, Prof. Ramachandra has guided over 30 Ph.D. scholars, completed 18 major research projects, and published more than 285 research papers with an h-index of 26 and over 3000 citations.

He is an elected Fellow of the Indian Academy of Sciences (FASc), Fellow of the Karnataka Science and Technology Academy (FKSTA), and Fellow of the Indian Academy of Biomedical Sciences (FIABS). His recognitions include the Sir C. V. Raman Young Scientist Award, Dr. Raja Ramanna Scientist State Award, and Prof. G. K. Manna Memorial Award, among others.

Topic: "Genetics and Genomics in Healthcare: Is it time to start a Genetics and Genomics Department in Medical Schools?"

The rapid advancement of genetics and genomics has revolutionized modern healthcare, offering unprecedented insights into disease mechanisms, early diagnosis, and personalized treatment strategies. With the completion of the Human Genome Project and the subsequent rise of precision medicine, genetic knowledge has transitioned from a research domain to an essential component of clinical decision-making. Despite these developments, most medical schools still lack a dedicated department of Genetics and Genomics, resulting in a significant educational gap among healthcare professionals. The integration of genomic literacy into medical education is vital for preparing future clinicians to interpret genetic data, counsel patients effectively, and participate in interdisciplinary care involving genetic specialists. A dedicated department would facilitate structured teaching, hands-on training in molecular diagnostics, bioinformatics, and ethical considerations surrounding genetic testing. It would also promote research collaborations in areas such as cancer genomics, pharmacogenomics, and hereditary disorders, ultimately enhancing translational outcomes. Furthermore, early exposure to genomic principles would encourage medical students to adopt evidence-based and individualized approaches to patient management. Establishing a Genetics and Genomics Department within medical schools is therefore not merely an academic addition but a strategic necessity to align medical education with the evolving landscape of precision healthcare. Investing in this discipline today ensures a generation of clinicians equipped to harness the full potential of genomic medicine for improved patient care and population health outcomes.

DR. GEORGE JACOB ORATION

Brig S.S Chopra

**Commandant, Army Research and Referral Dental Centre
Postgraduate Training Institute, Dhaula Kuan, New Delhi.
Brigadier Sukhbir Singh Chopra**



Brigadier Sukhbir Singh Chopra was commissioned to the Army Dental Corps on 31 Dec 1994. He is a postgraduate in Orthodontics from AFMC Pune under Mumbai University. He is a post graduate guide at the Army Dental Center Research and Referral, New Delhi and is also a recognized Professor at MUHS & DU. He has been a MDS examiner at the various universities. He has the rare distinction of being awarded commendation by both the Army and Naval Chiefs in 2013 and 2008 respectively. In 2003 he was awarded the Flag Officer in Charge

Western Naval Command commendation He was awarded the best outgoing student of his batch and also awarded Certificate of Merit

Awarded by The Indian Society of Pedodontics & Preventive Dentistry for scoring the highest marks in the subject of Pedodontics & Preventive Dentistry for the year 1993. The Indian Orthodontic Society awarded him with the Life Member Award for Best Clinical Research in 2010, 2013 and 2014 and best paper presentation in research category in 2012. A keen clinician, with over 140 publications and over 400 citations in peer reviewed international and national journals. He has contributed chapters in six books and is on the panel of reviewers for eight Journals including AJO DO and BMC Medical Education. He has been editor of Journal of Dentistry Defence Section, the official publication of IDA, Defence Branch. He has been associated with 12 AFMRC research projects. Interdisciplinary orthodontics and military dentistry are his areas of special interest. He has held various command, staff and instructional appointments. He is presently heading the largest dental establishment of the Armed Forces, Army Dental Centre Research & Referral at New Delhi.

Topic: "The Future of Personalized Dentistry: Integrating Genomics, Artificial Intelligence and Precision Medicine into Clinical Practice"

The future of dentistry is rapidly evolving toward a precision-based model driven by genomics and artificial intelligence (AI). Personalized dentistry integrates genetic information, advanced data analytics, and individualized treatment strategies to enhance diagnostic accuracy, preventive care, and therapeutic outcomes. Genomic research has uncovered genetic markers linked to oral diseases such as periodontitis, dental caries, and oral cancer, enabling clinicians to predict susceptibility and design tailored preventive interventions. Simultaneously, AI and machine learning are transforming dental diagnostics through pattern recognition in radiographic imaging, 3D modeling, and predictive analytics, facilitating early

Original Research **Papers**

Content

Sl. No.	Title	Page No.
1	Stress Among UG Dental Students	13
2	Tongue Cleaning Habits And Related Factors Among Medical Undergraduate Students At Hanoi Medical University In 2024: A Cross-Sectional Study	13
3	Comparison Of Antimicrobial Activity Of Commercially Available Herbal Toothpaste -Invitro Microbiological Study	14
4	Brush Up On Knowledge, Brush Up On Health	15
5	Developing A Novel Antibacterial Copper Tetraamine Fluoride	16
6	Correlation Between Severity Of Periodontal Disease And Dmft Scores In Adults – A Cross Sectional Study	17
7	Masking Efficacy Of Restorative Materials For Primary Teeth Following Staining With SDF 38%: An In Vitro Study	18
8	Bridging Facial And Dental Aesthetics With AI: Insights From An Indian Population	18
9	Assessment Of Accuracy Of Digitally Designed And Ai-Designed Crown Morphologies For A Mandibular Molar- An In Vitro Study	19
10	Tissue Engineering In Dentistry	19
11	Effect Of Betadine And Chlorhexidine Mouthwash On Oral Microbial Load : A Comparative Study	20
12	Oral Health, Systemic Health: A Two-Way Street	21
13	Prevalence Of Anaemia In Patients Visiting The Dental Hospital	21
14	Triphala Tulasi And Aloe vera As Root Canal Irrigants; Efficacy Against Enterococcus Faecalis In Comparison With Sodium Hydrochlorite	22
15	Smart Dental Implants: Revolutionizing Oral Care	23
16	Prevalence Of Incidental Findings In Orthopantomogram	24
17	Awareness And Attitude About Oral Cancer In Patients Visiting The Dental Hospital -A Questionnaire Based Study	24
18	Comparative Evaluation Of Efficacy Of Hyaluronic Acid (Gummed) And Tetracycline Fibers As An Adjunct To Scaling And Root Planing On Clinical Parameters In Patients With Stage II Periodontitis.	25
19	Parental Knowledge Of Pulp Therapy In Primary Teeth	26
20	Calcified Clues: A Systematic Investigation Into The Relationship Between Pulpal Calcifications And Systemic Disease: A Retrospective Observational Study	27
21	Comparison Of Correlation Between Added Mesiodistal Width Of Maxillary Anteriors And Premolars To Inter Infraorbital Foramen Width To Assist As A Guide In Teeth Selection	27

22	Uncovering The Gaps In Public Health Knowledge About Diet And Dental Health	28
23	Bactericidal And Bacteriostatic Effect Of Clitoria Ternatea On Oral Bacteria	28
24	Obacco Prevalence And Nicotine Dependency Levels Amongst The Estate Workers Of Coorg District: A Cross-Sectional Study	29
25	Get Set Alginate	29
26	Spit or Stick? Exploring Saliva For Hepatitis B Detection	30
27	Retrospective Study Of Morphometric Analysis Of Mandible Using Orthopantomogram	31
28	cracking The Code On -Dentifrices!!!!!!	31
29	Survey On Awareness Of Cervical Cancer Amongst Adolescent School Going Students	32
30	Awareness Of Dental Implants Among Dental Students	33
31	Prevalence Of Tuberculosis In Virajpet Population	33
32	Efficacy Of Medical Management In Oral Submucous Fibrosis	33
33	Understanding Patient Flow: Transforming Dental Service Delivery	34
34	Physical And Social Nicotine Dependence Among College Going Students In Mysore City, India	35
35	Postural Assessment And Concomitant Musculoskeletal Pain In Undergraduate Students: A Kinovea-Based Ergonomic Intervention Study	35
36	Masking Efficacy Of Restorative Materials For Primary Teeth Following Staining With SDF 38%: An In Vitro Study	36

STRESS AMONG UG DENTAL STUDENTS

Presented by: Aiswarya CV, Liana Sibi

Supervisor: Dr Gowtham Reddy

College/University: CIDS

Background: Stress is a common challenge among undergraduate dental students due to the demanding nature of academic and clinical training. High levels of stress can negatively impact students' mental health, academic performance, and professional development. This study aims to assess the prevalence, sources, and coping mechanisms of stress among dental students.

Methods: A cross-sectional questionnaire-based study was conducted among undergraduate dental students. The questionnaire included demographic details and questions related to academic stress, clinical stress, and coping mechanisms. Responses were collected and analysed to identify key stressors and their impact on students' well-being.

Results: The study revealed that a significant proportion of students experience stress due to academic workload, frequent examinations, clinical requirements, and patient interactions. Sleep deprivation, anxiety, and physical symptoms of stress were commonly reported. Coping mechanisms varied, with some students relying on social support, exercise, or relaxation techniques, while others struggled to manage stress effectively.

Conclusion: Stress is a prevalent issue among undergraduate dental students, with multiple contributing factors. Institutions should consider implementing stress management programs, providing better academic support, and fostering a more student-friendly clinical environment to enhance students' well-being and learning experience.

TONGUE CLEANING HABITS AND RELATED FACTORS AMONG MEDICAL UNDERGRADUATE STUDENTS AT HANOI MEDICAL UNIVERSITY IN 2024: A CROSS-SECTIONAL STUDY

Presented by: Tran Luu Dong A, To Thi Bach Duong

Supervisor: Duong Duc Long

College/University: Hanoi Medical University

Aims:

This study aimed to investigate the tongue-cleaning status and related factors among undergraduate medical students at Hanoi Medical University in 2024.

Methods and materials: A cross-sectional descriptive analysis was undertaken on 961 undergraduate medical students from Hanoi Medical University through a questionnaire, including questions about tongue-cleaning status and factors that could influence tongue-cleaning habits.

Statistical analysis used: The chi-square and multivariable logistic regression were used to find the correlation between associated factors and tongue-cleaning habits. The data were considered significant at $p < 0.05$.

Results: The study revealed that 6.8% of students engaged in tongue cleaning. Among them, 56.7% practiced it daily, while 47.8% maintained this habit every day of the week. A majority preferred cleaning the entire tongue dorsum (56%) but reported nausea during the process (70%). However, 84% did not find tongue cleaning unpleasant. Toothbrushes were the most commonly used tool for this purpose (51.8%). Factors influencing tongue cleaning practices included gender ($p < 0.001$), Desire to receive information on tongue hygiene ($p < 0.001$), Oral hygiene methods ($p < 0.001$), Regular dental check-up behavior ($p < 0.003$), and oral cleanliness perception ($p < 0.001$).

Conclusion: The tongue cleaning was widespread among research participants. However, more research is needed to determine the most effective tongue-cleaning methods and the specific tongue sections that require attention. Additionally, our findings underscore the need for more comprehensive oral health education to enhance students' knowledge and practices of effective tongue cleaning.

COMPARISON OF ANTIMICROBIAL ACTIVITY OF COMMERCIALLY AVAILABLE HERBAL TOOTHPASTE -INVITRO MICROBIOLOGICAL STUDY

Presented by: Shrinidhi Shetty

Supervisor: Dr Parimala Kumar

College/University: AJ Institute of Dental Science

Introduction: Oral health is crucial for overall well-being. Dentifrices help maintain oral hygiene by removing plaque, preventing cavities, and controlling bacterial growth. Herbal toothpaste contains natural ingredients that help maintain oral health by combating bacteria and promoting gum care. Assessing the effectiveness of herbal toothpaste in combating oral bacteria helps determine their role in maintaining oral hygiene.

Methodology: Pure cultures of *Streptococcus mutans*, *Candida albicans*, and *Escherichia coli* were obtained. Five herbal toothpastes were selected, masked as A, B, C, D, and E. Dentifrice

solutions were prepared at 1:1 dilution and further diluted to 1:2, 1:4, 1:8, and 1:16. The antimicrobial activity was evaluated using the modified agar well diffusion method. Agar plates were seeded with bacterial cultures, dried, and wells were prepared using an 8 mm cork borer. Each dilution of the toothpastes was added into separate wells, along with a positive control (fluoridated toothpaste, F) and a central well with sterile distilled water. Plates were incubated at 37°C for 24 hours, and inhibition zones were measured. The experiment was repeated three times.

Results: Toothpaste formulations B and D exhibited superior antimicrobial activity compared to the others.

Conclusion: This study highlights the antimicrobial potential of herbal toothpaste against *Candida albicans*, *Streptococcus mutans*, and *Escherichia coli* across different dilutions (1:2, 1:4, 1:8, 1:16). The findings suggest that some herbal formulations may serve as effective alternatives in promoting oral health.

BRUSH UP ON KNOWLEDGE, BRUSH UP ON HEALTH

Presented by: Dhananjay Gahlot, Smiley Potakari

Supervisor: Dr. Swetha H B

College/University: Raja Rajeswari Dental College and Hospital

Dental health remains a critical but often neglected issue in India, with a significant portion of the population suffering from dental diseases but failing to seek timely treatment. Multiple factors contribute to this gap, including inadequate dental education, socioeconomic constraints, lifestyle habits like tobacco use, and psychological barriers such as dental anxiety. Additionally, traditional beliefs and misinformation further discourage proper dental care.

A survey-based study was conducted to assess the awareness levels of dental education among different patient groups. The study examined knowledge gaps regarding preventive oral health practices, common misconceptions, and barriers to seeking professional dental care. Data were collected through questionnaires and interviews, focusing on key demographic groups, including parents, elderly individuals, pregnant women, and youth. Findings indicated a widespread lack of awareness regarding preventive dental care. Parents were largely unaware of the importance of early childhood oral hygiene, leading to increased cases of cavities. Elderly individuals lacked knowledge about age-related oral health issues and the connection between oral health and systemic diseases. Pregnant women had minimal awareness of the impact of oral health on pregnancy outcomes, while a significant number of young individuals neglected routine dental check-ups, unaware of their long-term consequences.

The study also highlighted the effectiveness of innovative solutions such as dental health apps,

tele-dentistry, and mobile dental clinics in increasing awareness and accessibility to dental care. The results underscore the urgent need for improved patient education to bridge the knowledge gap and promote better oral health practices. Digital platforms and outreach programs can play a crucial role in raising awareness, particularly among marginalized populations. By addressing socioeconomic and psychological barriers, enhancing access to dental services, and incorporating dental education into public health initiatives, significant improvements in oral health outcomes can be achieved. Improving dental education, expanding digital tools, and increasing accessibility to care are essential for enhancing oral health awareness. A well-informed population is more likely to adopt preventive oral health practices, reducing the burden of dental diseases. Bridging this knowledge gap through strategic education and healthcare initiatives will lead to a healthier future for all.

DEVELOPING A NOVEL ANTIBACTERIAL COPPER TETRAAMINE FLUORIDE

Presented by: Veena Wenqing Xu

Supervisor: Prof Chun Hung Chu

College/University: The University of Hong Kong

Objective: To develop a novel and biocompatible copper tetraamine fluoride (CTF) with antibacterial and non-discolouring properties.

Method: This study used copper fluoride and ammonia solution to develop CTF solution. The CTF was characterized by X-ray photoelectron spectroscopy (XPS). Cytotoxicity was evaluated by stem cells from human exfoliated deciduous teeth (SHED) and human gingival fibroblasts (HGF-1). The fluoride concentration was determined using ion-selective electrode. The alkalinity was measured by a pH electrode. The human dentine blocks were treated with CTF and then incubated with *Streptococcus mutans* (*S. mutans*) to evaluate the antimicrobial and discolouring effects. The silver diamine fluoride (SDF) was employed as the positive control, and water was the negative control. The colony-forming units (CFUs) and confocal laser scanning microscopy (CLSM) were used to examine the kinetics and viability of the biofilm. The discolouring property on dentine was assessed by spectrophotometry.

Results: XPS confirmed synthesis of CTF solution. The half-maximal inhibitory concentration of CTF on SHED and HGF-1 was 195 ± 16 ppm and 137 ± 11 ppm. The fluoride concentration was $121,000 \pm 5,000$ ppm. The pH value was 9. Log₁₀ CFU of the CTF, SDF and water group were 5.0 ± 0.2 , 4.9 ± 0.1 and 7.4 ± 0.1 ($p < 0.001$, CTF, SDF < Water). CLSM showed that the dead-to-live ratio of the CTF, SDF and water group were 0.8 ± 0.2 , 0.8 ± 0.2 , and 0.3 ± 0.1 ($p < 0.001$, CTF, SDF > Water). Spectrophotometry showed that the ΔE of the CTF, SDF and water group

were 5 ± 2 , 6 ± 3 and 45 ± 2 ($p < 0.001$, CTF, Water < SDF).

Conclusion: This study developed an alkaline 58% CTF solution, which is biocompatible, antibacterial and non-discolouring.

CORRELATION BETWEEN SEVERITY OF PERIODONTAL DISEASE AND DMFT SCORES IN ADULTS – A CROSS-SECTIONAL STUDY

Presented by: Sakshi yadav

Supervisor: Dr Pulin Saluja,

College/University: SGT Dental college, Budhera, Gurugram

Introduction: Dental caries and periodontitis are the two most common oral diseases and the leading causes of tooth loss among adults. Although they are generally considered distinct due to differences in their microflora, their co-occurrence in clinical settings is frequently observed. The null hypothesis of this study was that there is no correlation between dental caries and periodontitis. The primary research question was whether these two conditions co-occur. The study aimed to assess whether there is a correlation between the severity of periodontal disease and the DMFT (Decayed, Missing, Filled Teeth) score.

Methodology: This study involved 200 patients, aged 30-55, who had dental caries and visited the Oral Medicine and Radiology Department. Patients with edentulism and systemic diseases were excluded. The DMFT index was used to assess dental caries, while Russell's Periodontal Index was employed to gauge the severity of periodontal disease. The patients were divided into three groups: those with healthy periodontium, those with gingivitis, and those with periodontitis. Each group was then compared against the DMFT score.

Results: The results showed that patients with periodontitis had higher DMFT scores, indicating a positive association between the severity of periodontal disease and dental caries. The correlation between the two diseases was statistically significant ($p\text{-value} < 0.001$).

Discussion: Given these findings, there is a need to raise public awareness about dental caries and periodontitis, as well as their potential correlation. It's crucial to improve treatment strategies to address both conditions effectively, aiming to prevent and manage them concurrently. This can help reduce the prevalence of both diseases and improve overall oral health outcomes.

MASKING EFFICACY OF RESTORATIVE MATERIALS FOR PRIMARY TEETH FOLLOWING STAINING WITH SDF 38%: AN IN VITRO STUDY

Presented by: Dang Minh Phuong Tran Tat Thanh

Supervisor: Dr. Nguyen Ha Thu, MSc

College/University: School of Dentistry - Hanoi Medical University

A randomised controlled in vitro study was conducted to identify the color of primary anterior teeth and evaluate the potential masking of different restorative materials following staining with SDF 38%. 80 non-carious primary incisors and canines were collected and randomly assigned into four groups: (1) SDF only (control group), (2) SDF + Fuji VII, (3) SDF + DeltaFil, (4) SDF + G - aenial Universal Injectable. After preparing cavities, demineralising with acid phosphoric 37%, and applying SDF 38%, teeth were filled with different restorative materials corresponding to their groups. Colors were measured using Vita Easyshade V at selected time intervals. Colour changes were calculated using ΔE of CIELAB colour space. All groups exhibited significant colour changes ($\Delta E > 3.3$). The lowest ΔE value was found in the Fuji VII group (29.7 ± 9.7), followed by the DeltaFil group (37.2 ± 11.7), the G - aenial Universal Injectable group (42.2 ± 1.6), and the highest in the control group (67.4 ± 3.7). The differences were statistically significant ($p < 0.05$). GIC restorative materials provide superior color masking ability for teeth treated with SDF 38% compared to composite restorations. Restoring teeth treated with SDF 38% using restorative materials enhances aesthetics, particularly in the anterior region.

BRIDGING FACIAL AND DENTAL AESTHETICS WITH AI: INSIGHTS FROM AN INDIAN POPULATION

Presented by: Dr. Saiprasad alva, Dr. Sai Rachana

Supervisor: Dr. GAYATHRI DEVI

College/University: Ramaiah dental college.

This original research investigates the interplay between tooth form, shade, facial form, smile line, and skin shade among dental students in India, utilizing artificial intelligence (AI) to enhance aesthetic assessments and restorative treatments. The study focuses on the diversity of facial structures and skin tones in the Indian population. A total of 90 Bachelor of Dental Surgery (BDS) students aged 18- 25 from a dental college in India participated. Initial evaluations of facial form, smile line, tooth form, tooth shade, and skin shade were conducted visually, followed by AI-driven analysis to enhance precision, achieving over 90% detection accuracy. Data were analyzed using descriptive statistics and Pearson's correlation coefficient. Significant correlations were identified between aesthetic factors such as facial form, tooth shade, and smile line. AI-assisted classification demonstrated high accuracy in feature detection and categorization, with no significant gender-based differences observed. These findings underscore the importance of integrating personalized factors into prosthodontic treatment planning to achieve natural-looking restorations. The successful application of AI in this study

highlights its potential to improve the accuracy and customization of aesthetic assessments. Further research is recommended to validate these findings and explore broader applications of AI in dental practice.

ASSESSMENT OF ACCURACY OF DIGITALLY DESIGNED AND AI-DESIGNED CROWN MORPHOLOGIES FOR A MANDIBULAR MOLAR- AN IN VITRO STUDY

Presented by: Sandeep Kolla

Supervisor: Dr. Sivaranjani Gali

College/University: MS Ramaiah University of Applied Sciences

Dental prostheses are the main treatment for dental caries and tooth loss, designed to replace one or more missing teeth. These prostheses are usually customized to fit the individual's remaining teeth and oral characteristics. High-quality dental prostheses not only restore oral function but also enhance aesthetics by closely matching the natural color of teeth. However, if the prostheses do not properly restore function and aesthetics, it can lead to occlusal issues, patient dissatisfaction, reduced self-esteem, and oral dysfunctions.

While CAD-CAM can speed up the fabrication of prostheses, challenges remain in the design phase. The built-in tooth libraries in this software may not be advanced enough to customise the design for individual patients during the design stage. Artificial intelligence (AI) is developing gradually, especially in the medical field, it refers to machines assisting people by using programming language, and the establishment of big data and internet models based on digital technology. AI has slowly been introduced to clinical dentistry, in all disciplines to facilitate diagnosis, treatment planning, and prosthetic designing.

TISSUE ENGINEERING IN DENTISTRY

Presented by: Sadiya Sanober, Rithika R Revankar

Supervisor: Dr Abdul Mujeeb (BDS, MDS)

College/University: SJM Dental College and Hospital

Tissue engineering is at the forefront of modern dentistry and has emerged as a transformative field offering innovative solutions for repairing and regenerating oral tissues. By leveraging the body's natural healing mechanisms, tissue engineering offers a paradigm shift towards

minimally invasive, patient-specific outcomes in dental practice. This interdisciplinary field involves cutting-edge techniques, including 3D bioprinting, gene therapy the use of biomimetic materials and scaffolds, stem cells, and bioactive molecules to enhance tissue regeneration and redefine therapeutic strategies. It also addresses the critical challenges in oral healthcare and offers new hope for patients with conditions such as tooth loss, bone loss and craniofacial defects. Through a critical review of ongoing research, this study emphasizes on the potential of tissue engineering to revolutionize dental care, explores the future perspective and discusses how this innovative field can become a cornerstone of modern dentistry.

EFFECT OF BETADINE AND CHLORHEXIDINE MOUTHWASH ON ORAL MICROBIAL LOAD : A COMPARATIVE STUDY

Presented by: Diya Rajeshwari NV

Supervisor: Dr. Kavitha AP

College/University: CIDS

Introduction: Oral health is a crucial aspect of overall health, and maintaining an optimal microbial balance in the oral cavity is essential for preventing infections to avoid oral health complications. There can be significant disturbance in the intricate balance between the host and the distribution of the oral microbiota. Research pertaining to shift in the compositions of normal commensal in various systemic conditions is well documented and can be an additional factor contributing to the oral health condition of the patient. Various antimicrobials and effective treatment plan approaches are done to restore the normal oral condition. Antiseptic mouthwashes, such as Betadine and Chlorhexidine, are widely used to reduce microbial load in various oral lesions and conditions. The aim of the study is to assess the antimicrobial activity of commercially available mouthwashes in patients visiting the dental OPD.

Aim and Objective: The objective of the study is to assess the microbial load in the oral cavity before and after the use of Betadine and Chlorhexidine mouthwashes.

Methodology: Outpatients who visit the Department of Oral Medicine and Radiology aged above 18 years were considered. The study included 20 patients who were randomly assigned into two groups- Group 1 (10 patients) – Betadine, Group 2 (10 patients)- Hexidine. Pre-gargle and post -gargle Oral swabs from the tongue was obtained for assessment of bacterial load from all patients in both the groups MTT assay pre and post mouth rinse was assessed for anti-bacterial activity among the groups. The values obtained was subjected to statistical analysis.

ORAL HEALTH, SYSTEMIC HEALTH: A TWO-WAY STREET

Presented by: Darshana sunil Das, Riya Rasmin Rahees

Supervisor: Dr. Kavitha AP

College/University: CIDS

Introduction: Oral health reflects the overall health of a person. Patients with medical conditions on medications and those with undiagnosed systemic disorders can present with oral manifestations. Similarly oral diseases can negatively impact the existing systemic condition. Numerous studies related to the aforesaid association are available in the medical literature. Only few studies have focused on studying the awareness of the oro-systemic health link. However, patients visiting the dental clinics lack awareness pertaining to the link between oral and systemic health. Better awareness among the patients will enable the dentist in delivering the best treatment with modifications in the planned dental treatment with a prior medical consultation to prevent complications and better clinical outcomes. Only few studies have focused on this fact, hence the present study is planned to assess the awareness on the association between oral and systemic health among the out patients visiting the dental hospital.

Aim and Objective: To assess the awareness on association between oral health and systemic health among patients visiting the dental hospital.

Methodology: 50 outpatients aged above 18 years of age and who are willing to participate in the study will be included in the study. Physically and mentally challenged patients, patients who are unwilling to participate will be excluded from the study. The study questionnaire will be provided to the patients in either Kannada, English or Malayalam languages. The questionnaire includes 15 questions related to the link between oral and systemic health. The data obtained will be subjected to statistical analysis

PREVALENCE OF ANAEMIA IN PATIENTS VISITING THE DENTAL HOSPITAL

Presented by: Alfina V K

Supervisor: Dr Kavitha A P , Professor and Head of the Department

College/University: CIDS

Background: Medically compromised patients visit the dental clinician seeking treatment for various dental complaints. Patients with systemic illness affecting the cardiovascular, respiratory, gastrointestinal, renal, hematological systems and patients on medications for various medical problems also visit the dental clinics for treatment. Anemias are the most common red blood cell disorders. Patients with undiagnosed red blood cell disorders may present signs and symptoms of the same and the dental clinician may be the first to recognize these signs, provisionally diagnose them and confirm by means of simple investigation like Complete hemogram and refer the patient for specialty care. Anemias can cause significant

oral implications like syncope, substantial bleeding tendencies, delayed wound healing and increased risk of infections. Furthermore, patients with red blood cell disorders may require modification in the dental treatment, hence the clinician should have prior knowledge pertaining to these factors to avoid potential complications. Aim of the study: To assess the prevalence of Anaemias in patients visiting the dental hospital

Methodology: The haematology reports of 500 Out patients who had signs and symptoms of anaemia and underwent complete hemogram and reports of patients who had undergone complete hemogram as screening for haematological disorders prior to various oral surgical procedures was retrieved and the haemoglobin content, RBC Count, Red cell indices and peripheral smear reports was analysed and the values were noted.

Results: The data obtained was subjected to statistical analysis.

TRIPHALA TULASI AND ALOEVERA AS ROOT CANAL IRRIGANTS; EFFICACY AGAINST ENTEROCOCCUS FAECALIS IN COMPARISON WITH SODIUM HYDROCHLORITE

Presented by: Fathimath Sahala Parvin, Lena Elizabeth Joji

Supervisor: Dr Srinidhi Bhatt, Dr Sonali Sukesh

College/University: CIDS

Abstract

The main objective of root canal therapy is to eliminate microorganisms, thereby creating an ideal environment for tissue healing. A successful completion of root canal therapy relies on the combination of three-dimensional obturation, root canal sterilization, and biomechanical preparation. Instrumentation techniques solely are insufficient to accomplish complete disinfection of the pulp space thus, the essentiality of endodontic irrigants came into existence. The findings from the recent studies has shown conventional irrigants, having a sufficient effect at the same has shown drug interactions. In this context this study was aimed to assess the effectiveness of the natural root canal irrigation agents.

Aim : To compare the antibacterial efficacy of Triphala, Tulsi , Aloe vera and Sodium hypochlorite, in experimentally contaminated root canals with Enterococcus faecalis
Materials and methodology : 80 extracted single rooted mandibular premolar teeth were selected to evaluate and compare the antimicrobial efficacy of Triphala , Tulsi, Aloe Vera and Sodium hypochlorite in experimentally contaminated root canals with Enterococcus faecalis.
Results: Triphala, tulsi and Aloe vera have larger values and variation compared to sodium hypochlorite. Intergroup comparison between natural products Triphala, Tulsi and Aloe vera has shown significant difference in their antibacterial efficacy between them.

Conclusion: Sodium hypochlorite has a better antibacterial efficacy. In the natural products tested, Tulsi had better antibacterial efficacy followed by Triphala and Aloe vera

SMART DENTAL IMPLANTS: REVOLUTIONIZING ORAL CARE

Presented by: Ajay Kennedy

Supervisor: Dr Shantana C B Lakshmi, senior lecturer

College/University: Sri Rajiv Gandhi College of Dental sciences

Traditional dental implants often fail within 5-10 years due to inflammation, infection, or gum disease, requiring costly replacements. Smart dental implants, integrating advanced technologies like antibacterial materials, self-powered systems, and real-time monitoring, aim to address these limitations and improve patient outcomes.

Smart implants incorporate:

1. **Bacterial-Resistant Materials:** Barium Titanate (BTO) nanoparticles repel bacteria and reduce biofilm formation.
2. **Self-Powered Phototherapy:** Piezoelectric materials convert oral motions (e.g., chewing) into electricity, powering LEDs for phototherapy to heal gum tissue.
3. **Real-Time Monitoring:** Micro-sensors track oral health metrics (pH, temperature, bacteria levels) and transmit data wirelessly to dentists.
4. **Asymmetric Design:** One side promotes tissue integration, while the other resists bacterial growth.

Results:

- **Bacterial Resistance:** BTO-embedded implants showed dose-dependent reduction in biofilm formation.
- **Self-Powered Functionality:** Piezoelectric materials provided sustained power without mechanical compromise.
- **Safety:** Materials were confirmed safe for gingival tissue.
- **Remote Monitoring:** Enabled real-time tracking, reducing follow-up visits.

Discussion:

Smart implants offer advantages like longer durability, infection prevention, and personalized care. However, challenges such as data security, durability of electronic components, and cost must be addressed. The lack of quantitative data and patient-centric perspectives limits the evidence supporting their efficacy. Future research aims to refine materials, enhance predictive capabilities, and expand applications to other medical devices.

Conclusion:

Smart dental implants represent a transformative advancement in oral care, combining antibacterial properties, self-powered phototherapy, and real-time monitoring. With continued innovation, they have the potential to revolutionize dentistry and set a new standard for implant technology.

PREVALENCE OF INCIDENTAL FINDINGS IN ORTHOPANTAMOGRAM

Presented by: Ashira M, Navya Aravind Nambiar

Supervisor: Dr Kavitha A P

College/University: CIDS

Need of the Study: Panoramic radiography or Orthopantomograph (OPG) is a two-dimensional radiographic view which will depict the teeth, jaws and the surrounding structures and tissues in a single image. OPG is the most commonly advised radiographic view with relatively low doses of radiation for the diagnosis of common oral conditions like periodontitis, impactions, maxillofacial pathologies such as cysts, tumors, maxillofacial trauma etc.. Certain incidental finding includes the elongation of styloid process, carotid artery calcification, maxillary sinus pathologies, mucus retention cysts, condensing osteitis, pulpal calcifications etc. These findings could be a sign of an underlying systemic disorders or localized disorders which may necessitate prompt treatment. Early detection and diagnosis of incidental pathologies will provide Important preoperative information and can aid in better treatment plan with optimum benefit to the patient.

Aim: The aim of our study is to evaluate the prevalence of incidental findings in Orthopantamogram.

Methodology: 500 orthopantomograms (OPG) of patients who underwent OPG for diagnostic purposes in the Department of Oral Medicine and Radiology in Coorg institute of Dental Sciences will be considered for the study. OPGs with movement artifacts, ghost images, presence of surgical internal fixtures, surgical defects that can interfere in the observation for the incidental findings will be excluded from the study. The age, gender and the incidental findings if any in the OPG will be recorded in the proforma.

Result: Data obtained will be subjected to statistical analysis.

AWARENESS AND ATTITUDE ABOUT ORAL CANCER IN PATIENTS VISITING THE DENTAL HOSPITAL -A QUESTIONNAIRE BASED STUDY

Presented by: Ashira A, Sam Kurien Thomas

Supervisor: Dr. Kavitha AP

College/University: CIDS

Need of the Study: Worldwide, oral carcinoma is one of the most prevalent cancers and is the 11th most common malignancy. It is 4th to 6th cause of mortality from cancer. Most of the patients are asymptomatic and often get diagnosed in the later stages leading to poor prognosis. Tobacco: smoking and smokeless form increase the risk of occurrence of oral cancer. Epidemiological studies have shown that 90% of the patients with cancers are smokers. Early diagnosis of oral cancer is the most important factor that impacts the overall survival and

prognosis. Early detection at the state of potentially malignant disorder (PMD) can be intervened and the malignant transformation of PMD can be prevented. However, there is lack of awareness among patients about oral cancer, its signs and symptoms and unhealthy habits that may contribute to the development of the disease. Studies highlighted on the awareness and attitude on oral cancer are few in Indian population.

Aim: The aim of our study was to assess the awareness and attitude about oral cancer in patients visiting the dental hospital.

Methodology: A questionnaire-based hospital study involving 500 patients. Each patient was asked to fill the questionnaire based on their awareness and attitude about oral cancer.

Result: Obtained data was subjected to statistical analysis.

COMPARATIVE EVALUATION OF EFFICACY OF HYALURONIC ACID (GUMMELTS) AND TETRACYCLINE FIBERS AS AN ADJUNCT TO SCALING AND ROOT PLANING ON CLINICAL PARAMETERS IN PATIENTS WITH STAGE II PERIODONTITIS.

Presented by: Gayathri S Chandran

Supervisor: Dr Radhika B

College/University: CIDS

Need of the Study: Periodontitis is a common oral inflammatory disease characterized by destruction of the supporting structure around the teeth. Periodontal diseases represent a significant public health burden that could affect the quality of life. Evidences suggest that there is an independent association with various comorbidities. Possible risk factors for initiation and progression includes age, gender, plaque, calculus, dietary & smoking habits and lifestyle. There are four clinical stages of periodontitis, based on severity and complexity of management. Various treatment modalities have been proven to be effective in its treatment but their comparative efficacy is not clearly understood.

Aims and Objectives: The aim of this study is to evaluate the efficacy of hyaluronic acid(GUMMELTS) and tetracycline fiber as an adjunct to Scaling and root planing in patients with stage 2 periodontitis.

Methodology: A total of 15 patients, satisfying all the inclusion criteria are selected for the study. The sample is further randomly divided into 3 groups. Group A is treated with Gummelts as an adjunct to SRP, Group B with tetracycline fibers as adjunct to SRP and Group C is treated by SRP alone. OHIS, PD, CAL will be measured clinically.

Results and Conclusions: The study is under progress.

PARENTAL KNOWLEDGE OF PULP THERAPY IN PRIMARY TEETH

Presented by: Navya VV, Rifa Fathima M

Supervisor: Dr Chandru (Department of pedodontics)

College/University: CIDS

Parental awareness and understanding of pulp therapy for primary teeth play a critical role in promoting early intervention and ensuring the long-term dental health of children. This study explores the level of knowledge among parents regarding the importance of primary teeth, treatment procedures available for decayed teeth and about the outcomes of pulp therapy in primary teeth. The results underscore the need for targeted educational interventions to enhance parental knowledge and dispel myths surrounding pulp therapy. By improving parental understanding, we can foster a collaborative approach to paediatric dental care that prioritises timely and effective treatment for children's oral health issues. This study

emphasises the critical role of parental education in optimising treatment outcomes and ensuring that children receive appropriate dental care.

CALCIFIED CLUES: A SYSTEMATIC INVESTIGATION INTO THE RELATIONSHIP BETWEEN PULPAL CALCIFICATIONS AND SYSTEMIC DISEASE: A RETROSPECTIVE OBSERVATIONAL STUDY

Presented by: Samyuktha K, Sangeetha M

Supervisor: Dr. Keerthan Bollamma

College/University: CIDS

Introduction: Many conditions such as pulp degeneration, inductive interactions between the epithelium and pulp tissue, age, caries, operative procedures, periodontal diseases, epithelial rests in the pulp tissue, orthodontic tooth movement, circulatory disturbances in the pulp tissue, idiopathic factors, and genetic predisposition have been claimed to predispose to pulp stone formation. Some researchers have investigated the prevalence of or association of pulp stones with other dental conditions. However, very few studies have assessed the prevalence of pulp stones in Indian population.

Methodology: The OPG of 300 patients were assessed for the presence of pulp stones in molars. Patients below the age of 25 and above the age of 70 were excluded from the study. Only patients who have undergone a diagnostic OPG were considered for the study. Patients will not be subjected for radiographic examination for the purpose of the study. Patient's medical history will be recorded for diseases such as diabetes, hypertension and renal stones. The radiographs were evaluated for the presence or absence of pulp stones and were documented in the proforma. The collected data was subject to statistical analysis.

COMPARISON OF CORRELATION BETWEEN ADDED MESIODISTAL WIDTH OF MAXILLARY ANTERIORS AND PREMOLARS TO INTER INFRAORBITAL FORAMEN WIDTH TO ASSIST AS A GUIDE IN TEETH SELECTION

Presented by: Rakshitha B D, Prithya prijesh

Supervisor: DR Shankara Krishna, DR Basavaraj S Salagundi

College/University: CIDS

Statement of Problem: complete denture in edentulous patient not only helps in aesthetics but also for mastication and phonation. Proper replacement of teeth should be functional and aesthetically pleasing to enhance the psychology of patient. Anterior teeth selection is quite challenging in the patient without pre extraction records. Relay on the facial measurement and proportions for selection of teeth may vary among different ethnicities.

Aim and Objective: the main aim of this study is to guide in appropriate teeth size selection in edentulous patient by correlating the inter infra orbital foramen to the added mesiodistal width of maxillary anteriors and premolars.

Materials and Methods: Materials used: divider, ruler, cotton, disinfectant and rubber bowl. Methods: sample of 50 subject between the age of 18-25 years were taken for the study. Each individuals mesiodistal width of all maxillary anterior teeth and 1st and 2nd premolars were measured . With the help of divider and ruler . Also each individuals inter infraorbital foramen distance was measured by palpating the foramen clinically and measuring with the divider and ruler. Then mesiodistal width of the teeth were added and compared with inter infraorbital foramen width. The values were subjected to statistical analysis.

Result: result will be statistically analyzed.

UNCOVERING THE GAPS IN PUBLIC HEALTH KNOWLEDGE ABOUT DIET AND DENTAL HEALTH

Presented by: Gayatri R Menon, Ananya B S

Supervisor: Dr Keerthan Bollamma P B

College/University: CIDS

Introduction: The relationship of diet to dental caries risk was suspected as early as the fourth century B.C. when Aristotle hypothesized that dental caries was caused by the consumption of sweet figs, which stuck to the tooth. However, as McDonald (1985a) points out, even after 23 centuries we know only a little more than Aristotle about the relative cariogenicity of foods. Patients' understanding of the role of diet in the occurrence of dental caries is essential for the prevention. This questionnaire study aimed to uncover the gaps in public health knowledge about diet and dental health thereby assisting in improving patient

education.

Methodology: A total of 349 participants will answer a questionnaire comprising of 12 questions which assess the knowledge of the individuals regarding the association of the type, frequency of consuming certain food with the occurrence of dental caries. The data will be compiled and be subject to statistical analysis.

Results: Ongoing study, results are to be awaited

Clinical significance and conclusion:

BACTERICIDAL AND BACTERIOSTATIC EFFECT OF CLITORIA TERNATEA ON ORAL BACTERIA

Presented by: Shaswata D. E

Supervisor: Dr. Shashidara R

College/University: CIDS

Introduction: Bactericidal is the property that kills bacteria directly, whereas bacteriostatic refers to the inhibition of bacterial growth and reproduction. The choice between Bactericidal and Bacteriostatic antibiotics depends on the specific infection, the patient's condition and other factors. Clitoria ternatea, also known as "butterfly pea" is a plant that has been used in traditional medicine for centuries. The antimicrobial properties of Clitoria ternatea are attributed to the presence of various bioactive compounds, including: Flavonoids, Alkaloids, Tannins

Aim: The aim of this study is to evaluate the Bactericidal & Bacteriostatic effect of ethanol extraction of Clitoria ternatea on the growth rates of oral bacteria sampled from

Materials & Methods: First, the petals and sepals of the flower Clitoria ternatea are separated. Then it is dried using an incubator. After that the flower is to be grinded into powdered form. Different concentrations will be prepared with ethanol. Each concentration made will be inoculated, incubated and plated.

OBACCO PREVALENCE AND NICOTINE DEPENDENCY LEVELS AMONGST THE ESTATE WORKERS OF COORG DISTRICT: A CROSS-SECTIONAL STUDY

Presented by: Alfina V K, Gayathri S Chandran

Supervisor: Dr Lamea Afnan,

College/University: CIDS

Background: Coorg, known for its coffee production, has a diverse population with limited access to healthcare, especially in remote areas. There is a total of 5.27 lakh coffee workers in the country, of which 2.02 lakh are in the Kodagu district. Majority of coffee workers are tribal and migrant populations. Tobacco use is a significant public health concern among these estate workers. The nicotine in the tobacco products make it hard to quit the habit causing a varied level dependency.

Aim: To assess the prevalence of tobacco consumption and nicotine dependency levels amongst the estate workers

Methodology: A cross-sectional study was conducted among 15 estates of Coorg district. Both the smoking and smokeless form of tobacco consumers were identified and Fagerström Scale for Nicotine Dependency (FTND) administered.

Results: Of the 1213 estate workers examined, 460 of them consumed some form of tobacco accounting for prevalence of 11.71% and 28.85% for smoking and smokeless form of tobacco respectively. 64.35% were minimally dependent, 24.9% were moderately dependent and 10.75% were highly dependent for nicotine.

Conclusion: The study highlights a significant prevalence of tobacco use among estate workers in Coorg district, with a notable portion of individuals exhibiting varying levels of nicotine dependency. These findings underscore the need for targeted tobacco cessation programs that address different levels of nicotine dependency.

GET SET ALGINATE

Presented by: Koushik Gowda R, Mahantesh Kamatagi

Supervisor: Dr. Ashika

Introduction: Alginates are widely used in dentistry for making impression and they are of two types. Type 1(fast setting), Type 2(normal setting). India is a tropical country with temperature variations. A lot of clinics do not use air conditioner and the quality of water also varies from place to place. The room temperature and local water influence the setting time of alginate.

Aim and objective: purpose of this study was to investigate how different liquid medium with different temperature affect initial and final setting time of alginate.

Material and Methodology: Normal set alginate(algitex DPI), normal water, distilled water, hard water, Betadine(win medicare),chlorhexidine(hexodont), acrylic test rod(made up of cold cure resin from DPI company with the diameter of 6.35mm and 10cm long),mercury thermometer(Dr.Odin). The alginate mixed in normal water at 25°C is used as control group. The initial and final setting time was tested based on ANST/ADA specification no 18(ISO 1653) at a temperature of 15°C,25°C,30°C,35°C and 40°C. The alginate powder was mixed with normal water, distilled water, hard water, Betadine, chlorhexidine and put in a rubber bowl then the initial and final setting time was measured by acrylic test rod. Data were statistically analysed by linear regression and Mann whitney test

SPIT OR STICK? EXPLORING SALIVA FOR HEPATITIS B DETECTION

Presented by: Lavanya G Raypurmath, Koushik Gowda R

Supervisor: Dr. Shashidara R (HOD)

College/University: CIDS

Introduction: Hepatitis B virus (HBV) remains a critical health concern, particularly in healthcare settings where exposure to blood and bodily fluids is common, making early detection crucial for preventing its spread and managing infections effectively. Traditional diagnostic methods rely on serum-based testing, which, while reliable, requires invasive blood collection and trained personnel. In certain clinical and community settings, these factors can pose challenges, creating a need for alternative, non-invasive diagnostic approaches. Saliva has emerged as a promising bio-fluid for disease detection due to its ease of collection, non-invasive nature, and potential to reflect systemic infections. Its use in HBV diagnosis could improve accessibility to screening, especially in settings where blood collection is impractical or undesirable. This study explores the feasibility of saliva as an alternative diagnostic tool for HBV by comparing its diagnostic potential with that of serum.

Aim and objective: Evaluation of the potential of saliva as a non-invasive diagnostic sample for detecting hepatitis B virus (HBV) by comparing its diagnostic accuracy with serum samples.

Methodology: Study Protocol: Sample size – 60 patients will be randomly selected from the outpatient department (OPD) of Department of Oral Pathology. Demographic details such as age, sex, occupation and relevant medical histories will be collected. 1ml of blood and 0.5ml saliva samples will be collected in sterile tubes from the patients after procuring their informed consent. Using enzyme immunoassay (EIA) and microplate reader, blood and saliva samples will be tested for HBs antibodies. Results will be procured and statistical analysis of the data will be made

RETROSPECTIVE STUDY OF MORPHOMETRIC ANALYSIS OF MANDIBLE USING ORTHOPANTOMOGRAM

Presented by: Shashank Kalshetty, Afra Jinaan

Supervisor: Dr. Karthik

College/University: CIDS

Introduction: The identification of sex from skeletal remains is an important tool in forensic science. Mandibular ramus can be used for sex determination either on dry mandible or through orthopantomogram (OPG)

Aim: To determine the sex from mandibular ramus using digital Orthopantomogram
METHODOLOGY: The analysis was conducted on mandibular ramus using digital OPGs. The total of 330 digital OPG, which were available in the archives of department, were subjected

to morphometric analysis of mandibular ramus. The parameters such as maximum ramus breadth, minimum ramus breadth, condylar height, projective ramus height, coronoid height were considered on the ramus and the measurements are performed using.

DENTSPLY SIRONA SIDEXIS. The study is conducted on the population of Coorg (Kodavas).

Objectives: To identify whether mandible could aid in determining individuals gender using variables from body and ramus of mandible. To assess whether left or right side of mandible yields more accurate gender identification. To assess that the same variables can be used for age determination and that left or right side is better for age determination. To establish correlations between variables measured and age.

Statistical Analysis: The data shall be tabulated in Microsoft Excel and statistical analysis such as frequency distribution along with mean and standard deviation shall be performed.

CRACKING THE CODE ON -DENTIFRICES!!!!!!

Presented by: Anaswara K Ayyappan, Likitha C S

Supervisor: Dr. Jithesh Jain, HOD, Department of Public health dentistry

College/University: CIDS

Need of the Study: Toothpaste is a paste or gel used to preserve and enhance oral health with a toothbrush. Formulations of toothpaste have developed over the years. Currently the ingredients are categorised into natural, natural with medicine, natural with chemicals and all chemicals. A colour coding is present at the bottom of the toothpaste tube which depicts the ingredient category of the toothpaste.

Aim: To evaluate the awareness about colour coding on toothpastes among dental students

Methodology: A cross sectional study was conducted among the undergraduate and postgraduate students of a private dental college in Karnataka. A self-administered questionnaire was given consisting of two main parts: Part 1 includes socio demographic information of the participants: Part 2 is related to the dental professionals' knowledge of colour coding of toothpastes.

Results: 35.29% of males with a mean age of 25.37 ± 1.91 and 67.41% of females with mean age of 23.69 ± 2.43 responded to this survey. Majority of participants were postgraduates (55%) and the least was from interns (2%). 72.59% of the respondents were aware of the colour coding and 34.81% knew that colour code represents the ingredients of the toothpaste. 8.14% of students have used toothpastes based on colour coding and 60.74% students agreed that it is very important to educate the public regarding the facts of colour coding

SURVEY ON AWARENESS OF CERVICAL CANCER AMONGST ADOLESCENT SCHOOL GOING STUDENTS

Presented by: Samarth Kariappa MK, Sai Kiran M

Supervisor: Dr. Shashidara R

College/University: CIDS

Introduction: Cervical cancer ranks fourth among cancers that affect women globally. In India, the five most common malignancies that strike women are colon, lung, oral cavity, breast, and cervical cancer. India has the highest rate of cervical cancer-related deaths among women worldwide. If identified early and given the right care, cancers of significant public health importance, including those of the breast, mouth, cervical, stomach, lung, and colorectal regions, can be cured. Cervical cancer is mostly caused by Human Papillomavirus (HPV) and is transmitted mostly via unsafe sexual practices. Awareness, screening methodologies and treatment modalities for cervical cancer is mostly unknown amongst women and men alike. Education and guidance regarding cervical cancer needs to be addressed and should be included within the curriculum of school going adolescent students.

Aim and Objective: To assess knowledge and aptitude about cervical cancer amongst adolescent school going students of Virajpet town, Karnataka.

Methodology: A questionnaire comprising 11 questions shall be prepared to assess knowledge and working attitude regarding the general awareness, modes of transmission, screening methodologies and preventive measures to be undertaken for cervical cancer amongst 9th, 10th, 11th and 12th standard students of various schools in Virajpet town.

Statistical analysis: The data shall be tabulated in Microsoft Excel and statistical analysis such as frequency distribution along with mean and standard deviation shall be performed using IBM SPSS version 23.

AWARENESS OF DENTAL IMPLANTS AMONG DENTAL STUDENTS

Presented by: Adonis Alva John, Vivek R Chauhan

Supervisor: Dr Shankara Krishna and Dr Basavaraj S Salagundi

College/University: CIDS

Dental implants have become a cornerstone of modern restorative dentistry, offering a superior alternative to traditional methods of tooth replacement. The increasing use of dental implants in clinical practice necessitates that dental students are equipped with adequate knowledge and practical understanding of implantology. Studying awareness of dental implants among dental students is crucial to assess knowledge gaps, improve clinical skills, and update curriculum. Dental implants are a popular treatment option, and students' awareness is essential for optimal

patient care. Research objectives include evaluating knowledge, attitudes, and awareness. A survey design and data analysis will identify trends and knowledge gaps. Expected outcomes include improved curriculum, enhanced clinical skills, and increased awareness about dental implants' importance in dental education and patient care, ultimately benefiting patient outcomes.

PREVALENCE OF TUBERCULOSIS IN VIRAJPET POPULATION

Presented by: Darshana Sunil Das, Anu Sarah Abraham

Supervisor: Dr Aklesha Behra

College/University: CIDS

Tuberculosis is an infectious disease that most often effect the lung and cause by a type of bacteria Mycobacterium tuberculosis. It spreads through the air when infected people cough, sneeze or spit. A person need to inhale only a few germs to become Infected with TB bacteria. TB remains the 13th leading death worldwide. India was the only country to complete national TB Prevalence survey since 2019. 24.08 lakh cases in 2020 India have reported 24.2 lakh cases in 2023 an estimated 10.8million people fell ill with TB. Every year 10 Million people fall in with TB.

EFFICACY OF MEDICAL MANAGEMENT IN ORAL SUBMUCOUS FIBROSIS

Presented by: Vivek R Chauhan, Adonis Alva John

Supervisor: Dr. Kavitha AP

College/University: CIDS

Oral Submucous Fibrosis (OSMF) is a chronic insidious potentially malignant disorder that affects any part of the oral cavity and sometimes the oropharynx. OSMF causes significant juxta epithelial inflammatory reaction followed by fibroelastic change of the connective tissue and epithelial atrophy that leads to stiffness of the oral mucosa causing trismus and inability to eat. OSMF is characterized by reduced movement and depilation of the tongue, blanching and leathery texture of the oral mucosa associated with burning sensation. The main causative agent is arecanut chewing, other contributory risk factors are tobacco chewing, malnutrition, high intake of chillies, vitamin deficiencies. The mainstay of treatment is habit cessation, symptom alleviation improving mouth opening and long term follow up for prevention of transformation into malignancy. Several pharmacological agents are reported to have been used in the treatment of OSMF with varied outcomes.

UNDERSTANDING PATIENT FLOW: TRANSFORMING DENTAL SERVICE DELIVERY

Presented by: Jilna A C, Amina Nourin R

Supervisor: Dr JITHESH JAIN, PROFESSOR AND HEAD

College/University: CIDS

Need of the Study: Healthcare utilisation is the actual attendance of general population at healthcare facilities to receive care. This is influenced by complex set of factors. Behavioural, socio-economic and culturally related factors and need-based factors contribute to people's decision to either go for care or seek professional assistance for their dental problems especially in rural areas. The main factors among this might be the distance to get the dental care. In India, dental care is provided mainly by government dental clinics, dental colleges, private clinics.

Aim of the Study: A cross-sectional study was conducted to estimate the geographic distribution of patients and the demographic factors from the secondary data of patients visiting a private dental college in Karnataka.

Materials and Methodology: Data from 751 patients visited the OPD in one month period was extracted and categorised according to age, gender, location and the distance travelled to reach out the dental college from their residential area. Distance from their residential area to dental college was calculated for individual patients categorized according to the address given. The distance was mapped and the data was analysed.

Result: The data from 751 patients showed that, out of the 408 patients from Karnataka, the most frequent visitors to the dental college were from Virajpet (70 patients), while the fewest were from Shivamoga, Athur, Napolu, and other locations. Of the 343 patients who are travelling from Kerala, 128 are from Kannur, with the remaining patients coming from Payyavoor, Karur, Thrissur, and other locations. The gender distribution showed that 335 women and 416 men received treatment at the college.

PHYSICAL AND SOCIAL NICOTINE DEPENDENCE AMONG COLLEGE GOING STUDENTS IN MYSORE CITY, INDIA

Presented by: Maanya CP, Akash C

Supervisor: Sunitha S

College/University: JSS

Introduction: The World Health Organization had predicted deaths in India due to tobacco may exceed 1.5 million annually by 2020. Smoking is typically thought to be maintained by nicotine dependence, that smokers are motivated to smoke frequently throughout the day to maintain nicotine levels to avoid lapsing into nicotine. Hence, this study was conducted.

Objectives: (1) Assess and compare physical and social nicotine dependence between different smoking profiles of degree college students in Mysore city; (2) Determine the predictors of high physical and social nicotine dependence among them. Method: Cross-sectional study among students in ten-degree colleges of Mysore, India. Cluster random sampling technique. Design reviewed and approved by the Institutional Ethical Committee. 1090 students participated.

Result: Binary logistic regression to predict high physical and social nicotine dependence. 'B.A course' ($\beta=2.06$) was only significant ($p < 0.05$). Factors predicting high social nicotine dependence included 'studying B.Sc. course' ($\beta=1.16$), 'studying B.B.M course' ($\beta=1.12$), 'studying B. Com course' ($\beta=0.88$), 'Daily Social Smoker' ($\beta=1.04$), 'a Daily Anytime Smoker' ($\beta=1.28$) and 'Non-daily Social smoker' ($\beta=1.92$). The odds of having high social nicotine dependence were the highest for the NDSS group and for the B.Sc group.

Discussion: Current research examined socio-demographic and smoking-related factors with physical and social nicotine dependence to predict high dependence levels across five smoking profiles the first ever attempt to study the effect of both smoking frequency and smoking situation resulting in 5 smoking profiles with distinct characteristics being compared.

POSTURAL ASSESSMENT AND CONCOMITANT MUSCULOSKELETAL PAIN IN UNDERGRADUATE STUDENTS: A KINOVEA-BASED ERGONOMIC INTERVENTION STUDY

Presented by: Kiran N Nambiar, Ujjwal Kumar

Supervisor: Dr. Meenakshi S - Lecturer

College/University: JSS

Work-related musculoskeletal disorders (MSDs) pose a significant health risk to dental professionals, who are often unrecognized in the high-risk field. Ergonomics, which focuses on aligning work environments with individual needs, can improve efficiency and well-being.

Aim: Evaluate the occurrence of work-related musculoskeletal disorders (WMSDs) among

second-year dental students, as well as their understanding of ergonomic principles and the application of this knowledge to cultivate essential skills for their clinical training.

Subjects and Methods: 98 second-year dental students from JSS Dental College participated in the study, engaging in preclinical lab activities. Participants completed a questionnaire outlining the study protocol, and the Rapid Upper Limb Assessment (RULA) was used to evaluate risk factors for work-related disorders. Musculoskeletal disorders were assessed using the Nordic standard questionnaire, while demographic data were collected through another questionnaire.

Statistical Analysis Used: The data was collected and statistically analyzed from 81 of the 98 test subjects.

Results: The study sample included 30 male and 51 female dentists. The assessment of the physical condition of the test subjects revealed that 82.8% of them were at high risk of musculoskeletal disorders. Most musculoskeletal pain was in the neck (88%), followed by the upper and lower back (62%). In addition, 68.9% of the test subjects had experienced pain at least once in the last year.

Conclusion: Students recognized the importance of integrating dental ergonomics from the start of mannequin training. Research supports incorporating ergonomics into dental education, and students should also be trained on occupational musculoskeletal disorders.

MASKING EFFICACY OF RESTORATIVE MATERIALS FOR PRIMARY TEETH FOLLOWING STAINING WITH SDF 38%: AN IN VITRO STUDY

Presented by: Ha Thi Minh Phuong, Chu Thi Hong Ha

Supervisor: Dr. Nguyen Ha Thu, MSc

College/University:

A randomised controlled in vitro study was conducted to identify the color of primary anterior teeth and evaluate the potential masking of different restorative materials following staining with SDF 38%. 80 non-carious primary incisors and canines were collected and randomly assigned into four groups: (1) SDF only (control group), (2) SDF + Fuji VII, (3) SDF + DeltaFil, (4) SDF + G - aenial Universal Injectable. After preparing cavities, demineralising with acid phosphoric 37%, and applying SDF 38%, teeth were filled with different restorative materials corresponding to their groups. Colors were measured using Vita Easyshade V at selected time intervals. Colour changes were calculated using ΔE of CIELAB colour space. All groups exhibited significant colour changes ($\Delta E > 3.3$). The lowest ΔE value was found in the Fuji VII group (29.7 ± 9.7), followed by the DeltaFil group (37.2 ± 11.7), the G - aenial Universal Injectable group (42.2 ± 1.6), and the highest in the control group (67.4 ± 3.7). The differences were statistically significant ($p < 0.05$). GIC restorative materials provide superior color masking ability for teeth treated with SDF 38% compared to composite restorations. Restoring teeth treated with SDF 38% using restorative materials enhances aesthetics, particularly in the anterior region.

Original research

Posters

Content

S. No	Title	Page No
1	Analysis Of Indian Population Using Oral Hygiene Products With Special Emphasis On Utilization Of Toothpaste And Mouth Rinse	39
2	Dental Stem Cells In Intraoral Regenerative Therapy: A Systematic Review	39
3	Effect Of The 1450 Ppm Fluoride Toothpaste On The Enamel Remineralization: An In-Vitro And Pilot Study	40
4	Three-Dimensional Assessment Of Maxillary Sinus Volume In Different Age And Sex Groups In The Vietnamese Population Using Cbct: Significance Of Sinus Lift And Implant Placement	41
5	Musculoskeletal Disorders Among Dental Professionals In Malaysia	42
6	Awareness And Knowledge About Ground Sections And Ground Sectioning Of Teeth/Bone Amongst Dental Students	42
7	Arresting Early Childhood Caries With Silver Diamine Fluoride Gel: Protocol For A Randomised Clinical Trial	43
8	Smear Layer Removal And Micro Hardness Of Root Canal Dentin After Chemo-Mechanical Procedure Using Different Types Of Disinfection Solution	44

ANALYSIS OF INDIAN POPULATION USING ORAL HYGIENE PRODUCTS WITH SPECIAL EMPHASIS ON UTILIZATION OF TOOTHPASTE AND MOUTH RINSE

Presented by: Kiran N Nambiar, Ujjwal Kumar

Supervisor: Dr. Nandlal B

College/University: JSS

The aim is to establish an analysis of Indian population with respect to usage of dental products along with in depth assessment on toothpaste and mouth rinses. According to a recent worldwide health survey, just 45% of Indians clean their teeth twice a day, compared to 78–83 percent of other individuals worldwide. The growing frequency of dental maladies, rising disposable incomes, and enhanced understanding of oral hygiene are all factors driving India's sizable rapidly scaling oral care industry. With over 60% of the Indian oral care market share, toothpaste is the largest segment in the oral care sector. The toothbrush is the second-largest sector, subsequently followed by mouthwash and dental floss. In the Indian marketplace, Colgate Palmolive India Limited is the market leader in terms of value, product type, and customer acquisition followed by HUL and Dabur. The majority of Indians use toothpaste as their primary dental care product because they are unaware of additional alternatives, lack exposure to product information, and the market in general being conservative. Dental care products commercially marketed in general retail marketplaces are more readily available and offer a wider range of possibilities than those supplied in health care facilities like pharmacies, hospitals, and clinics. In conclusion, the Indian population generally uses fewer oral health products overall, with a stronger preference for the toothpaste market. In the short term, there currently will be a developing preference towards mouth rinses in addition to greater awareness of the products and the significance of preserving personal oral health.

DENTAL STEM CELLS IN INTRAORAL REGENERATIVE THERAPY: A SYSTEMATIC REVIEW

Presented by: Alfina V K, Gayathri S Chandran

Supervisor: Dr Asmin P K,

College/University: CIDS

Objective: 1) To critically review the published literature on applications of dental stem cells in the regeneration of intraoral tissues. 2) To provide an evidence-based level on research regarding application of dental stem cells in intraoral tissues regeneration.

Methodology: This systematic review (PROSPERO Protocol I.D. CRD42020206567) is conducted as per the JBI guidelines and reported as per the PRISMA. An initial literature search of papers published in the last 20 years and yielded 421 manuscripts. Nineteen studies satisfied

the inclusion/exclusion criteria and were included for qualitative synthesis. Studies were categorized as animal (11) and human (8) trials. Evidence levels were assessed based on JBI Criteria.

Results: Animal trials mainly focused on periodontal regeneration. A high risk of bias was found amongst animal studies. Laboratory, clinical and radiographic evaluation were used to assess the outcome. A total of Eight Human studies were conducted on a total samples size of 153 upon a wide age ranging from seven years to 60 years. Nearly 70% of the human studies used DPSC for regenerating alveolar bone defects.

Conclusion: Appropriate well designed double-blind randomized clinical trials of longer duration are yet to be performed. Evidence for the included studies were 1C and 1D as per the JBI Criteria. Stem cell therapy demonstrated promising results in Periodontal tissue and alveolar bone regeneration. However, the number of studies to claim such a benefit are very limited.

Keywords: Dental stem cell (DSCs); Stem cells from human exfoliated deciduous teeth (SHED); Dental pulp stem cells (DPSC).

EFFECT OF THE 1450 PPM FLUORIDE TOOTHPASTE ON THE ENAMEL REMINERALIZATION: AN IN-VITRO AND PILOT STUDY

Presented by: Hoàng Thanh Tâm

Supervisor: Assoc. Prof. Vu Manh Tuan

College/University: Hanoi Medical University

Objectives: This study aimed to evaluate the remineralization efficacy of toothpaste containing 1450ppm fluoride by assesing enamel surface hardness in in-vitro.

Subjects and methods: The study subjects consisted of 36 enamel samples taken from extracted permanent third molars ($n = 36$). The enamel samples were initially demineralized to simulate early-stage caries lesions, then randomly divided into three groups and subjected to a pH cycling remineralization process for 14 days. Each group (12 teeth) was treated with different toothpastes containing 0 ppm fluoride (Group 1), 550 ppm fluoride (Group 2), and 1450 ppm fluoride (Group 3). The enamel surface hardness (VHN – Vickers Hardness) and the percentage change in hardness were measured at baseline, post-demineralization, and post-remineralization.

Results: After demineralization, the mean VHN values were as follows: Group 1: 155.58 ± 68.28 , Group 2: 108.25 ± 50.81 , Group 3: 121.17 ± 48.41 . After remineralization, the mean VHN values decreased in Group 1 but increased in Groups 2 and 3. Group 3, treated with toothpaste containing 1450 ppm fluoride, showed the highest mean VHN value post-remineralization (185.25 ± 81.22).

Conclusion: Toothpaste containing 1450 ppm fluoride demonstrated a remineralization effect, increasing enamel surface hardness after demineralization in in-vitro. Toothpastes with 0 ppm and 550 ppm fluoride did not show this effect in in-vitro.

Keywords: Remineralization, toothpaste, 1450ppm fluoride, enamel surface, hardness

THREE-DIMENSIONAL ASSESSMENT OF MAXILLARY SINUS VOLUME IN DIFFERENT AGE AND SEX GROUPS IN THE VIETNAMESE POPULATION USING CBCT: SIGNIFICANCE OF SINUS LIFT AND IMPLANT PLACEMENT

Presented by: Nam Le Hai Nguyen Thanh Ngoc Thien Le

Supervisor: Dr Lam Nguyen Le

College/University: Can Tho University of Medicine and Pharmacy

Background and Objectives: The maxillary sinus is the largest among the paranasal sinuses and holds significant relevance in dentistry and maxillofacial surgery, especially in sinus lift procedures during implant placements. The aim of this study is to evaluate the correlation between the volume of the maxillary sinus and factors such as gender, age, and the condition of the upper molars.

Material and Methods: In this retrospective study, 130 CBCT images of Vietnamese patients were obtained for various clinical indications from 2023 to 2024 at Can Tho University of Medicine and Pharmacy. The study was conducted from June to December 2024. A convenience sampling method was used. CBCT data were processed using GALILEOS version 1.8, MIMICS 26.0 software and analyzed with SPSS 20.0 statistical software.

Result and Discussion: The study found no significant difference in the volume of the maxillary sinus between both sides; however, men exhibited larger volumes compared to women. The volume peaked between the ages of 18–24 and gradually decreased with age ($p < 0.05$). The maxillary sinus volume was affected by the loss of upper molars, but this factor showed no statistically significant difference. The results were largely consistent with previous studies.

Conclusion: The findings align with existing literature, indicating that gender, age, and dental condition influence the volume of the maxillary sinus. CBCT, a 3D technique, provides accurate measurements and is highly beneficial to clinicians in diagnosing, treatment planning, and preventing complications.

MUSCULOSKELETAL DISORDERS AMONG DENTAL PROFESSIONALS IN MALAYSIA

Presented by: Tan Jiun Jie, Celine Ko, Previnjit Kaur

Supervisor: ASSOC. PROF. DR G. PADMANABHA KUMAR

College/University: MAHSA University

Introduction: Musculoskeletal disorders (MSD) are highly prevalent among dental professionals due to prolonged static postures and poor ergonomic practices. This study examines the prevalence of MSD among dental professionals in Malaysia, identifies key ergonomic risk factors, and assesses the impact of ergonomic tools usage on MSD.

Materials & Methods: A cross-sectional study was conducted among 459 dental professionals. Data on demographic variables, ergonomic practices, and MSD prevalence were collected. Chi-square tests were performed to analyze associations between ergonomic factors and MSD occurrence.

Results: Participants had a 89.08% prevalence of MSD, indicating a persistent occupational health hazard. Frequent neck torsion/flexion ($p < 0.001$), poor instrument accessibility ($p < 0.001$), poor sitting posture ($p < 0.001$), and lack of post-work stretching exercises ($p = 0.046$) were among the significant risk variables for MSD that were found by chi-square analysis. However, the use of ergonomic tools, including magnifying loupes, did not significantly correlate with MSD ($p = 0.179$), indicating that workplace ergonomics and posture are of greater significance than tool utilisation alone.

Conclusion: MSD remains a critical issue among dental professionals. In order to reduce the risk of MSDs, the results highlight the necessity of better posture instruction, ergonomic workstation adjustments, and frequent stretching exercises. Unless paired with appropriate ergonomic practices, using ergonomic instruments like loupes alone might not be enough to avoid MSD.

AWARENESS AND KNOWLEDGE ABOUT GROUND SECTIONS AND GROUND SECTIONING OF TEETH/BONE AMONGST DENTAL STUDENTS

Presented by: Surbhi Singla, Sakshi Yadav

Supervisor: Dr. Pulin Saluja Associate professor

College/University: SGT

Aim & Objectives: To evaluate Awareness and Knowledge about the Ground section and Ground Sectioning of teeth/Bone amongst Dental students in a Dental College in Gurugram. Ground sections of teeth or bone have been always contemplated as a panacea for studying

any hard tissues in the study of histopathology. A lot many studies have been undertaken to understand structure of enamel and dentin, cemental annulations, course of dental caries, morphology of bone, forensic odontology etc. This Ground sectioning and Ground sections therefore form an important area of research. We make our dental graduates do this exercise in II BDS. But we seldom assess the knowledge they have about various aspects of Ground sectioning. The present study was an attempt to evaluate the knowledge undergraduates and postgraduates possess about the topic and also to know how much aware they are to do this in the right way.

Method: The present cross-sectional questionnaire based study was done with BDS and MDS students of SGT Dental College, Gurugram. The data recorded was subjected to statistical analysis.

Results: Through the present study we found that though the students do this exercise as part of their curriculum but have very less knowledge about the topic.

Conclusion: Knowledge is of no value unless you put it into practice and superficial knowledge is even more dangerous. We need to work in this area. Either a chapter should be added or proper knowledge should be disseminated amongst the students before they perform the exercise.

ARRESTING EARLY CHILDHOOD CARIES WITH SILVER DIAMINE FLUORIDE GEL: PROTOCOL FOR A RANDOMISED CLINICAL TRIAL

Presented by: Anthony Yihong Cheng, Kitty Jieyi Chen

Supervisor: Prof. Chun Hung Chu

College/University: The University of Hong Kong

Early childhood caries (ECC) constitutes the most prevalent chronic childhood disease globally. Silver diamine fluoride (SDF), recognized by the World Health Organization as an essential medicine for ECC management, is conventionally available as a 38% aqueous solution. A newly developed 38% SDF gel addresses the clinical limitations of the conventional solution's watery consistency. This study aims to evaluate the non-inferiority of the 38% SDF gel compared to the conventional solution in arresting ECC.

This 30-month randomized; active-controlled, parallel-group non-inferiority pragmatic clinical trial will recruit 630 three-year-old kindergarten children. Using block randomization, participants will receive semi-annual applications of either SDF gel or solution on cavitated carious lesions in primary teeth. The study hypothesizes that the 38% SDF gel is not worse than the 38% SDF solution by a non-inferiority margin of 10% caries-arrest rate. The primary outcome is the proportion of active carious surfaces that become arrested at 30 months. The same calibrated dentist will conduct 6-monthly dental examinations to assess carious lesion status. The examiner, children, and parents will be blinded to treatments. Parental surveys will

assess child's oral health-related behaviours and socioeconomic background to account for potential effect modification.

If the anticipated results are obtained, the findings will validate the 38% SDF gel as an alternative to the conventional solution. The SDF gel's attributes—cost-effectiveness, non-invasiveness, and absence of aerosol generation—position it as a potentially superior intervention for ECC management, particularly in resource-limited settings.

SMEAR LAYER REMOVAL AND MICRO HARDNESS OF ROOT CANAL DENTIN AFTER CHEMO-MECHANICAL PROCEDURE USING DIFFERENT TYPES OF DISINFECTION SOLUTION

Presented by: Yu Jie Teoh, Rosnani Mamat

Supervisor: Associate Professor Dr Nik Rozainah Nik Abdul Ghani

College/University: School of Dental Sciences, University Sains Malaysia

Introduction: Root canal treatment aims to eliminate microbial infection in the root canal system. However, the smear layer's deposition and disinfection solution effect on root canal dentinal hardness during the procedure may hinder the treatment outcome. This study aims to compare the effectiveness of four irrigation solutions on smear layer removal and root dentin microhardness.

Methods: Thirty extracted maxillary central incisors were randomly divided into five groups (n=6). Group I (Normal saline, negative control), Group II (2.5% NaOCl), Group III (17% EDTA), Group IV (120 mg/ml aqueous extract of *Cymbopogon citratus*), Group V (Oxyionic solution). Irrigation using respective solutions was done in 2ml per minute, up to 10 ml. The samples were vertically split into half. One sample from each group was selected for the smear layer observation. Weighted Cohen's Kappa test was conducted for assessment. The remaining samples were included in the microhardness test. Results were statistically analysed with SPSS version 29 and one-way variance analysis (ANOVA) at $\alpha = 0.05$.

Results: Group III showed less smear layer both in the middle third and apical third. Microhardness test showed no significant difference among the five experimental groups ($p > 0.05$). Nevertheless, Group II and Group V showed comparable results to the negative control group.

Discussion and Conclusion: 17% EDTA was the most effective solution for smear layer removal, while 2.5% NaOCl and Oxyionic solution had minimal impact on dentin microhardness. Further studies are necessary to explore the *C. citratus* in different concentrations and on cell toxicity.

Keywords: Root canal treatment, smear layer, microhardness, irrigation, disinfection

Literature review Papers

Content

S. No	Title	Page No
1	Effectiveness Of Ozone Therapy In Conservative Dentistry	47
2	Histopathological Bodies: Markers Of Mystery In Stained Glass	47
3	Early Detection, Diagnosis Of Early Caries	48
4	Virtual Surgical Planning (VSP) In Maxillofacial Onco Surgery- A Bridging Era Of Digital Dentistry And Its Surgical Outcomes	49
5	Revolutionizing Dental Education: The Impact Of AI Chatbots And Large Language Models On Teaching And Learning.	49
6	Post-Extraction Alveolar Bone Resorption And Alveolar Ridge Preservation (ARP) - A Review	50
7	16s Gene Isolation And Its Role In Implant Failure And Periodontal Diseases	51
8	Artificial Intelligence In Dentistry A Ray Of Hope	52
9	Thyroid Disorders And Oral Health: Dentists Perspective	52
10	Rehabilitation Of A Partial Hemimaxillectomy Patient With A Hollow Obturator Prosthesis Using The Lost Salt Technique	53
11	Illuminating Dentistry: Photodynamic Therapy In Modern Treatments	54
12	Invisible Myths, Visible Truths-Reality Of Aligners	54
13	Nanotechnology In Dentistry: The Role Of Antimicrobial Nanoparticles	55
14	Herbs And Healing: The Role Of Ayurveda In Dentistry	56
15	Histopathological Bodies: Markers Of Mystery In Stained Glass	57
16	Rehabilitation Of A Partial Hemimaxillectomy Patient With A Hollow Obturator Prosthesis Using The Lost Salt Technique	58
17	Invisible Myths, Visible Truths-Reality Of Aligners	59
18	Herbs And Healing : The Role Of Ayurveda In Dentistry	59
19	Histopathological Bodies: Markers Of Mystery In Stained Glass	60

EFFECTIVENESS OF OZONE THERAPY IN CONSERVATIVE DENTISTRY

Presented by: Pooja Ravichandran, Vachan A B

Supervisor: Dr. Swetha H B

College/University: RRDCH

Ozone is a form of oxygen which has shown to be fruitful in the management of various diseases for many years now. Ozone therapy is slowly emerging as an alternative treatment modality for many dental pathologies catering to all age groups. It has proven to be beneficial than conventional strategies with applications to dental treatment. It's quite inexpensive, predictable and conservative. It has proven to halt primary root caries, primary pit and fissure decay and clinically reverse the lesion Treatment done with ozone reduces the treatment time as well as eliminates the bacterial count. The treatment is painless and increases the patient acceptability. It has a very potent anti-inflammatory property along with a favourable cellular and humoral immune response. It's ability to arrest and reverse carious lesions in a predictable way opened up a new chapter in minimal intervention dentistry. It's efficacy in curbing resistant poly microbial root canal flora appears very promising. It can be used to remove discolouration of tooth. Variety of biological mechanisms acting through multiple biochemical target pathways were reported to be responsible for the therapeutic effects of ozone Therapeutic goals of ozone therapy is increasing circulation in gums, activating immune system, encourages body to use its own antioxidant, encourages body to restore correct oxygen metabolism. The main beneficial effects of ozone occurred in the following domains: antimicrobial, remineralization and microstructural changes of hard dental tissues. Despite the benefits, one must also consider the adverse effects and contraindications of ozone treatment. In this paper review, I'll be talking about it's benefits in conservative dentistry.

HISTOPATHOLOGICAL BODIES: MARKERS OF MYSTERY IN STAINED GLASS

Presented by: Dr. Hemanth Rangaswamy

Supervisor: Dr. Priya NS

College/University: VSDC

Histopathological bodies are microscopic storytellers, capturing disease processes like mysteries frozen in stained glass. These cellular and extracellular structures—Civatte bodies in lichen planus, Verocay bodies in schwannomas, and Russell bodies in chronic inflammation—serve as vital diagnostic markers in oral pathology. Their distinct morphology and staining characteristics provide crucial insights into infections, immune disorders, and neoplastic conditions, aiding in accurate diagnosis and treatment planning.

Beyond their diagnostic significance, these enigmatic structures reflect the intricate cellular

responses to disease, offering a deeper understanding of tissue pathology. Their presence in oral lesions provides clues to disease progression, prognosis, and potential therapeutic targets, making them indispensable in both research and clinical practice. This review delves into the classification, histological significance, and clinical relevance of histopathological bodies, presenting comparative tables, case-based discussions, and visually enhanced infographics to make complex concepts more accessible and engaging.

By bridging traditional microscopy with deeper pathological insights, this article highlights the enduring relevance of histopathological bodies in oral pathology and disease diagnosis. As we continue to decode their hidden messages, these stained-glass markers serve as guiding beacons in histopathology, helping to unravel disease mechanisms, refine diagnostic accuracy, and enhance patient care. The study of these bodies is not merely an academic pursuit but a journey into the microscopic realm where pathology meets precision.

EARLY DETECTION, DIAGNOSIS OF EARLY CARIES

Presented by: Shreyoshee Neogi, Sanjana R

Supervisor: Dr. Swetha H.B - professor

College/University: RRDCH

Introduction: Dental caries is a significant global health concern, affecting individuals across all age groups. Contributing factors include bacterial activity, dietary habits, and inadequate oral hygiene. Early detection and accurate diagnosis are essential for preventing disease progression and reducing the need for invasive treatments.

Methods: Recent advancements in dental technology, such as fluorescence-based imaging, artificial intelligence, and digital systems, have enabled personalized and non-invasive strategies for managing dental caries. By integrating these technologies better preventive care is taken.

Results: The application of cutting-edge technologies demonstrated improved accuracy in early detection and diagnosis of caries. Non-invasive techniques facilitated effective disease management, leading to better patient outcomes.

Discussion: By adopting innovative tools and strategies, dental professionals can enhance early intervention, reduce the global burden of caries, and improve patient care. Future research should continue to refine these technologies and expand their accessibility to underserved populations.

VIRTUAL SURGICAL PLANNING(VSP) IN MAXILLOFACIAL ONCO SURGERY- A BRIDGING ERA OF DIGITAL DENTISRTY AND ITS SURGICAL OUTCOMES

Presented by: Darshika Agarwal

Supervisor: Dr Akshay AB

College/University: SDM

Introduction: Oral cancer is a prevalent malignancy worldwide, posses' significant challenge in its management, due to its aggressive nature, late diagnosis and complex treatment modalities. Effective management involves a multidisciplinary approach, combining early detection, precise diagnosis and personalized therapeutic strategies. Virtual surgical planning (VSP) has emerged as a transformative tool in modern surgical practice, and is transforming the landscape of oral cancer management. Primary objective of this study is to examines the role of VSP in enhancing surgical outcomes, with a focus on its applications in oncological primary resections and reconstructions.

Domain of Intervention and Clinical Implication: Virtual surgical planning (VSP) with computer-aided design and computer-aided machining (CAD/CAM) enables the opportunity to provide personalized medicine in complex head and neck surgeries. This innovative technology allows ablative and reconstructive surgeons to virtually create and manipulate three-dimensional anatomic models, which could eventually help surgeons in planning both resection and reconstruction. The integration of 3D printing with VSP facilitates the creation of patient specific surgical guides, customized fixation hardware, prosthetics and implants.

This results in improved surgical accuracy and efficiency.

Conclusion: As with any technologic advancement there is always a flip side to the coin, challenges such as high cost, technical training requirements, and limited accessibility in resource constrained setting remain a barrier to widespread adoption. These obstacles can be overcome by establishing 3D point care centers within healthcare facilities, to impart a precision guided surgical outcomes.

REVOLUTIONIZING DENTAL EDUCATION: THE IMPACT OF AI CHATBOTS AND LARGE LANGUAGE MODELS ON TEACHING AND LEARNING.

Presented by: Khushali R. Goswami

Supervisor: Dr. Shailaja Sankireddy

College/University: College of Dental Sciences, Amargadh

The integration of Artificial Intelligence (AI) chatbots and large language models (LLMs) in dental education is gaining significant attention, transforming the way educators and students interact with learning materials. AI-powered tools such as ChatGPT and Google Gemini have

demonstrated their potential in enhancing knowledge acquisition, clinical decision-making, and research capabilities in dentistry. A global cross-sectional survey of 428 dental educators across multiple continents explored their perceptions, benefits, and challenges regarding AI chatbots in dental education. 31% of respondents actively use AI tools, and 64% recognize their potential, though regional variations exist in adoption rates.

Educators highlighted AI's ability to improve research efficiency (68.5%), support clinical decision-making (63.6%), and personalize learning experiences. However, concerns about reduced human interaction (53.9%), lack of clear guidelines, and inadequate AI training persist. Additionally, AI-driven learning raises ethical concerns, including data privacy, plagiarism risks, and the reliability of AI-generated information. While AI chatbots show promise in enhancing student engagement and assessment, many educators remain cautious due to the lack of institutional regulations and structured implementation strategies.

Future directions include developing standardized AI integration guidelines, conducting multicenter research on AI's impact on dental curricula, and training educators for effective AI utilization. Addressing these challenges will ensure that AI tools serve as a complement rather than a replacement for traditional education, paving the way for an innovative, interactive, and AI-driven future in dental education.

POST-EXTRACTION ALVEOLAR BONE RESORPTION AND ALVEOLAR RIDGE PRESERVATION (ARP) - A REVIEW

Presented by: Maheshacharya M Badiger

Supervisor: Dr. Prashanth, Dr. Priya, Dr. Niveditha

College/University: VSDC

Introduction: Post-extraction alveolar bone resorption is a well-documented phenomenon that can compromise future prosthetic rehabilitation, particularly dental implant placement. This review aims to provide a comprehensive overview of the available literature on post-extraction alveolar bone resorption and the efficacy of alveolar ridge preservation (ARP) techniques in mitigating this resorption.

Discussion: We conducted a search of major databases and Publications to identify relevant randomized controlled trials (RCTs), prospective studies, and retrospective studies published in English. Data were extracted and analyzed regarding the extent of alveolar bone resorption, different ARP techniques, materials used, and their effectiveness in minimizing ridge alterations.

Conclusion: Our findings indicate that significant alveolar bone resorption occurs following tooth extraction, particularly in the bucco-lingual dimension. ARP techniques, including the use of bone grafts, barrier membranes, and combinations thereof, demonstrate varying degrees

of success in preserving the alveolar ridge dimensions. Further research is needed to identify the most effective ARP protocols and to evaluate their long-term clinical and radiographic outcomes.

16S GENE ISOLATION AND ITS ROLE IN IMPLANT FAILURE AND PERIODONTAL DISEASES

Presented by: Shail Kumari

Supervisor: Dr Sangeetha,

College/University: Saveetha Dental College

The 16S ribosomal RNA (rRNA) gene, a highly conserved region of bacterial genomes, serves as a critical marker for identifying and characterizing microbial communities in various environments, including the oral cavity. In the context of implant failures and periodontal disease, the 16S gene offers valuable insight into the microbial etiologies contributing to these conditions. Dental implants, although widely used, can fail due to biofilm formation on implant surfaces, leading to peri-implantitis, a condition characterized by inflammation and tissue destruction. Similarly, periodontal disease is caused by dysbiosis in the subgingival microbiome, where pathogenic bacteria outgrow beneficial species, causing chronic inflammation and tissue damage.

Recent studies utilizing 16S rRNA gene sequencing have identified specific bacterial taxa associated with both implant failure and periodontal disease. Pathogens such as *Porphyromonas gingivalis*, *Fusobacterium nucleatum*, and *Treponema denticola* are common in the microbiota of peri-implantitis and periodontitis sites. The 16S gene analysis enables the detection of these microorganisms even in low-abundance states, offering a more precise and comprehensive understanding of the microbial landscape. Moreover, the identification of microbial signatures associated with inflammation provides potential targets for diagnostic markers and therapeutic interventions.

Understanding the role of the 16S rRNA gene in the microbial communities of periodontal disease and implant failures underscores the importance of microbial monitoring and early intervention strategies. By identifying pathogenic species early, clinicians can tailor treatment protocols, reduce implant complications, and mitigate the progression of periodontal diseases, ultimately improving oral health outcomes.

ARTIFICIAL INTELLIGENCE IN DENTISTRY A RAY OF HOPE

Presented by: Dr. Shantanu Kumar

Supervisor: Dr. Mahesh Kumar TS

College/University: RRDCH

Artificial Intelligence (AI) is making a significant impact on the field of dentistry, revolutionizing both clinical practice and patient management. AI technologies, including machine learning and deep learning, are increasingly being used to enhance diagnostic accuracy, treatment planning, and overall patient care. In diagnostic applications, AI is utilized for the interpretation of dental radiographs, enabling the early detection of conditions such as cavities, periodontal diseases, and oral cancers, with improved precision and speed compared to traditional methods.

Furthermore, AI has proven beneficial in orthodontics and surgical procedures. Beyond clinical functions, AI is transforming administrative aspects of dental practices. AI applications help streamline appointment scheduling, patient communication, and billing processes, reducing human error and improving efficiency.

As AI continues to evolve, its integration into dentistry holds the promise of enhancing productivity, improving accuracy, and ensuring better patient experiences. By addressing both clinical and administrative challenges, AI has the potential to revolutionize the dental landscape and improve overall healthcare delivery.

THYROID DISORDERS AND ORAL HEALTH: DENTISTS PERSPECTIVE

Presented by: Ridhi Ranka

Supervisor: Dr Poornima G

College/University: RRDCH

The thyroid gland secretes essential hormones for the growth regulation, development, metabolic, vital functions and activities of the body. Thyroid dysfunction includes many conditions that can indirectly affect dental treatments. Patients with thyroid dysfunction have become a common occurrence in dental practice all over the world. The undetected cases are a higher risk factor as it may pose a serious threat to the patient in any of the dental practice being followed. Therefore, it is deemed necessary for dental professionals to take safety measures and treatment amendments when providing dental treatment to such patients. Thorough knowledge of the clinical manifestations of thyroid disorders helps dentists to recognize any related complication. This paper presents an overview of thyroid disorders, oral manifestations and dental management of thyroid disorders.

REHABILITATION OF A PARTIAL HEMIMAXILLECTOMY PATIENT WITH A HOLLOW OBTURATOR PROSTHESIS USING THE LOST SALT TECHNIQUE

Presented by: Syed Viqhar Ahmed

Supervisor: Lakshmi, C. B. Shanthana,

College/University: Sri Rajiv Gandhi College of Dental Sciences

Introduction: Maxillary obturator prostheses are essential for rehabilitating patients post-partial or total maxillectomy, often necessitated by congenital defects or acquired conditions like oral neoplasms. This case report describes the management of a 68-year-old patient with mucoepidermoid carcinoma of the left palate, leading to impaired masticatory and phonological functions.

Methods: The treatment involved surgical resection of the tumor and a three-phase prosthodontic rehabilitation: immediate surgical obturator, interim hollow bulb obturator, and definitive hollow bulb obturator. The lost salt technique was employed to reduce the prosthesis weight. Salt was packed into the hollow portion, covered with self-cure acrylic, and later removed by perforation and water irrigation.

Results: The interim hollow bulb obturator was fabricated using heat-cure acrylic resin, with retention achieved through mechanical and muscular control mechanisms. The prosthesis was lightweight, functional, and esthetically acceptable. The patient reported improved masticatory function and speech post-rehabilitation.

Discussion: The lost salt technique proved effective in reducing prosthesis weight while maintaining structural integrity. This method is simple, cost-effective, and avoids the challenges associated with removing other hollowing materials. However, the report lacks long-term follow-up data on patient adaptation, functional outcomes, and potential complications. Additionally, while the lost salt technique is well-described, a more detailed comparison with alternative hollowing methods (e.g., polyurethane foam, silicone) would enhance the discussion.

Conclusion: This case highlights the successful rehabilitation of a partial hemimaxillectomy patient using a hollow obturator prosthesis fabricated with the lost salt technique. Immediate and interim obturators are crucial for functional recovery and improving patient outcomes post-maxillectomy.

ILLUMINATING DENTISTRY: PHOTODYNAMIC THERAPY IN MODERN TREATMENTS

Presented by: Saanvi Chowdhary

Supervisor: Dr. David K

College/University: Manipal College of Dental Science, Mangalore

In this age of minimally invasive dentistry significant growth in scientific and technological advancements has resulted in a wide range of novel treatment modalities. One such advancement is photodynamic therapy that utilizes the power of light to deliver precise, painless and effective treatments. PDT harnesses the synergy of light, a photosensitizing dye and the oxygen present in the tissues to produce reactive oxygen species (ROS) that induce oxidative stress and selectively impair cellular components. This principle operates by triggering a non-thermal chemical reaction triggered by exposure to light of a specific wavelength that activates the photosensitizer leading to formation of an excited triplet state that generates ROS. PDT has been utilized in a myriad of treatments across dentistry and medicine as an adjunctive or alternative modality. The most prominent application of PDT is the treatment of cancer including oral cancers and premalignant lesions owing to its potential for selective tumor ablation. Another major application of PDT in dentistry is as an adjunct to non-surgical periodontal therapy and has shown a significant reduction in clinical parameters. PDT can similarly be employed in the treatment of various pathologies like endodontic treatment, dental caries, oral candidiasis and orofacial viral infections. The road to fully realizing the potential of PDT is paved with both challenges and opportunities and by embracing these we will continue to advance in this exciting field.

INVISIBLE MYTHS, VISIBLE TRUTHS-REALITY OF ALIGNERS

Presented by: Faariha Meher

Supervisor: Dr. Bilal Ahamed

College/University: SJM Dental college and hospital

Clear aligners have revolutionized orthodontic treatment, offering a nearly invisible and comfortable alternative to traditional braces. However, misconceptions about their effectiveness, limitations, and benefits persist. This paper aims to debunk common myths and reveal the reality of clear aligners.

Many believe aligners work for everyone or that they move teeth faster than braces. In reality, they are most effective for mild to moderate cases, and treatment duration depends on individual needs. Another widespread myth is that aligners require minimal effort, yet consistent wear (20-22 hours daily) is crucial for success. Some assume aligners cause no discomfort, but minor pressure during tooth movement is normal. Additionally, while marketed

as a DIY solution by some brands, professional supervision remains essential to prevent complications.

Beyond aesthetics, aligners offer functional benefits like improved bite alignment and better oral hygiene. They are removable, making eating and cleaning easier, but this also demands patient discipline. Understanding the truths behind aligners helps individuals make informed decisions about their orthodontic care.

By separating myth from fact, this study highlights the real capabilities of clear aligners, empowering users with accurate knowledge to achieve effective and safe results.

NANOTECHNOLOGY IN DENTISTRY: THE ROLE OF ANTIMICROBIAL NANOPARTICLES

Presented by: Chethana S, Zunaira Azeema

Supervisor: Dr. Vinutha M

College/University: JSS

The oral cavity is constantly exposed to a diverse and abundant population of microorganisms. Microbial colonization being a serious problem, the biofilm formed by these microbes presents significant health risks and economic burdens. Thus, the approach helping to control the microbial numbers in infectious hot-spots such as oral cavity are necessary. Since the 1940s, antibiotics have been traditionally used to control microbial numbers and spread. With the recent progress in nanotechnology and advancement of nanomaterial-directed research, the potential of nano size, i.e., 1–100 nm, particles in various applications have been realized. While, nanomaterials have unique properties compared to their micro- and macro-scale counterparts. Due to their small size, high surface reactivity, and multiple mechanisms of action, nanoparticles, and structures have been proven themselves also as effective antimicrobials.

Methods: By thoroughly studying research articles publishes between 2013 to 2024, with the keywords “antimicrobial nanoparticles, nanotechnology, dentistry and oral health” was conducted. Assessment of role of antimicrobial nanotechnology in the dentistry by using the inclusion criteria.

This research explores application antimicrobial nanoparticles in dentistry including restorative dentistry, endodontics, implantology, orthodontics, dental prostheses and periodontal field, highlighting their role in preventing microbial adhesion, reducing biofilm formation, inhibit bacterial growth, surface colonization and biofilm development, by discussing its mechanisms, application advantages and challenges.

Result: Fifteen articles were considered for this review. The effectiveness of various antimicrobial nanoparticles on dental materials was assessed. This review article highlights

both the successes and challenges of antimicrobial nanoparticles to understand the potential and limitations of nanotechnology in dental practice.

Discussions: Incorporating diverse nanoparticles into dental materials and oral care products holds the potential to significantly reduce the risk of infection, control biofilm formation, and improve overall oral health. This review underscores the importance of continued research and development in this promising field to realize the full potential of nanoparticles in dental care. Current evidence suggests an optimistic and exciting future for the use of antimicrobial nanotechnology in improving clinical outcomes in medicine and dentistry. **Keywords:** antimicrobial; nanoparticles; nano-coatings; dentistry; oral health.

HERBS AND HEALING: THE ROLE OF AYURVEDA IN DENTISTRY

Presented by: Pranjal Kalwani

Supervisor: Dr. Sreeshyla H.S

College/University: JSS

Background: Ayurveda is a holistic system of medicine which evolved in India 3000-5000 years ago, and is now practiced in other parts of the world as complementary medicine. The Ayurvedic approach to oral health is rooted in the belief that the body's overall health and balance is a reflection of three doshas; Vata, Pitta, and Kapha.

Introduction: The efficiency of holistic ayurvedic approaches like chewing sticks such as miswak, oil pulling and herbs like Rasayana, Triphala, Tulsi, Neem etc., which aid in better provision of dental care is not widely known. Understanding and unveiling their effects on the body both adverse and favorable will enable us to become better healthcare providers.

Discussion: Medicinal scrolls dated centuries back like the Susruta Samhita and Charaka Samhita highlight the antimicrobial properties of chewing sticks. Oil pulling (Gandusha or Kavala), a practice gaining popularity among the newer generations, has been a go to method for maintaining oral hygiene since centuries. Use of sesame oil and sunflower oil for oil pulling has been credited in the Charaka Samhita for aiding in the cure of various systemic and dental diseases. Use of herbs like Neem and Triphala as natural mouthwashes has been proven to reduce bacterial growth while soothing and strengthen inflamed gums. Chewing onto Licorice root and whole spices like Cloves has also been recommended for protection against dental caries. Tongue scrapping (Jihwa Prakshalana) tools have seen multiple variants ever since the ancient Greek and Roman empires where tools named cyathiscomele and buccinator were used.

Conclusion: Concludingly, this review assesses how by utilizing the former mentioned remedies such as oil pulling, herbs, tongue scrapping and dietary adjustments, Ayurveda not only alleviates oral symptoms but also promotes long-term oral health and overall, well-being. These practices, focused on prevention and detoxification, highlight the deep connections

between oral hygiene and systemic health, offering an effective, natural and personalized alternative to conventional treatments.

HISTOPATHOLOGICAL BODIES: MARKERS OF MYSTERY IN STAINED GLASS

Presented by: Hemanth Rangaswamy, Zaid Addin Shariff

Supervisor: Dr. Priya NS

College/University: VSDC

Histopathological bodies are microscopic storytellers, capturing disease processes like mysteries frozen in stained glass. These cellular and extracellular structures—Civatte bodies in lichen planus, Verocay bodies in schwannomas, and Russell bodies in chronic inflammation—serve as vital diagnostic markers in oral pathology. Their distinct morphology and staining characteristics provide crucial insights into infections, immune disorders, and neoplastic conditions, aiding in accurate diagnosis and treatment planning.

Beyond their diagnostic significance, these enigmatic structures reflect the intricate cellular responses to disease, offering a deeper understanding of tissue pathology. Their presence in oral lesions provides clues to disease progression, prognosis, and potential therapeutic targets, making them indispensable in both research and clinical practice. This review delves into the classification, histological significance, and clinical relevance of histopathological bodies, presenting comparative tables, case-based discussions, and visually enhanced infographics to make complex concepts more accessible and engaging.

By bridging traditional microscopy with deeper pathological insights, this article highlights the enduring relevance of histopathological bodies in oral pathology and disease diagnosis. As we continue to decode their hidden messages, these stained-glass markers serve as guiding beacons in histopathology, helping to unravel disease mechanisms, refine diagnostic accuracy, and enhance patient care. The study of these bodies is not merely an academic pursuit but a journey into the microscopic realm where pathology meets precision.

REHABILITATION OF A PARTIAL HEMIMAXILLECTOMY PATIENT WITH A HOLLOW OBTURATOR PROSTHESIS USING THE LOST SALT TECHNIQUE

Presented by: Syed Viqhar Ahmed

Supervisor: Lakshmi, C. B. Shanthana,

College/University: Sri Rajiv Gandhi College of Dental Sciences

Introduction: Maxillary obturator prostheses are essential for rehabilitating patients post-partial or total maxillectomy, often necessitated by congenital defects or acquired conditions like oral neoplasms. This case report describes the management of a 68-year-old patient with mucoepidermoid carcinoma of the left palate, leading to impaired masticatory and phonological functions.

Methods: The treatment involved surgical resection of the tumor and a three-phase prosthodontic rehabilitation: immediate surgical obturator, interim hollow bulb obturator, and definitive hollow bulb obturator. The lost salt technique was employed to reduce the prosthesis weight. Salt was packed into the hollow portion, covered with self-cure acrylic, and later removed by perforation and water irrigation.

Results: The interim hollow bulb obturator was fabricated using heat-cure acrylic resin, with retention achieved through mechanical and muscular control mechanisms. The prosthesis was lightweight, functional, and esthetically acceptable. The patient reported improved masticatory function and speech post-rehabilitation.

Discussion: The lost salt technique proved effective in reducing prosthesis weight while maintaining structural integrity. This method is simple, cost-effective, and avoids the challenges associated with removing other hollowing materials. However, the report lacks long-term follow-up data on patient adaptation, functional outcomes, and potential complications. Additionally, while the lost salt technique is well-described, a more detailed comparison with alternative hollowing methods (e.g., polyurethane foam, silicone) would enhance the discussion.

Conclusion: This case highlights the successful rehabilitation of a partial hemimaxillectomy patient using a hollow obturator prosthesis fabricated with the lost salt technique. Immediate and interim obturators are crucial for functional recovery and improving patient outcomes post-maxillectomy.

INVISIBLE MYTHS, VISIBLE TRUTHS-REALITY OF ALIGNERS

Presented by: Faariha Meher

Supervisor: Dr. Bilal Ahamed

College/University: SJM Dental college and hospital

Invisible Myths, Visible Truth – The Reality of Aligners

Clear aligners have revolutionized orthodontic treatment, offering a nearly invisible and comfortable alternative to traditional braces. However, misconceptions about their effectiveness, limitations, and benefits persist. This paper aims to debunk common myths and reveal the reality of clear aligners.

Many believe aligners work for everyone or that they move teeth faster than braces. In reality, they are most effective for mild to moderate cases, and treatment duration depends on individual needs. Another widespread myth is that aligners require minimal effort, yet consistent wear (20-22 hours daily) is crucial for success. Some assume aligners cause no discomfort, but minor pressure during tooth movement is normal. Additionally, while marketed as a DIY solution by some brands, professional supervision remains essential to prevent complications.

Beyond aesthetics, aligners offer functional benefits like improved bite alignment and better oral hygiene. They are removable, making eating and cleaning easier, but this also demands patient discipline. Understanding the truths behind aligners helps individuals make informed decisions about their orthodontic care.

By separating myth from fact, this study highlights the real capabilities of clear aligners, empowering users with accurate knowledge to achieve effective and safe results.

HERBS AND HEALING : THE ROLE OF AYURVEDA IN DENTISTRY

Presented by: Pranjal Kalwani

Supervisor: Dr. Sreeshyla H.S

College/University: JSS

Background: Ayurveda is a holistic system of medicine which evolved in India 3000-5000 years ago, and is now practiced in other parts of the world as complementary medicine. The Ayurvedic approach to oral health is rooted in the belief that the body's overall health and balance is a reflection of three doshas; Vata, Pitta, and Kapha.

Introduction: The efficiency of holistic ayurvedic approaches like chewing sticks such as miswak, oil pulling and herbs like Rasayana, Triphala, Tulsi, Neem etc., which aid in better provision of dental care is not widely known. Understanding and unveiling their effects on the body both adverse and favorable will enable us to become better healthcare providers.
Discussion: Medicinal scrolls dated centuries back like the Susruta Samhita and Charaka

Samhita highlight the antimicrobial properties of chewing sticks. Oil pulling (Gandusha or Kavala), a practice gaining popularity among the newer generations, has been a go to method for maintaining oral hygiene since centuries. Use of sesame oil and sunflower oil for oil pulling has been credited in the Charaka Samhita for aiding in the cure of various systemic and dental diseases. Use of herbs like Neem and Triphala as natural mouthwashes has been proven to reduce bacterial growth while soothing and strengthen inflamed gums. Chewing onto Licorice root and whole spices like Cloves has also been recommended for protection against dental caries. Tongue scrapping (Jihwa Prakshalana) tools have seen multiple variants ever since the ancient Greek and Roman empires where tools named cyathiscomele and buccinator were used. Conclusion: Concludingly, this review assesses how by utilizing the former mentioned remedies such as oil pulling, herbs, tongue scrapping and dietary adjustments, Ayurveda not only alleviates oral symptoms but also promotes long-term oral health and overall, well-being. These practices, focused on prevention and detoxification, highlight the deep connections between oral hygiene and systemic health, offering an effective, natural and personalized alternative to conventional treatments.

HISTOPATHOLOGICAL BODIES: MARKERS OF MYSTERY IN STAINED GLASS

Presented by: Hemanth Rangaswamy, Zaid Addin Shariff

Supervisor: Dr. Priya NS

College/University: VSDC

Histopathological bodies are microscopic storytellers, capturing disease processes like mysteries frozen in stained glass. These cellular and extracellular structures—Civatte bodies in lichen planus, Verocay bodies in schwannomas, and Russell bodies in chronic inflammation—serve as vital diagnostic markers in oral pathology. Their distinct morphology and staining characteristics provide crucial insights into infections, immune disorders, and neoplastic conditions, aiding in accurate diagnosis and treatment planning.

Beyond their diagnostic significance, these enigmatic structures reflect the intricate cellular responses to disease, offering a deeper understanding of tissue pathology. Their presence in oral lesions provides clues to disease progression, prognosis, and potential therapeutic targets, making them indispensable in both research and clinical practice. This review delves into the classification, histological significance, and clinical relevance of histopathological bodies, presenting comparative tables, case-based discussions, and visually enhanced infographics to make complex concepts more accessible and engaging.

By bridging traditional microscopy with deeper pathological insights, this article highlights the enduring relevance of histopathological bodies in oral pathology and disease diagnosis. As we continue to decode their hidden messages, these stained-glass markers serve as guiding beacons in histopathology, helping to unravel disease mechanisms, refine diagnostic accuracy, and enhance patient care. The study of these bodies is not merely an academic pursuit but a journey into the microscopic realm where pathology meets precision.

Literature Review - Posters

S. No	Title	Page No
1	AI In Forensic Dentistry	66
2	Micro Endodontics	66
3	The Art And Sciences Of Maxillofacial Prosthetic: -Restoring Faces And Restoring Lives	67
4	Abscess: from pus to peace: how to deal with Abcesses properly	68
5	Advance Diagnostic Techniques In OSCC	69
6	Genetic Factors In Dental Caries — Susceptibility And Gene-Environment Interactions	69
7	Oral Health In Orthodontic Patients	70
8	Paediatric Oral Oncology	71
9	Epithelial-Mesenchymal Transition In Ossc Progression	72
10	Fluorescence Imaging - A Boon For Early Detection Of Oral Cancer	72
11	Oral Manifestations Of Guillain-Barré Syndrome	73
12	Tobacco And Areca Nuts Effect On The Oral Microbiome ("Silent Disruption")	74
13	AI & Salivary Diagnostics (Saliva Meets Ai: The Future Of Non-Invasive Monitoring)	74
14	Laser Dentistry	75
15	Role Of Salivary Biomarkers In Early Cancer Detection	76
16	The Relationship Between Diet And Dental Caries	76
17	Chewing Gum And Oral Health: Impact On Saliva Production And Plaque Reduction	77
18	Oral Cancer: -An In-Depth Exploration Of Its Hidden Risks	78
19	Orthodontics Appliances And Techniques	79
20	Oral Lesions Of Tuberculosis	79
21	“Aurora Smile” Illuminating The Path To Autism Friendly Dentistry	80
22	Anticipatory Guidance In Pediatric Dentistry	80
23	Outcomes Of Obturation Materials By Calcium Hydroxide/Iodoform Paste In Pulpectomy: A Systematic Review	81
24	Unravelling The Role Of Artificial Intelligence In Forensic Odontology	81
25	The Oral Microbiome In Autoimmune Diseases: A Double-Edged Sword	82
26	Importance Of Biomimetic Materials	83
27	Bag A Breakthrough In Dental Restoration	83
28	Evolution Of Dentistry: From Antiquity To Modern Innovations	84
29	Haptics: Where Science Meets Sensation In Dentistry	85
30	AI-Driven Optical Coherence Tomography: A Game Changer In Oral Cancer Detection	85
31	Oral Manifestations Of Diabetes Mellitus	86
32	Normal Anatomical Variations Of Oral Mucosa Often Misinterpreted To Be A Mucosal Pathology	86
33	Cyanoacrylate Glue In Oral And Maxillofacial Surgery	87

34	Oral Hygiene For Children With Autism: The Influence Of Parental Knowledge In Providing Care	88
35	Oral Premalignant Disorders And Oral Cancer Prevention	88
36	Beyond Blood : Unlocking The Potential Of IPRF	89
37	Advancements In Minimally Invasive Techniques In Detection And Management Of Oral Lesions	89
38	Quorum Sensing In Porphyromonas Gingivalis And Oral Microbial Interactions: A Literature Review	90
39	Oral Leukoplakia	91
40	Deep Marginal Elevation	92
41	Digital Dentures - An Era Of Prosthodontics	92
42	Bioactive Glass In Pulp Capping: A Step Towards Regeneration	93
43	Lasers In Oral And Maxillofacial Surgery	94
44	Conservative Approaches To Restorative Dentistry: When To Use Filling Vs Crowns	95
45	Importance Of Tooth In Forensic Odontology	95
46	Advances In Dentistry	96
47	The Science Behind Tooth Discolouration: Causes And Management	97
48	Regenerative Dentistry Using Stem Cells	98
49	Teledentistry	98
50	Piezoelectric Surgery	99
51	Sustainable dentistry. How close are we?	100
52	Advancements In Composite Resins	101
53	Breathing New Life Into Sleep	101
54	Oral Health In Children Smile Naturally- Ancient Wisdom For Modern Smiles	102
55	A Ray Of Hope: Photodynamic Therapy In Oral Oncology	102
56	Esthetic Veneers, Crown And Bridge: First Fit System	103
57	The Future Of Smiles: Digital Design Revolution	104
58	Flies To Infestation: Oral Myiasis	104
59	Artificial Intelligence In Pediatric Dentistry	105
60	Artificial Intelligence In Oral Medicine And Radiology- A Turning Point In Dentistry	106
61	Bias Risk In Ai In Dentistry	107
62	A Review On Left Ventricle	107
63	Solitary Median Maxillary Central Incisor Syndrome	108
64	Revolutionizing Orthodontics - Future Trends In Tads Applications	108
65	Can Methylphenidate Use In Children/Adolescents For Treatment Of Adhd Lead To Development Of Bruxism: Systematic Review	109
66	Biomimicry In Restorative And Regenerative Dentistry	110
67	Calcium Serum Levels	111
68	Robotics: A New Buzz In Orthodontics	111
69	Neuro Anatomy Of Spinal Cord	112

70	Pituitary Gland	112
71	Basal Ganglia, Review Of Literature	113
72	Orthodontic Traction Of Impacted Maxillary Canine	113
73	The Effect Of Carbonated Drinks On Tooth	114
74	Cutomised Orthodontic Appliances - Is This The Future?	114
75	Methods Of Hemostasis In Oral And Maxillofacial Surgery	115
76	Intranasal Anesthesia And Sedatives	116
77	Oral Manifestations In Iron Deficiency Anaemia	116
78	Tele Dentistry Remote Dental Consultation	117
79	Guided Endodontics	118
80	Variations In Facial Nerve	118
81	Teratogenic Drugs	119
82	Digital Complete Denture	119
83	Toothbrush: A Cleanser Or A Reservoir	120
84	Alternatives To Topical Anaesthesia- A Less Trodden Path	120
85	Microstomia A Treatment Challenge To A Prosthodontist	121
86	Advancements In Tissue Regeneration	121
87	Anatomical Variation Of Marginal Mandibular Nerve	122
88	A Review On Immediate Dentin Sealing	123
89	Dynamic Abutments In Implants	123
90	GBS Outbreak	124
91	Solitary Median Maxillary Central Incisor Syndrome	124
92	Laser And Its Application In Periodontics	125
93	Scoping Review Of Tubarial Glands	125
94	Ozone Therapy In Dentistry	126
95	Oral Manifestations In Diabetes Mellitus	126
96	Dental Fluorosis	127
97	Role Of Homeobox Genes In Tooth Development And Repair: A New Horizon	127
98	Hais-Is It Relevant In In Dentistry??	128
99	Green Dentistry	129
100	Keto On Your Plate, Effect On Your Teeth	129
101	Energy Malnutrition: The Impact On Pregnancy, Birth Outcomes, And Infant Health	130
102	PEEK	130
103	Intraarticular Injections To TMJ	131
104	Causes of dental implant failures	131
105	Routes Of Drug Administration	132
106	ULCA Abutments In Implants	132
107	Biomedical Waste Management In Prosthodontics	133
108	The Rising Threat Of Antimicrobial Resistance In Dental Care	133

109	Diagnostic And Prognostic Role Of Special Stains In Salivary Gland Neoplasms: An Insight Into Histogenesis	134
110	Spit Test Revolution: How Saliva Biomarkers Are Changing Mentalcare	135
111	Rotational Path Removable Partial Denture	136
112	3D Imaging In Implantology: CBCT And The Evolution Of Scanning Protocols	136
113	The Next Era Of Clear Aligner Therapy	137
114	Navigating The Complexities Of Periodontal Disease And Systemic Health	138
115	Ventricular System Of Brain	138
116	Basal Implants	139
117	Oral Mucosa Demystified: Health, Disease And Beyond	139

AI IN FORENSIC DENTISTRY

Presented by: Pavana MB, Anushree KM

Supervisor: Dr. Savitha

College/University: RRDCH

Introduction: Artificial intelligence (AI) is rapidly transforming forensic dentistry by significantly enhancing the accuracy and efficiency of an individual identification through the analysis of dental records and images, particularly in complicated cases involving decomposed or fragmented remains; AI algorithms can automate tasks like dental comparison, age estimation, sex determination, and bite mark analysis, enabling faster and more reliable identification of victims in mass disasters or criminal investigations, while also improving the quality of forensic evidence by utilizing advanced image processing techniques.

This paper explores the integration of AI technologies, such as machine learning and deep learning, into forensic dentistry to enhance accuracy, efficiency, and reliability in dental analysis. Additionally, AI enables the automated comparison of dental data with existing databases, improving the speed of forensic investigations. This paper highlights the advancements, challenges, and future directions of AI in forensic dentistry, emphasizing its potential to revolutionize the field while addressing ethical concerns and limitations.

Conclusion: The forensic dentistry plays a important role in historical crisis and findings, by artificial intelligence the way of processing has been enhanced and have been developing from past and will be developing furthermore in the future and makes a better way for the forensic dentistry

MICRO ENDODONTICS

Presented by: Bysani Nayonika

Supervisor: D E. Saveetha

College/University: RRDCH

Micro-endodontics or micro surgical endodontics is an aspect of the root canal treatment procedure that evolve after the introduction of the Dental Operating Microscope (DOM) to endodontics. Your tooth root canal is a very thin and delicate path. Sometimes, these paths are complicated with multiple canals or curved paths. Such tortuous canals are difficult to navigate with lack +of visibility of the tooth.

Micro – endodontics has emerged as a critical component in endodontics, revolutionizing the management of complex root canal anatomy. It utilizes magnification devices, such as dental operating microscopes or loupes, to enhance visualization and identify intricate anatomical

details. Micro – endodontics encompasses advanced techniques and technologies that are utilized alongside the principles of conventional endodontics. While both approaches share common goals of cleaning, disinfection and obturation of the root canal system, micro-endodontics specifically focusses on managing complex root canal anatomy by utilizing specialized tools and techniques to enhance visualization, instrumentation, disinfection, obturation. Ultrasonic instruments aid in negotiating challenging canal configurations and removing obstructions. Nickel-titanium rotary instruments offer flexibility and durability for efficient cleaning and shaping, ultrasonic and laser-activated irrigation improves disinfection.

Procedural steps in endodontic microsurgery;
 Osteotomy
 Root resection
 Root end resection \ Long Bevel versus shot Bevel
 Microsurgical instruments:
 Examination instruments
 Incision and elevation instruments
 Retraction instruments
 Osteotomy instruments
 Curettage instruments
 Instruments for root end preparation
 Instruments for inspection
 Retro filling carrier and plugging instruments
 Instruments for suturing
 Miscellaneous instruments

THE ART AND SCIENCES OF MAXILLOFACIAL PROSTHETIC: -RESTORING FACES AND RESTORING LIVES

Presented by: Vimarsha M

Supervisor: Dr. Savitha

College/University: RRDCH

Maxillofacial prostheses play a critical role in the rehabilitation of patient with defects in head and neck region caused by congenital anomalies, trauma or surgical resection of tumors. The goal of maxillofacial prostheses is to restore function, aesthetics and quality of life for patients with disability with face and jaw. This is achieved through the use custom-made prosthetic devices:

- Obturators
- Facial prostheses
- Dental implant

Maxillofacial prostheses are indicated for patients with congenital or acquired defects of cleft lip and palate, trauma, cancer and neurological disorders. Patients' selection is critical, and a thorough evaluation of the patient's medical, dental and physiological history is necessary to determine the best course of treatment.

The treatment planning involves the fabrication of maxillofacial prostheses requires a high degree of skill and precision using materials such as silicone, acrylic and metal. Future perspectives: the integration of emerging technologies such as artificial intelligence, augmented reality and tissue engineering holds promise for the future of maxillofacial prostheses.

Conclusion: maxillofacial prostheses are invaluable in restoring the form and function of individuals with craniofacial defects, significantly improving their quality of life. Continued research and innovation enhance accessibility and affordability in care of maxillofacial prosthetics.

Keywords: maxillofacial prostheses, craniofacial defects, silicone, rehabilitation, congenital anomalies, dental implant, tissue engineering, obturators.

ABSCESS: FROM PUS TO PEACE: HOW TO DEAL WITH ABCESES PROPERLY

Presented by: Murfela Sadaf Quraishi

Supervisor:

College/University: RRDCH

An oral abscess is a localized connection of pus in the tissue of the mouth, often resulting from bacterial infections. These abscesses typically form as a complication of untreated dental decay, periodontal disease, or trauma to the oral cavity and may occur at the root of a tooth or along the gum line. These are often accompanied by severe pain, swelling, and fever. Complications of oral abscess: spread of infection to surrounding tissues, septicemia, Ludwig's angina, cavernous sinus thrombosis. Prevention of oral abscess involves maintaining good oral hygiene and addressing dental issues promptly. Treating dental issue promptly. Avoiding tobacco products. Managing dental trauma. Future of managing and upgrading the treatment of oral abscesses is likely to involve advances in several key areas, such as early detection, treatment techniques, and preventive measures.

Conclusion: oral abscess is a common and potentially serious condition requiring prompt diagnosis and management.

ADVANCE DIAGNOSTIC TECHNIQUES IN OSCC

Presented by: Anushree Yadav KM , Pavana MB

Supervisor: Dr Savita

College/University: RRDCH

Oral squamous cell carcinoma (OSCC), the most common form of oral cancer, presents as mouth sores, lumps, or white patches and is linked to risk factors like tobacco, alcohol, betel quid, and HPV. With a survival rate of 49.4%, its rising prevalence among younger generations underscores the urgent need for early detection. Advanced diagnostic techniques are critical for improving outcomes and reducing treatment costs.

Initial diagnosis often involves visual and physical examinations, supported by Reflectance Confocal Microscopy (RCM) for detailed imaging. Biopsy techniques, such as Fine Needle Aspiration (FNA), allow for tissue sampling and histopathological analysis. Immunohistochemistry (IHC) diagnosis by identifying specific protein markers in tissue samples. Laser-induced fluorescence (LIF) and autofluorescence imaging are non-invasive tools that detect abnormal tissue by measuring changes in fluorescence patterns. Light-based systems, like chemiluminescence, further improve lesion visualization. Liquid biopsy detects circulating tumor cells (CTCs), cell-free DNA (cfDNA), circulating tumor DNA (ctDNA), and exosomes, providing insights into tumor behavior.

Early detection is paramount, as it improves survival rates and reduces treatment costs. Recognizing symptoms early, combined with advanced tools like IHC, LIF, and autofluorescence, can save lives and lower healthcare burdens. The focus should be on early detection, timely diagnosis, and prompt treatment to enhance patient outcomes.

In conclusion, leveraging advanced diagnostic techniques, including immunohistochemistry, laser-induced fluorescence, and autofluorescence, for OSCC can transform patient care, ensuring early intervention and better prognosis. Prioritizing early detection saves lives, reduces costs, and improves quality of life.

GENETIC FACTORS IN DENTAL CARIES — SUSCEPTIBILITY AND GENE-ENVIRONMENT INTERACTIONS

Presented by: S. K. Sankarsh

Supervisor: Dr. Savitha,

College/University: RRDCH

Introduction

Dental caries, a multifactorial chronic disease, arises from complex interactions between genetic predisposition and environmental factors. While traditional risk determinants like diet

and oral hygiene are well-established, emerging research highlights the critical role of genetic markers in modulating susceptibility. This review synthesizes evidence on key genes influencing caries development, offering insights into personalized prevention strategies.

Genetic Factors in Caries Susceptibility Genetic polymorphisms in enamel formation (*AMELX*), immune response (*DEFB1*), taste perception (*TAS2R38*), and salivary function (*CA6*) significantly impact caries susceptibility. For instance, *AMELX* variants (e.g., rs17878486) are linked to enamel defects and increased caries risk, particularly in early childhood. Similarly, *DEFB1* and *CA6* polymorphisms alter antimicrobial peptide levels and saliva composition, influencing microbial adhesion. Taste receptor genes like *TAS2R38* affect sweet perception, indirectly impacting dietary sugar intake and caries incidence.

Gene-Environment Interactions Gene-environment interactions further complicate caries risk. High-sugar diets exacerbate susceptibility in individuals with specific genetic variants, while socioeconomic factors like low education and poor access to dental care amplify these risks. Twin studies reveal that genetic factors account for 54-70% of caries variability in primary dentition and 35-55% in permanent dentition, underscoring the heritable nature of the disease.

Clinical Implications and Future Directions Understanding these genetic factors enables tailored interventions, such as dietary counselling for patients with sweet-taste receptor variants or enamel-strengthening therapies for those with *AMELX* mutations. Integrating genetic profiling with environmental assessments offers a roadmap for personalized prevention, potentially reducing the global burden of dental caries. Future research should prioritize diverse cohorts and mechanistic studies to refine prevention paradigms and improve oral health outcomes.

Conclusion: Genetic factors play a pivotal role in dental caries susceptibility, interacting with environmental influences to shape disease risk. By leveraging genetic insights, dental care can transition toward personalized prevention strategies, improving outcomes for high-risk individuals. Continued research into gene-environment interactions and innovative interventions will be essential to address the global challenge of dental caries effectively.

ORAL HEALTH IN ORTHODONTIC PATIENTS

Presented by: K Varshith Kumar

Supervisor: Dr. Savitha

College/University: RRDCH

Introduction: Orthodontic treatment aims to correct malocclusions, improve bite alignment, and enhance dental aesthetics. However, maintaining optimal oral health during treatment is critical to prevent complications such as cavities, gingivitis, and enamel demineralization. This abstract outlines key challenges and evidence-based practices to safeguard oral health in orthodontic patients.

Key Challenges: **Plaque Accumulation:** Fixed appliances (e.g., braces) hinder effective brushing and flossing, promoting plaque buildup. **Tooth Decay:** Brackets and wires trap food debris, increasing caries risk. **Gingival Inflammation:** Poor hygiene around appliances often leads to swollen, bleeding gums.

Importance of Regular Dental Check-ups Frequent visits to orthodontists and dentists enable early detection of cavities, gum disease, and demineralization. Professional cleanings and fluoride treatments mitigate risks, ensuring uninterrupted treatment progress.

Oral Hygiene Recommendations

Brushing: Use a soft-bristled toothbrush with fluoride toothpaste after meals.

Flossing: Employ orthodontic floss threaders or water flossers to clean interdental spaces.

Antimicrobial Mouthwash: Reduces plaque and bacterial load.

Interdental Brushes: Effective for cleaning around brackets and wires.

Diet: Limit sugary and acidic foods to minimize enamel erosion.

Impact of Poor Oral Health Neglecting hygiene protocols can delay treatment timelines, necessitate unplanned interventions, and compromise long-term functional and aesthetic outcomes. Severe issues may even halt orthodontic progress.

Conclusion: Adherence to rigorous oral hygiene practices, combined with regular professional care, is essential for successful orthodontic outcomes. Integrating patient education and tailored preventive strategies ensures both treatment efficacy and sustained oral health.

PAEDIATRIC ORAL ONCOLOGY

Presented by: U Vedanandana

Supervisor: Dr. Savitha,

College/University: Rajarajeshwari Dental College and Hospital

Pediatric oral oncology emphasizes the significance of early diagnosis and effective management of rare oral cancers in children. The field combines advanced diagnostic techniques and targeted therapies to improve survival rates and outcomes.

Aim: To explore the risk factors, diagnostic tools, treatment modalities, and preventive strategies in managing pediatric oral cancers.

The poster examines:

1. Risk factors such as genetic predisposition, viral infections (HPV, EBV), and environmental exposures.
2. Signs and symptoms, including persistent oral ulcers, unexplained bleeding, and difficulty swallowing.
3. Diagnostic advancements like imaging, tissue analysis, and saliva testing.
4. Treatment options, including surgery, chemotherapy, and emerging immunotherapies.

Key Findings:

1. Early detection significantly improves survival rates.
2. Advanced imaging and biopsies enable precise diagnosis.
3. Preventive strategies, such as HPV vaccination and routine screenings, are critical in reducing risks.

Conclusion: Pediatric oral oncology underscores the importance of timely intervention and awareness among caregivers. Early detection, combined with advanced therapeutic options, can drastically improve outcomes for children with oral cancers.

EPITHELIAL-MESENCHYMAL TRANSITION IN OSCC PROGRESSION

Presented by: Kanika Madan

Supervisor: Dr. Savitha. J.K.

College/University: RRDCH

Oral squamous cell carcinoma (OSCC) is one of the most prevalent cancers in the head and neck region, known for its aggressive nature and high likelihood of metastasis. A key process driving OSCC progression is epithelial-mesenchymal transition (EMT), where epithelial cells transition to a more migratory and invasive mesenchymal phenotype. This process contributes to tumor metastasis and resistance to conventional treatments, making EMT an essential area of study for improving clinical outcomes. This poster explores the role of EMT in the progression and metastasis of OSCC, focusing on the molecular alterations associated with this transition. Key changes include the downregulation of E-cadherin, along with the upregulation of N-cadherin and vimentin, which collectively enhance cellular motility and invasiveness. Various signaling pathways, such as TGF- β , Wnt/ β -catenin, and Notch, regulate EMT by influencing gene expression, further driving tumor progression. Clinically, EMT is linked to increased tumor invasion, higher rates of metastasis, and greater resistance to standard therapies, highlighting its importance in determining prognosis and treatment response in OSCC patients. Understanding the mechanisms behind EMT offers potential for developing targeted therapies aimed at inhibiting this process, which could ultimately reduce metastasis and improve patient outcomes. Targeting EMT-related signaling pathways represents a promising strategy for enhancing treatment efficacy in OSCC.

FLUORESCENCE IMAGING - A BOON FOR EARLY DETECTION OF ORAL CANCER

Presented by: BS Shreya Hegde

Supervisor: Dr. Savitha. J.K.

College/University: RRDCH

One of the biggest problems faced by society today for oral cancer is the lack of pre-diagnosing techniques which makes diagnosing cancer too late to treat it. Fluorescent Imaging has emerged to be a non-invasive way to identify potent premalignant lesions. This review showcases the core concepts around the challenges and advantages of using fluorescence imaging in the early stages of oral cancer diagnosis. Fluorescence imaging relies on a phenomenon called tissue autofluorescence, where tissues are

irradiated using light of specific wavelengths to excite biomolecules like porphyrins or flavins, which emit distinct patterns with respect to the health of the tissue. In addition, metabolic activity, angiogenesis and collagen breakdown in the tumor increase and tumor fluorescence emission changes intensity and distribution, making it easier to identify malignant lesions. It is more sensitive and provides real-time evaluation as well as non-invasively visual stimulation and biopsy, it is also considerably faster than MRI, CT, and ultrasound. Also, the use of AI and machine learning offers automated lesion classification, increasing the non-subjective diagnostic potential of the imaging. The only limitations to this diagnostic tool is the price, availability of the device, and the lack of a standard for interpretive diagnostics. Fluorescence imaging enhances early oral cancer detection, enabling non-invasive, real-time diagnosis, improving prognosis, and revolutionizing screening for better patient outcomes. **Keywords:** Fluorescence imaging, oral cancer, early detection, autofluorescence, contrast agents, non-invasive diagnosis, optical imaging, cancer biomarkers, early-stage cancer, photo diagnostic .

ORAL MANIFESTATIONS OF GUILLAIN-BARRÉ SYNDROME.

Presented by: Simran Mangsule

Supervisor: Dr. Savitha. J.K.

College/University: RRDCH

Guillain-Barré Syndrome (GBS) is a rare autoimmune neuropathy affecting the peripheral and cranial nervous system. It can lead to severe craniofacial and oral complications due to neuromuscular impairment. Understanding the oral manifestations of GBS is crucial for early diagnosis and better patient management. This poster showcases various oral manifestations of Guillain-Barré Syndrome and highlights their clinical significance in dental practice.

Patients with GBS exhibit:

- Involvement of facial nerve will cause unilateral facial palsy .
- Facial muscle weakness, leading to altered expressions.
- Dysphagia, affecting swallowing and increasing aspiration risk.
- Trismus, limiting mouth opening and complicating dental procedures.
- Reduced masticatory forces, impacting food intake and nutrition.
- Impaired salivary production, resulting in xerostomia, ulceration, taste disturbances, and complications with dental prostheses.

The increasing prevalence of GBS in India, possibly due to contaminated food and water, highlights the need for awareness of its oral manifestations among dental and medical professionals. Early diagnosis and multidisciplinary management can help mitigate the impact of these symptoms and improve patient outcomes.

Keywords: Guillain-Barré Syndrome, oral manifestations, neuropathy, dysphagia, trismus, xerostomia.

TOBACCO AND ARECA NUTS EFFECT ON THE ORAL MICROBIOME ("SILENT DISRUPTION")

Presented by: Charan Tej. P

Supervisor: Dr. Savitha. J.K.

College/University: RRDCH

Introduction: Tobacco and areca nut consumption disrupts the oral microbiome, increasing the risk of periodontitis, leukoplakia, and oral cancer. Tobacco releases nicotine, reactive oxygen species, and carcinogens that promote harmful bacteria, while areca nut contains arecoline and alkaloids that enhance pathogenic bacterial activity. This imbalance weakens immune responses and contributes to microbial dysbiosis.

- This study reviews literature on the effects of tobacco and areca nut on the oral microbiome, examining their chemical compositions, mechanisms of action, and role in disease progression. It also analyzes lesion distribution in oral squamous cell carcinoma (OSCC) cases.
- Tobacco and areca nut alter oral pH, promote *Streptococcus mutans* growth, and weaken immunity. Areca nut chewing causes microtrauma, facilitating bacterial entry and infection. The most affected sites include the buccal mucosa, tongue, and lower gingiva, with a higher prevalence of lesions in chronic users.
- The combined effects of tobacco and areca nut create an environment favorable for bacterial colonization and chronic infections. Preventive strategies like smoking cessation, nicotine replacement, and regular checkups are crucial in reducing risks. Disrupting the oral microbiome has severe consequences. Awareness, early diagnosis, and preventive measures can help mitigate oral diseases associated with tobacco and areca nut. Future research should focus on restoring microbiome balance to prevent disease progression.

Keywords: Tobacco , Areca nut , Oral microbiome , Oral cancer , Microbial dysbiosis

AI & SALIVARY DIAGNOSTICS (SALIVA MEETS AI: THE FUTURE OF NON-INVASIVE MONITORING)

Presented by: Shreya Saha Roy

Supervisor: Dr. Savitha. J.K.

College/University: RRDCH

Salivary diagnostics has emerged as a non-invasive, accessible method for detecting various health conditions, ranging from oral diseases to systemic conditions like cancer and diabetes. However, traditional diagnostic methods often suffer from limitations in accuracy and time efficiency. This research explores the integration of Artificial Intelligence (AI) in enhancing the diagnostic potential of salivary biomarkers.

This study aims to investigate the

1. Application of AI techniques, particularly machine learning
2. In analyzing salivary samples for early disease detection
3. Improving diagnostic accuracy and
4. Reducing diagnostic times.

Some key findings are: I. Preliminary results indicate that AI algorithms, when trained on salivary biomarker data, show an accuracy rate of 85% in detecting early stage oral cancer and a 90% accuracy in identifying diabetes markers.

2. Additionally, AI models significantly reduced diagnostic time compared to traditional methods. The integration of AI into salivary diagnostics offers a promising, non-invasive, and efficient tool for early disease detection. These findings suggest that AI could revolutionise clinical practices by providing quicker, more accurate diagnostic results and improving patient outcomes.

Keywords: Artificial Intelligence, Salivary Diagnostics, Machine learning, Easy disease detection, Biomarkers

LASER DENTISTRY

Presented by: Mohammed Mazoon

Supervisor: Dr Savita

College/University: RRDCH

Laser technology has become an integral part of modern dentistry, offering numerous advantages in both diagnostic and therapeutic procedures. This poster examines the application of lasers in dental practices, focusing on their use for both hard and soft tissue treatments. Hard tissue lasers, commonly employed for cavity preparation and tooth surface procedures, provide exceptional precision and minimal heat production, reducing the need for anesthesia and minimizing patient discomfort. Soft tissue lasers are used effectively for gum surgeries, including crown lengthening, periodontal treatment, and frenectomy, offering reduced bleeding, faster healing, and less post-operative pain.

The underlying principle of laser dentistry is the interaction between light energy and tissue, where the laser's wavelength and power are carefully selected to target specific tissues with high precision. This technology allows for minimally invasive procedures, promoting faster recovery times and a more comfortable patient experience.

Additionally, lasers in dentistry contribute to improved accuracy in diagnostics, such as early detection of cavities or periodontal disease, through the use of laser fluorescence. The poster also covers safety considerations, emphasizing proper training and adherence to safety protocols to avoid potential risks associated with laser use.

With ongoing advancements, laser dentistry continues to evolve, with new applications emerging that promise further improvements in treatment efficiency and patient outcomes. This poster highlights the clinical benefits of laser use, showcasing its potential in transforming the landscape of dental care and enhancing patient satisfaction.

ROLE OF SALIVARY BIOMARKERS IN EARLY CANCER DETECTION

Presented by: Tanushree Rajpurohit

Supervisor: Savitha

College/University: RRDCH

Cancer detection at an early stage significantly improves treatment outcomes and survival rates. Salivary biomarkers have emerged as a promising, non-invasive diagnostic tool for early cancer detection. Saliva contains a variety of biomolecules, including proteins, nucleic acids, metabolites, and microbiota components, which reflect systemic physiological and pathological changes. Early cancer detection is crucial for improving treatment outcomes and patient survival. Traditional diagnostic methods often rely on invasive procedures, which can be painful and costly. This review aims to highlight the potential of salivary biomarkers in early cancer detection, exploring their advantages, challenges, and future directions. A comprehensive literature search was conducted to identify studies investigating salivary biomarkers for various types of cancer. Salivary biomarkers, including proteins, nucleic acids, and metabolites, have shown promise in detecting cancers, such as oral, breast, lung, and pancreatic cancer.

These biomarkers can be detected using non-invasive and cost-effective methods. Salivary biomarkers offer a promising approach for early cancer detection, providing a potential alternative to traditional diagnostic methods. Further research is needed to validate these biomarkers and develop clinical applications.

THE RELATIONSHIP BETWEEN DIET AND DENTAL CARIES

Presented by: Akriti Kumari

Supervisor: Dr. Savitha

College/University: RRDCH

Dental caries remains a prevalent global health concern heavily influenced by dietary habits. High sugar consumption and poor dietary choices are primary contributors to the development and progression of caries. This review explores the intricate connection between dietary patterns and the prevalence of dental caries, emphasizing key findings from recent studies. Research consistently demonstrates that increased sugar intake correlates directly

with higher caries prevalence, highlighting sugars' role in fueling oral bacteria and promoting acid production that demineralizes enamel. Conversely, protective foods such as fibrous fruits, vegetables, dairy products, and water have shown a significant reduction in caries rates. These foods promote oral health by increasing salivary flow, neutralizing acids, and facilitating enamel remineralization.

Furthermore, the frequency of food consumption plays a critical role; frequent snacking prolongs acid exposure, intensifying caries risk. Based on these findings, practical dietary recommendations are proposed to mitigate caries risk: limiting sugary foods and beverages, opting for tooth-friendly snacks like nuts and raw vegetables, and ensuring adequate water intake, especially fluoridated water. Moreover, promoting consistent mealtimes over frequent snacking is advised.

The implications of these findings suggest that educating individuals and implementing public health initiatives focused on fostering healthy dietary habits are pivotal in reducing caries incidence. By raising awareness about the significant impact of diet on oral health, communities can effectively promote preventive measures against dental caries. In conclusion, this review underscores the critical role of diet in dental caries prevention and advocates for targeted dietary education to improve overall oral health outcomes globally.

CHEWING GUM AND ORAL HEALTH: IMPACT ON SALIVA PRODUCTION AND PLAQUE REDUCTION

Presented by: Varganti Vivek

Supervisor: Dr. Savitha

College/University: RRDCH

Chewing gum, especially sugar-free varieties, has been shown to play a crucial role in oral health by stimulating saliva production, buffering acids, remineralizing enamel, and reducing bacterial colonization. Saliva flow increases significantly when chewing gum, neutralizing harmful acids and delivering essential minerals such as calcium and phosphate to strengthen teeth. Sugar-free gum containing xylitol further inhibits the growth of plaque-causing bacteria like *Streptococcus mutans*, leading to reduced plaque formation and fresher breath.

This study aims to examine the benefits of chewing gum in promoting oral hygiene, enhancing saliva production, and minimizing plaque accumulation. Key aspects explored include the role of saliva in oral health, the antibacterial and plaque-reducing effects of sugar-free gum, and the convenience of chewing gum as an adjunct to traditional oral hygiene practices like brushing and flossing.

Key findings suggest that chewing gum can increase saliva production up to tenfold, assisting in acid neutralization and enamel remineralization. Additionally, xylitol in sugar-free gum helps control bacterial growth, further supporting oral hygiene. While chewing gum is not a substitute for brushing and flossing, it serves as an accessible, cost-effective, and beneficial supplement to daily oral care routines.

In conclusion, regular use of sugar-free chewing gum contributes to improved oral health by enhancing saliva production, reducing plaque accumulation, and maintaining fresh breath. Its ease of incorporation into daily life makes it a valuable tool for promoting overall oral hygiene.

ORAL CANCER: -AN IN-DEPTH EXPLORATION OF ITS HIDDEN RISKS

Presented by: Abiya john

Supervisor: Dr. Savitha

College/University: RRDCH

Oral cancer, primarily oral squamous cell carcinoma, continues to be major global health challenge it is subtype of head and neck cancer, is a malignant neoplasm that originates in the oral cavity. It is a multifactorial disease, with various etiological factors contributing to its development.

The incidence and mortality rates of oral cancer vary greatly across different geographic regions. Understanding the epidemiology and risk factors for oral cancer is crucial for developing effective prevention and early detection strategies.

Oral cancer often presents as a non-healing ulcer or a persistent red or white patch in oral cavity. Patients complaint about difficulty while swallowing, speaking or moving the jaw, as well as numbness or pain in the oral cavity.

Prevention and early detection are critical in reducing the incidence and mortality of oral cancer. The prognosis of oral cancer varies depending on the stage and location of the disease. Early-stage oral cancer has a relatively good prognosis. However, advanced-stage disease has a poor prognosis.

Conclusion: understanding the etiology, risk factors and clinical presentation of oral cancer is crucial in reducing its incidence and improving treatment outcomes.

Keywords: oral cancer, squamous cell carcinoma, early detection, mortality rate, advanced stage and malignant.

ORTHODONTICS APPLIANCES AND TECHNIQUES

Presented by: Aditya, Ujjwal

Supervisor: Dr. Maurya M

College/University: JSS

Intercanine distance, and intermolar distance in all cases. The procedure was achieved within 1-9 months, depending on the patient's compliance. The procedure is recommended for compliant patients needing proclination of more than one anterior tooth, especially in dental class I pseudo-class III patients and the first phase of class II division 2 skeletal treatments. The optimum age to treat anterior crossbite is between 8 and 11 years, when the root 9 is being formed and the tooth is in the active stage of eruption. Successful correction of crossbite in mixed dentition occurs in 84-100% of cases.

ORAL LESIONS OF TUBERCULOSIS

Presented by: Pragathi Venkatesh, Muraghendra Chougale

Supervisor: Savitha

College/University: RRDCH

Introduction: Tuberculosis (TB) caused by *Mycobacterium tuberculosis* may be seen as oral lesions, although rare, in less than 1% of TB cases. The current study evaluated the clinical and histopathological features of oral TB lesions in 15 TB patients.

Materials and Methods: Retrospective analysis was done among patients with oral lesions diagnosed to be TB based on histopathology, acid-fast bacilli (AFB) stain, and PCR. Evaluation of characteristics of the lesion was carried out by clinical assessment, imaging, and biopsy.

Results: The most frequent site was the tongue (40%), followed by buccal mucosa (33%) and palate (27%). The lesion was seen as non-healing ulcers (60%), granulomatous masses (27%), or erythematous nodules (13%). Histopathology showed caseating granulomas in 80% and AFB stain in 47%. All were positive on PCR for *M. tuberculosis*. Systemic symptoms of TB such as cough and weight loss were observed in 73% of the cases.

Discussion: Oral TB lesions are commonly misdiagnosed due to their non-specific presentation. Strong suspicion, especially in TB-endemic regions, is required. Histopathology and PCR are the instruments necessary for a conclusive diagnosis. Early diagnosis and antitubercular therapy may lead to complete healing of the lesions.

Conclusion: Oral TB, although rare, must be part of the differential diagnosis of chronic oral lesions, especially in association with systemic symptoms of TB. Multidisciplinary approaches comprising histopathology and molecular diagnosis are necessary to diagnose and treat the

condition with accuracy. Early treatment ensures better results, and this highlights the importance of clinician awareness.

“AURORA SMILE” ILLUMINATING THE PATH TO AUTISM FRIENDLY DENTISTRY

Presented by: Sarah D Souza M

Supervisor: Dr. Jaya AR

College/University: RRDCH

Children with autism spectrum disorder ASD often experience significant changes in dental settings including anxiety, fear and behavioural difficulties. This poster provides a comprehensive review of behaviour management strategies for children with autism empowering the multi-disciplinary approach to incorporate behavioural, psychological and dental interventions. This poster discusses the use of visual support, positive reinforcement, Desensitization and other evidence-based strategies to manage behaviour and reduce anxiety in children with autism. the poster explores the role of dental professionals in providing autism friendly care and promoting oral health outcome for children with autism

ANTICIPATORY GUIDANCE IN PEDIATRIC DENTISTRY

Presented by: Janvi Manoharan

Supervisor: Dr. Jaya.A.R.

College/University: RRDCH

Introduction: Anticipatory guidance (AG) in Pediatric dentistry promotes healthy dental habits and prevents oral diseases in children. Effective methods guide parents from infancy through adulthood.

Methods: AG involves proactive advice and support for parents at each developmental stage, focusing on oral health and milestones.

Results: AG has a profound impact on children's oral and overall health. Educating parents and children at various stages prevents oral diseases, promotes healthy habits, and fosters a positive attitude.

Discussion: AG empowers parents to take proactive measures, ensuring optimal oral health. This approach benefits oral health and overall well-being.

Conclusion: Anticipatory guidance is crucial in Pediatric dentistry, promoting oral health and preventing diseases. Emphasizing AG at various developmental stages makes a lasting impact on children's oral and overall health

OUTCOMES OF OBTURATION MATERIALS BY CALCIUM HYDROXIDE/IODOFORM PASTE IN PULPECTOMY: A SYSTEMATIC REVIEW

Presented by: Lê Văn Anh

Supervisor: Phd. Tran Thi My Hanh

College/University: Hanoi Medical University

Primary roots tooth have a physiological resorption process, so the ideal root canal filling material requires to have a resorption rate similar to the resorption rate of the tooth root. In an effort to find an ideal obturation material, the Calcium hydroxide/Iodoform paste was born with the following advantages: ability to dissolve material when it is over filling, high antibacterial ability, and good biocompatibility. Objective: The aim of this study is to describe the outcomes of Calcium hydroxide/Iodoform paste in root canal filling of primary teeth. Methods: Thesis overview was conducted according to the PRISMA-ScR 2018 checklist. Data was collected from PubMed, ScienceDirect and Cochrane Library from November 2023 to January 2024, then analyzed. Results: 16 studies were eligible for data extraction and review reporting. Calcium hydroxide/Iodoform paste shows good treatment effect, high success rate of 70-100% after 6-24 months of follow-up. Conclusion: Calcium hydroxide/Iodoform mixture is safe, does not cause irritation to surrounding tissue, kills bacteria well, supports wound healing, and has the ability to dissolve quickly when the tip is too high. However, the hollow effect is the material's biggest drawback. The treatment process also significantly affects the results after treatment.

UNRAVELLING THE ROLE OF ARTIFICIAL INTELLIGENCE IN FORENSIC ODONTOLOGY

Presented by: Sanya Rao

Supervisor: Dr.Punnya.Rao ,

College/University: KLE

Forensic odontology is a branch of dentistry that mainly deals with the identification of an individual by assessing the unique structures of the oral cavity like the teeth and the jawbones. This science is mostly used in medico-legal investigations, mass disasters, and the identification of accidental remains through the analysis of dental information. Forensic

odontologists can determine, age, sex and racial aspects of a deceased individual based on the dental structures.

AI, which is defined as a system's capacity to comprehend external data, draw conclusions from it, and adapt to specific tasks, has the capability to completely revolutionise the world. Modern humans' lives are becoming more and more infused with artificial intelligence, and it is getting harder to identify domains in which it does not exist in some capacity. It is present practically everywhere, including in our smartphones, automobiles, aeroplanes, banks, healthcare, agriculture, science, and entertainment. A new era of transdisciplinary advancement has been brought about by the incorporation of artificial intelligence (AI) into numerous fields. Artificial Intelligence has long been used in various areas of medicine and dentistry. However, the practical application of AI in the field of forensic odontology is still in infancy.

This review poster aims to highlight the applications of Artificial Intelligence in forensic odontology and its advantages as well as disadvantages.

THE ORAL MICROBIOME IN AUTOIMMUNE DISEASES: A DOUBLE-EDGED SWORD

Presented by: Gazal Srivastava

Supervisor: Dr.Varsha VK

College/University: RRDCH

The human body harbors a diverse microbiome, with the oral cavity hosting over 700 bacterial species across mucosal surfaces, tooth structures, and saliva. A balanced interaction between the oral microbiota and the immune system is essential for maintaining health. Emerging evidence suggests that oral microbiota dysbiosis plays a significant role in the onset and progression of autoimmune diseases.

This dysbiosis is influenced by various factors, including genetic predisposition, diet, stress, smoking, antibiotic use, tissue injury, and infections. The disruption of microbial homeostasis contributes to autoimmune disease pathogenesis through microbial translocation, molecular mimicry, autoantigen overproduction, and cytokine-mediated immune amplification. Addressing oral microbiota dysbiosis offers promising therapeutic strategies, including maintaining good oral hygiene, adopting low-carbohydrate diets, and promoting healthy lifestyles. Additionally, the use of prebiotics, probiotics, synbiotics, oral microbiota transplantation, and nanomedicine-based therapies present innovative approaches for restoring microbial balance and mitigating autoimmune conditions. A deeper understanding of the intricate relationship between oral microbiota dysbiosis and autoimmune diseases is crucial for developing targeted microbiota-based therapies. This insight may pave the way for novel interventions to combat these chronic, refractory disorders.

Keywords: Autoimmune diseases, Dysbiosis, Oral microbiota.

IMPORTANCE OF BIOMIMETIC MATERIALS

Presented by: Aishwarya Giri MG

Supervisor: John Jeffrey Daniel

College/University: RRDCH

With the advances in technology, during the last two decades, numerous changes have been made in the field of restorative dentistry. This article reviews the various biomimetic materials and its biological properties in the field of restorative dentistry and endodontics. Biomimetic materials like synthetic polymer, ceramics with their biocompatible nature and excellent physico-chemical properties are widely used nowadays. They can function as long-lasting esthetic and restorative materials, cements, root repair materials, root canal sealers and filling materials, which have the advantages of enhanced biocompatibility, high strength, sealing ability and antibacterial properties. New biomimetic materials have demonstrated the ability to overcome some of the significant limitations of earlier generation materials. Although other studies, show encouraging and positive results randomized and double-blind clinical studies of sufficient of time with these materials are needed to confirm long-term success. While biomimetic materials hold great promise, ongoing research and development are crucial to further enhance their properties and expand their applications in endodontics.

BAG A BREAKTHROUGH IN DENTAL RESTORATION

Presented by: Sanchita Agarwal

Supervisor: Swetha H B

College/University: RRDCH

The evolution of bioactive materials in dentistry marks a paradigm shift from passive restorations to biologically interactive solutions that promote natural tooth repair. Among these, bioactive glass (BAG) has emerged as a groundbreaking material, exhibiting superior biocompatibility, remineralization potential, and antimicrobial properties. Unlike conventional synthetic restoratives, BAG actively participates in the healing process by releasing therapeutic ions, fostering dentin remineralization, and enhancing the mechanical integrity of dental structures. The strategic incorporation of elements such as silicon, phosphorus, strontium. Exhibiting copper, silver, zinc, and fluoride amplify its bioactivity and antibacterial efficacy, making it an invaluable component in dental restorations, root canal sealers, and desensitizers. Furthermore, its controlled, ion exchange mechanism not only strengthens interfacial bonding but also mitigates secondary caries and bacterial infiltration. Despite its promising applications, further long-term clinical studies are imperative to optimize its formulation and establish its long-term efficacy and safety in restorative and endodontic therapies. The Integration of bioactive glass with next generation technology such as

nanotechnology and biometric engineering paves the way for a future where dental restoration are not just reparative but regenerative.

This study underscores the transformative potential of bioactive glass in shaping the future of dentistry offering a biomaterial that not only restores but revitalizes dental healthcare.

Key Findings and Advancement are superior Biocompatibility and Adhesion: Unlike conventional materials, BAG chemically bonds with dentin, forming a stable interface that resists degradation, enhancing longevity and reducing secondary caries. Antibacterial and Remineralization Properties. Expanded Clinical Applications: From traditional dental fillings to endodontic sealers and periodontal regeneration, BAG is now integrated into biomimetic implants and coatings, accelerating post-surgical healing and tissue integration.

EVOLUTION OF DENTISTRY: FROM ANTIQUITY TO MODERN INNOVATIONS

Presented by: Hemavathi P, Eshwari V Shivayogimath

Supervisor: Dr Varsha V K,

College/University: RRDCH

Dentistry has evolved from primitive tooth extractions to a sophisticated, technology-driven medical discipline. Evidence of early dental care dates back to 7000 BCE in the Indus Valley, where rudimentary tools were used to remove decayed teeth. Ancient Egyptians, Greeks, and Romans advanced dental knowledge with prosthetics, gold wiring, and herbal treatments. Hippocrates and Aristotle documented tooth extraction techniques and gum disease management, laying the foundation for future dental practices.

The formalization of dentistry began in the 18th century with Pierre Fauchard, the "Father of Modern Dentistry," who introduced dental fillings, prosthetics, and structured treatment approaches. The 19th century saw significant progress with the development of porcelain crowns, anaesthesia (nitrous oxide, ether), and the establishment of professional dental organizations.

The 20th century brought transformative advancements, including the discovery of X-rays for dental diagnostics, fluoride for caries prevention, and specialized fields like endodontics and periodontics. The advent of digital dentistry—CAD/CAM technology, 3D printing, and AI-driven diagnostics—has revolutionized treatment precision. Regenerative medicine, including stem cell therapy and bioengineered tissues, holds promise for tooth regeneration and advanced periodontal care.

As dentistry continues to evolve, the integration of nanotechnology, artificial intelligence, and personalized medicine is shaping a future of minimally invasive, biologically driven treatments. The growing recognition of the oral-systemic health connection further emphasizes the importance of dentistry in overall well-being, making it a continually advancing and essential medical discipline.

Keywords: Artificial intelligence, Dental history, Nanotechnology, Oral health.

HAPTICS: WHERE SCIENCE MEETS SENSATION IN DENTISTRY

Presented by: Juli Kumari

Supervisor: Dr. Jaya A.R,

College/University: RRDCH

Dentistry is a professional field, and patients receive dental care in a straightforward way owing to the use of tactile abilities. Haptics act by identifying things through touch. It is an innovation in both medical and dentistry procedures. The current revelations have proposed that haptic and virtual technologies might improve dentistry education outcomes, and scientific data have supported the use of virtual technology in dentistry. With the utilization of haptics, students can acquire skills without putting a strain on resources or labor by obtaining access to an unlimited number of training hours. This review offers a succinct overview of the haptics literature for educating dental students.

AI-DRIVEN OPTICAL COHERENCE TOMOGRAPHY: A GAME CHANGER IN ORAL CANCER DETECTION

Presented by: khushali R. Goswami

Supervisor: Dr. Shailaja Sankireddy

College/University: College of Dental Sciences, Amargadh

Oral cancer remains a significant global health challenge, with early detection crucial for improving survival and treatment outcomes. Optical Coherence Tomography (OCT) has emerged as a revolutionary, non-invasive imaging modality that provides high-resolution, real-time visualization of oral tissues. Artificial Intelligence (AI)-assisted OCT further enhances diagnostic precision by automating lesion classification, reducing subjectivity, and enabling rapid decision-making.

A systematic review of diagnostic accuracy and AI integration in OCT highlights its potential in identifying oral potentially malignant disorders (OPMDs) and early-stage malignancies. Studies report OCT's sensitivity ranging from 75% to 100% and specificity from 71% to 100%, with AI-powered interpretations achieving the highest accuracy. AI-driven analysis combined with swept-source and frequency-domain OCT allows deeper tissue penetration, improving differentiation between benign, dysplastic, and malignant tissues.

Traditional screening methods, such as visual examination and biopsy, have limitations, including delayed diagnosis, high costs, and reliance on expert interpretation. AI-based OCT imaging overcomes these barriers by providing real-time, high-resolution, and radiation-free screening, significantly improving lesion differentiation.

Despite these advancements, challenges persist in terms of cost, accessibility, and clinician training. Future directions include multicenter trials, portable AI-integrated OCT systems, and AI-driven predictive models for personalized diagnostics. The integration of AI with OCT is paving the way for non-invasive, real-time oral cancer screening, reducing the need for biopsies, and significantly enhancing early detection and patient survival rates.

ORAL MANIFESTATIONS OF DIABETES MELLITUS

Presented by: Jeevitha M

Supervisor: Dr Poornima G

College/University: RRDCH

Diabetes mellitus is a growing public health concern affecting all age groups. It is one of the leading causes of mortality and morbidity worldwide. Diabetes mellitus, a chronic metabolic disorder is characterized by hyper glycemia due to either deficiency of insulin secretion or resistance to the action of insulin or both. The world health organization (WHO) has recently declared it to be a pandemic; its prevalence has increased dramatically over the past few decades and is expected to triple in the next decade. Periodontal diseases have been proposed as the sixth most prevalent complication of diabetes mellitus. Various inflammatory diseases and soft tissue pathologies in oral cavity are associated with Diabetes mellitus; however awareness of these complications is lacking worldwide. This poster presents the overview of the oral manifestations of Diabetes mellitus

NORMAL ANATOMICAL VARIATIONS OF ORAL MUCOSA OFTEN MISINTERPRETED TO BE A MUCOSAL PATHOLOGY

Presented by: Alisha Prasad

Supervisor: Dr Prarthana G A

College/University: RRDCH

A normal anatomical variant is an atypical finding that is seen in a percentage of the population, which generally has no clinical significance, and is considered within the spectrum of normal findings. Oral anatomy is fairly varied in its native forms, with some anatomical variations causing problems that may be functional or aesthetic in nature, while others give the appearance of benign abnormalities. The oral cavity represents the first part of the digestive tube. It should be evaluated as a whole, and it is important to standardize the routine evaluation of oral mucosa. Anatomical variants in the buccal mucosa, tongue, palate, gingiva are the most commonly encountered variants of oral mucosa in the routine dental practice which is often misdiagnosed to be a pathology. By obtaining thorough knowledge on normal anatomic variants in the oral

mucosa, one can easily differentiate mucosal pathologies from normal anatomy. Hence, this poster highlights the normal anatomical variants of the oral mucosa, its prevalence in the Indian population and also its clinical significance in dental practice.

CYANOACRYLATE GLUE IN ORAL AND MAXILLOFACIAL SURGERY

Presented by: Syed Aqayid Abbas

Supervisor: Dr Prashant, Dr Nivedita

College/University: VSDC

Introduction: Cyanoacrylate tissue glue has been widely used in different surgical applications as an effective alternative to conventional suturing. Due to its ease of application, it reduces surgical time and enhances patient comfort. This adhesive offers several advantages, including rapid wound closure, hemostasis, graft stabilisation with minimal tissue irritation, and the potential for improved cosmetic outcomes. This abstract aims to review the current applications, benefits, and challenges associated with the use of cyanoacrylate glue in oral and maxillofacial surgery.

Discussion: This poster presentation explores the clinical application of cyanoacrylate glue. It has shown effective results in soft tissue closure, particularly in pediatric patients and those with difficult-to-suture wounds. It significantly reduces the incidence of infection and enhances healing compared to traditional sutures. However, its use in large or deep wounds remains limited due to concerns about adhesion strength. Through a series of documented clinical cases, we highlight its advantages, such as rapid application, patient comfort, resistance to infection, hemostatic properties, and no suture removal anxiety. In addition, we also discuss its limitations, including tensile strength, potential cytotoxicity along with recent advancements in bioresorbable and microbial formulations.

This abstract outlines key areas for future research, including the development of more flexible, the evaluation of long-term healing outcomes, and the comparison of cyanoacrylate glue with alternative adhesive systems.

Conclusion: Cyanoacrylate glue represents a promising alternative to traditional sutures in oral and maxillofacial surgery, offering advantages such as faster application, reduced infection risk, and improved cosmetic outcomes. While it has shown effectiveness in soft tissue closure and hemostasis, future advancements in cyanoacrylate formulations and clinical applications could enhance its utility, leading to more efficient and reliable surgical practices in the field.

Keywords: cyanoacrylate, maxillofacial surgery, wound closure.

ORAL HYGIENE FOR CHILDREN WITH AUTISM: THE INFLUENCE OF PARENTAL KNOWLEDGE IN PROVIDING CARE

Presented by: Nguyễn Tiến Dũng, Lê Văn Anh

Supervisor: Duong Duc Long

College/University: Hanoi Medical University

In Vietnam, although there is no precise statistical data on the prevalence of autism in the community, the number of children diagnosed with this condition is rapidly increasing, leading to a growing demand for special support from parents in both general and oral healthcare. To provide comprehensive care for children with autism, a cross-sectional study was conducted with a sample size of 170, aimed at assessing parental knowledge of oral hygiene practices and evaluating the oral hygiene levels and dental health status of the children.

Results: The average parental knowledge score was 6.26 ± 2.42 on a 10-point scale. Of the participants, 55.29% of parents had good knowledge, 29.41% had average knowledge, and 15.29% had poor knowledge. The children's average dmft/DMFT index was 3.91 ± 4.66 , with the highest index observed in the group with poor oral hygiene (5.46 ± 5.26) and in the mixed dentition group aged 7-12 years (5.17 ± 4.61).

Conclusion: The majority of parents demonstrated good knowledge of oral hygiene for children with autism. Higher educational levels and income were associated with better parental knowledge, highlighting the influence of socioeconomic factors on parental knowledge. The dmft/DMFT index tended to decrease in children whose parents had good knowledge of oral healthcare, while it increased in the mixed dentition age group. Keywords: autism, dental caries, dmft, DMFT, oral hygiene knowledge

ORAL PREMALIGNANT DISORDERS AND ORAL CANCER PREVENTION

Presented by: Aaditya Biju Aditi Sudarshan

Supervisor: Dr. Kavita Rao

College/University: VSDC

Oral premalignant lesions (OPMLs) are abnormal tissues in the oral cavity that have a higher risk of developing into oral cancer. They are also known as potentially malignant disorders. The most common OPMLs include leukoplakia, erythroplakia, and lichen planus. OPMLs can appear as white or red patches, ulcers, or abnormal growths in the mouth. Oral cancer is a serious disease, but it is also preventable. There are three levels of prevention for oral cancer: primary, secondary, and tertiary.

Primary prevention aims to prevent the disease from ever developing in the first place. This involves reducing exposure to risk factors for oral cancer, such as tobacco use and excessive alcohol consumption. Maintaining a healthy diet, practicing good oral hygiene. Secondary prevention focuses on early detection of oral cancer. This involves regular oral

cancer screenings by a dentist or other healthcare professional. Tertiary prevention aims to prevent the recurrence of oral cancer and to improve the quality of life for people who have been treated for oral cancer. This may involve surgery, radiation therapy, chemotherapy, or other treatments.

By taking steps to prevent oral cancer at all three levels, you can significantly reduce your risk of developing this disease

BEYOND BLOOD : UNLOCKING THE POTENTIAL OF IPRF

Presented by: Sakshi KM

Supervisor: Dr Roopashri, Professor AJ Institute dental sciences

College/University: AJ

Introduction: Platelet rich plasma (PRP) has been utilized in regenerative dentistry as a supra-physiological concentrate of autologous growth factors capable of stimulating tissue regeneration.

Methods: Standard PRP and i-PRF (centrifuged at 700 rpm (60G) for 3 min) were compared for growth factor release up to 10 days (8 donor samples). Furthermore, fibroblast biocompatibility at 24 h (live/dead assay); migration at 24 h; proliferation at 1, 3, and 5 days, and expression of PDGF, TGF- β , and collagen1 at 3 and 7 days were investigated. Results : i-PRF showed significantly highest mRNA levels of TGF- β at 7 days, PDGF at 3 days, and collagen1 expression at both 3 and 7 days when compared to PRP. Conclusion: Over the past decade, use of leukocyte platelet-rich fibrin (L-PRF) has gained tremendous momentum in regenerative dentistry as a low-cost fibrin matrix used for tissue regeneration. These views will be highlighted in this poster.

Keywords: tissue regeneration, growth factors, low-cost fibrin matrix

ADVANCEMENTS IN MINIMALLY INVASIVE TECHNIQUES IN DETECTION AND MANAGEMENT OF ORAL LESIONS

Presented by: Aditi Sudarshan, Aaditya Biju

Supervisor: Dr. Kavita Rao

College/University: VSDC

“Less Invasive, More Innovative: Revolutionizing oral healthcare one procedure at a time.”

Traditionally, surgery and radiation therapy have been the go-to treatments for precancerous lesions of the oral mucosa. However, these methods often bring in complications. In response, a range of minimally invasive techniques have emerged, offering promising alternatives. Laser ablation, electrocautery, cryotherapy, chemical agents, and photodynamic therapy are among these innovative approaches, used for their efficacy in lesion removal while minimizing trauma to surrounding tissues.

The advantages of these techniques are diverse. Patients experience reduced postoperative discomfort, quicker recovery times, and enhanced cosmetic results. By embracing these minimally invasive approaches, clinicians can deliver effective treatment while prioritizing patient comfort and satisfaction.

The dawn of a new era in dentistry is upon us, marked by the rise of minimally invasive techniques that are reshaping the landscape of oral healthcare. This poster delves into the realm of minimally invasive approaches for managing oral soft tissue lesions, shedding light on their potential to optimize patient outcomes. From laser technology to advanced chemical interventions, these methods represent a foreword shift in oral healthcare, promising safer, more efficient, and ultimately more patient centered treatment options.

QUORUM SENSING IN PORPHYROMONAS GINGIVALIS AND ORAL MICROBIAL INTERACTIONS: A LITERATURE REVIEW

Presented by: Zelda Ziyi ZHAO

Supervisor: Chun Hung Chu

College/University: The University of Hong Kong

Background: *Porphyromonas gingivalis*, a major periodontal pathogen, interacts with other oral microbes through quorum sensing, enhancing its growth and virulence, which results in periodontitis.

Aim: This literature review aims to examine the role of quorum sensing in the interactions between *P. gingivalis* and other oral microbial species.

Methods: Two independent researchers conducted a systematic search using the keywords [((quorum sensing) OR QS) AND ((*Porphyromonas gingivalis*) OR *P. gingivalis*)] for English publications prior to 2025 through Medline, Scopus, and Web of Science. They screened titles and abstracts, retrieving full texts of original studies to identify key concepts and findings regarding the quorum sensing of *P. gingivalis* in oral microbial ecosystems.

Results: A total of 125 publications were identified, of which 25 were included in the review. These studies demonstrated quorum sensing of *P. gingivalis* and other bacteria through signal molecules Autoinducer-1 and Autoinducer-2. Autoinducer-1 enhances the pathogenicity of *P.*

gingivalis, facilitating its integration into complex oral microbial communities. Autoinducer-2 fosters cooperative or competitive relationships between *P. gingivalis* and other periodontal pathogens, modifying the structure of oral biofilms. Additionally, researchers are studying the use of quorum sensing inhibitors to reduce the virulence of *P. gingivalis* for managing periodontitis and restoring microbial balance in the oral cavity. Conclusions: Quorum sensing enhances the pathogenicity of *P. gingivalis* in the oral environment. Through the modulation of Autoinducer-1 and Autoinducer-2, quorum sensing regulates interactions between *P. gingivalis* and other oral microbes. Significance: This study underscores the need for further research into quorum sensing-targeted interventions in periodontal therapy.

ORAL LEUKOPLAKIA

Presented by: R Siri Iyer

Supervisor: Dr Savitha

College/University: RRDCH

Oral leukoplakia is a potentially malignant disorder characterized by the presence of white patches or plaques on the mucous membranes of the oral cavity, which cannot be wiped off or diagnosed as any other disease. It remains one of the most common oral mucosal lesions, with a prevalence that varies across different populations.

The etiology of oral leukoplakia is multifactorial, with tobacco use (both smoking and smokeless), alcohol consumption, and human papillomavirus (HPV) infection being significant risk factors. The condition is often asymptomatic, making early detection challenging. Histopathologically, oral leukoplakia can range from mild epithelial hyperplasia to severe dysplasia, and it has the potential to transform into oral squamous cell carcinoma (OSCC), especially in lesions with dysplastic features. Management includes cessation of tobacco and alcohol use, regular monitoring, and, in some cases, surgical intervention for high-risk or symptomatic lesions. The clinical course varies, with some lesions regressing spontaneously, while others may progress to malignancy. Understanding the molecular mechanisms underlying leukoplakia and its progression is crucial for early intervention and the prevention of oral cancer. Early diagnosis, vigilant monitoring, and individualized treatment strategies are essential for improving outcomes in patients with oral leukoplakia. Latest research therapy: Nivolumab, a targeted therapy drug that acts as an immune checkpoint inhibitor.

DEEP MARGINAL ELEVATION

Presented by: Manvith Narayan

Supervisor: Dr Supriya

College/University:

Deep Marginal Elevation (DME) is an advanced restorative technique used in adhesive dentistry to manage deep subgingival margins that challenge direct composite restorations and indirect restorations such as inlays and onlays. Traditional restorative procedures often require surgical crown lengthening or orthodontic extrusion to expose deep margins, but these methods can be time-consuming, invasive, and may compromise aesthetics. DME provides a minimally invasive alternative by elevating the cavity margin coronally using composite resin, allowing for easier placement and improved adhesion of indirect restorations. The technique involves incrementally layering a highly filled composite to elevate the margin, ensuring proper adaptation and avoiding polymerization shrinkage. This approach enhances gingival health, reduces contamination risks, and maintains the structural integrity of the tooth. Additionally, it preserves more tooth structure compared to conventional methods. Clinical studies have shown that DME, when performed with proper bonding protocols and isolation techniques and positioning of a matrix of cervical seal, provides reliable marginal seal and improved long-term success. However, concerns regarding gap formation, microleakage, and secondary caries necessitate precise technique and material selection. Also, Proper finishing and polishing of the elevated margin are crucial to prevent plaque accumulation and ensure periodontal health.

In conclusion, DME is an effective and conservative technique for managing deep cavities and subgingival margins, allowing for successful adhesive restoration placement without surgical intervention. Its adoption in modern adhesive dentistry represents a patient-friendly, esthetically superior, and biologically sound approach to complex restorative challenges.

DIGITAL DENTURES - AN ERA OF PROSTHODONTICS

Presented by: Manthan Dialani

Supervisor: Dr.Maria peter

College/University: RRDCH

Introduction: Digital dentures represent a transformative advancement in prosthodontics, leveraging computer-aided design and manufacturing (CAD/CAM) technology to enhance precision, efficiency, and patient outcomes. This approach eliminates the need for traditional impressions and manual fabrication, streamlining the denture-making process.

Objective: To explore the advantages of digital dentures over conventional methods. To evaluate the clinical accuracy, fit, and patient satisfaction. To highlight the workflow and

future potential of digital denture fabrication.

Methodology: A review of studies of recent advancements in digital denture technology was conducted, including intraoral scanning, 3D printing, and milling techniques. Comparative studies assessing fit, durability, and aesthetics were analysed. Patient satisfaction surveys were reviewed to gauge acceptance.

Results: Enhanced Accuracy: Digital dentures exhibit superior fit due to precise scanning and CAD design.

Efficiency: The digital workflow reduces chairside time and the number of patient visits.

Material Advancements: 3D printing and milling ensure improved strength and aesthetics.

Patient Satisfaction: Studies indicate a higher acceptance rate due to better fit and comfort.

Conclusion: Digital dentures offer a significant leap forward in prosthetic dentistry, providing better patient experiences, enhanced efficiency, and improved long-term outcomes. With continued advancements in materials and software, they are set to become the gold standard in removable prosthodontics.

Keywords: Digital Dentures, CAD/CAM, 3D Printing, Prosthodontics, Patient Satisfaction

BIOACTIVE GLASS IN PULP CAPPING: A STEP TOWARDS REGENERATION

Presented by: Mohammed ameen

Supervisor: Dr Bhavana

College/University: RRDCH

Introduction: Direct pulp capping is a crucial procedure in conservative dentistry that preserves pulp vitality and promotes tissue healing. Traditional materials like calcium hydroxide and mineral trioxide aggregate (MTA) have been widely used, but bioactive glass (BAG) has emerged as a promising alternative due to its superior regenerative and antibacterial properties.

Materials and Methods: A review of recent studies was conducted to compare the biological and clinical performance of BAG-based pulp capping materials with MTA and calcium hydroxide. Key parameters analyzed included dentin remineralization, odontogenic differentiation, antibacterial efficacy, and clinical success rates. Challenges such as handling properties and setting time were also evaluated.

Results: BAG releases calcium, phosphate, and silica ions, stimulating hydroxyapatite formation and dentin remineralization. It promotes odontogenic differentiation of dental pulp stem cells, leading to faster reparative dentin formation compared to MTA and calcium

hydroxide. Additionally, its antibacterial properties reduce bacterial penetration, minimizing the risk of pulp inflammation and failure. Studies indicate that BAG-based materials, such as Biodentine® and experimental bioactive composites, show faster dentin bridge formation and lower inflammatory responses. However, issues like mechanical strength and long-term validation remain.

Discussion: BAG's bioactivity, antibacterial properties, and regenerative potential position it as a transformative material in vital pulp therapy. Research continues to refine its formulations for improved handling and controlled ion release.

Conclusion: Bioactive glass bridges the gap between conventional materials and regenerative endodontics, offering a biomimetic approach to pulp preservation and long-term tooth vitality.

LASERS IN ORAL AND MAXILLOFACIAL SURGERY

Presented by: Shraddha Murthy

Supervisor: Dr. Savitha

College/University: RRDCH

Introduction: Ever since their discovery in 1960, lasers have been in use in dentistry since the 1970s in various branches due to their versatility and the appreciable advantages they offer compared to traditional surgical instruments. This poster aims to include their applications, advantages and limitations in oral and maxillofacial surgery.

Methods: An electronic search of various databases including Google Scholar, The Lancet, Web of Science, and Cochrane, published within a period of 2007 to 2024 was conducted.

Results: In oral and maxillofacial surgery, lasers can primarily be used for soft tissue surgery and hard tissue surgery. Soft tissue surgery includes incisions, biopsies, frenectomies, gingivectomies and operculectomies. Hard tissue surgery includes osteotomies, and bone cutting or contouring for dental implants. Lasers are also used oncology, i.e. to vaporize or excise malignant lesions.

Discussion: Lasers have numerous advantages over scalpels such as haemostasis, higher precision, lower pain, asepsis, improved tissue healing and thus, reduced postoperative complications. Additionally, they operate silently, reducing patient anxiety. However, their limitations include high cost, requirement of safety protocols and trained personnel, and possibility of thermal damage to surrounding tissues.

Conclusion: Lasers have had an undeniable impact on the quality of treatments an oral surgeon can offer. Considering their wide range of application, attributes and disadvantages, their use requires careful clinical discretion and consideration, along with continued research to better understand their nature, to amplify their benefits and minimize their shortcomings.

Keywords: Laser, Application, Advantages, Limitations, Oral and Maxillofacial Surgery.

CONSERVATIVE APPROACHES TO RESTORATIVE DENTISTRY: WHEN TO USE FILLING VS CROWNS

Presented by: Shreyanka P K, Shreya V

Supervisor: Dr. Subhashini

College/University: RRDCH

A conservative approach in restorative dentistry prioritizes preserving as much natural tooth structure as possible, favoring minimally invasive treatments like fillings over crowns whenever feasible; however, when substantial tooth decay or structural compromise exists, a crown becomes necessary to provide adequate support and protection, making the decision based on the extent of damage and the remaining tooth integrity, with the goal of maintaining optimal function and aesthetics with the least invasive method possible.

To provide a framework for selecting between fillings and crowns in restorative dentistry, emphasizing conservative approaches that preserve natural tooth structure.

qsdbc ?A review of clinical scenarios and tooth conditions was conducted to determine the indications for fillings, crowns, and intermediate options like inlays/onlays and partial crowns.

Fillings are suitable for small cavities, limited tooth damage, and non-load bearing teeth. Crowns are necessary for large cavities, extensive tooth damage, load-bearing teeth, and root canal treated teeth. Intermediate options are used for cases that fall between these extremes.

A conservative approach to restorative dentistry involves selecting the most minimally invasive option that ensures tooth functionality and aesthetics. By understanding the indications for fillings, crowns, and intermediate options, dentists can provide optimal treatment while preserving natural tooth structure.

IMPORTANCE OF TOOTH IN FORENSIC ODONTOLOGY

Presented by: Kamal solanki

Supervisor: Dr. Sowbhagya

College/University: RRDCH

Teeth play a crucial role in forensic odontology as they are one of the most durable structures in the human body, allowing them to be used for identification even when other bodily tissues are severely decomposed or damaged. Their unique characteristics like fillings, spacing, and

tooth shape, can be compared to dental records to identify an individual making them a reliable tool in cases like criminal investigations, mass disasters or when identifying unknown remains. Due to their resilience to decomposition, teeth can be used to identify individuals even when bodies are badly burned, decomposed, or mutilated, making them a valuable tool in challenging situations.

The dental tissues are an excellent source of DNA for identification, even when other tissues are degraded. As these tissues are resistant against environmental attacks such as incineration, immersion, trauma, and decomposition.

Since every person has a unique dental pattern including the arrangement, shape, and size of their teeth, it can be used for comparison with dental records to establish identity. Teeth can be used to analyze bite marks left on a victim, as the pattern in a bite mark is unique, like fingerprinting, radiographs, and DNA; helping to link a suspect to a crime scene. Age determination is aided by recording the degree of formation of crown and root structures, the stage of eruption, and the intermixture of primary and permanent dentition. It also helps in identification of an individual.

Forensic odontology has become a vital and integral part of forensics that utilizes knowledge of dentistry for the identification of unknown living or deceased persons and unidentified remains.

ADVANCES IN DENTISTRY

Presented by: G Varun Shetty

Supervisor: Dr Savita

College/University: RRDCH

The field of dentistry has seen rapid advancements, transforming patient care and clinical outcomes. Digital impressions have replaced traditional molds, using intraoral scanners for faster, more accurate, and comfortable dental impressions. Orthodontic wire benders now enable highly customized wire adjustments, improving precision and reducing patient discomfort. Clear aligners, such as Invisalign, offer a discreet, removable, and flexible alternative to traditional braces, appealing to those seeking aesthetic solutions.

Ceramic brackets, made from tooth-colored materials, provide a durable and less noticeable option for orthodontic treatment. Guided tissue regeneration (GTR) has revolutionized treatment by promoting the growth of new bone and gum tissue, restoring lost structures and improving gum health.

AI in radiology has enhanced diagnostic accuracy, with algorithms analyzing X-rays and 3D scans to detect cavities, gum disease, and oral cancers earlier and more precisely than traditional methods. Smart toothbrushes, equipped with sensors and connected to apps, provide real-time feedback on brushing habits, helping patients maintain optimal oral hygiene and reducing the risk of decay and gum disease.

Robotic surgery is improving precision in complex procedures like implant placements and root canals. Robotic systems enable minimally invasive techniques, reducing recovery times and enhancing patient outcomes.

Conclusion: These innovations highlight a shift toward precision, convenience, and patient-centered care, setting the stage for a new era in dentistry. By integrating advanced technologies and materials, dental professionals can deliver more effective, efficient, and comfortable treatments, paving the way for the future of oral healthcare.

THE SCIENCE BEHIND TOOTH DISCOLOURATION: CAUSES AND MANAGEMENT

Presented by: Trisha V, Sahana Prakash

Supervisor: Dr Geeta IB

College/University: RRDCH

Tooth discoloration is a prevalent aesthetic concern that can arise from intrinsic and extrinsic factors. Intrinsic discoloration originates from within the tooth and may be caused by developmental defects, systemic conditions and fluorosis. Extrinsic discoloration results from surface stains due to dietary factors, tobacco use, poor oral hygiene, and certain medications. The management of discoloured teeth varies based on the cause and tooth vitality. Vital teeth are typically treated with external bleaching using low-concentration hydrogen peroxide or carbamide peroxide in customized trays, offering a conservative and effective whitening approach. Non-vital teeth, particularly those that have undergone endodontic treatment, can be treated with internal bleaching techniques such as the walking bleach method, which involves placing a bleaching agent inside the pulp chamber. However, the use of high concentration HP has been associated with external cervical root resorption, making technique sensitivity and material selection crucial for safe application.

While bleaching remains the first line, minimally invasive approach, cases of severe discoloration that do not respond adequately may require prosthetic solutions, such as veneers or crowns. These provide long-term aesthetic improvement but involve tooth structure removal, increasing the need for future restorative interventions.

A multidisciplinary approach involving restorative dentistry, endodontics, and prosthodontics may be necessary for complex cases. Ultimately, the goal is to achieve optimal aesthetic outcomes while preserving the natural tooth structure and ensuring long-term oral health and patient satisfaction.

REGENERATIVE DENTISTRY USING STEM CELLS

Presented by: Mayukh Dey

Supervisor: Dr. Poornima G

College/University: RRDCH

Regenerative dentistry using stem cells is a groundbreaking approach aimed at restoring damaged or lost dental tissues by harnessing the regenerative potential of stem cells. Various types of stem cells, including dental pulp stem cells (DPSCs), periodontal ligament stem cells (PDLSCs), dental follicle stem cells (DFSCs), and stem cells from human exfoliated deciduous teeth (SHED), have shown promise in regenerating dentin, pulp, periodontal structures, and even entire teeth.

Stem cell-based regenerative techniques involve isolating stem cells, culturing them, and using bioactive scaffolds and signaling molecules such as growth factors to guide their differentiation into specific dental tissues. Applications include pulp regeneration in endodontic treatments, periodontal tissue repair for periodontitis patients, and potential whole-tooth bioengineering. Advances in gene editing, 3D bioprinting, and biomaterial scaffolds further enhance the precision and efficacy of these approaches.

Despite significant progress, challenges remain, including immune rejection, ethical considerations, and the complexity of regenerating multi-layered dental structures. Future research is focused on overcoming these hurdles to translate stem cell-based regenerative dentistry into routine clinical practice, offering long-term, biological solutions for oral healthcare.

TELEDENTISTRY

Presented by: D Latha Shree

Supervisor: Dr. Poornima G

College/University: RRDCH

Teledentistry is an innovative approach that integrates telecommunication technology with dental care to enhance access, efficiency, and quality of oral health services. It involves the remote exchange of clinical information, consultation, diagnosis, and patient education through digital platforms. Teledentistry is particularly beneficial in rural and underserved areas where access to dental professionals is limited. It enables real-time (synchronous) and store-and-forward (asynchronous) communication between patients and dentists, facilitating early diagnosis and timely intervention.

With advancements in artificial intelligence, mobile applications, and cloud-based dental records, teledentistry has evolved to provide virtual consultations, treatment planning, and post-operative care. It reduces the need for in-person visits, thereby minimizing costs, saving time, and improving patient convenience. Additionally, it plays a crucial role in dental public health, allowing for remote monitoring of oral diseases and conducting virtual educational programs.

During the COVID-19 pandemic, teledentistry emerged as a vital tool in maintaining dental care while reducing infection risks. However, challenges such as technology accessibility, data security, regulatory policies, and the need for hands-on dental procedures limit its widespread adoption. Despite these challenges, ongoing advancements and integration with artificial intelligence and machine learning are expected to further enhance its capabilities. Teledentistry represents a significant shift in modern dental care, bridging geographical barriers and improving patient engagement. As technology continues to evolve, it holds the potential to revolutionize dental healthcare delivery, making it more accessible, efficient, and patient-centric.

PIEZOELECTRIC SURGERY

Presented by: Trushna Patil

Supervisor: Dr. Savita

College/University: RRDCH

Introduction: Piezo surgery is basically ultrasonic micro vibrations used to cut bone tissues. It is a minimally invasive surgical technique developed to improve traditional methods. It's used in a variety of surgical fields, including dentistry, maxillofacial surgery, and neurosurgery. It offers better soft tissue preservation, faster healing, and reduced blood loss, finding increasing use across various surgical specialties.

Modes of piezoelectric devices used in the field of dentistry: There are three modes: Low mode (apical RCT), High mode, (cleaning and smoothing bone borders), boosted mode (Used in OMFS to avoid overheating and maintain optimal cutting capacity)

Boosted mode is used for the osteoplasties and osteotomies. The most often used mode in oral and maxillofacial surgery is boosted mode in which digital modulation of the oscillation pattern produces alternating high-frequency vibrations, with pauses at frequencies up to 30 Hz to avoid overheating, while maintaining optimal cutting capacity

Principle: Piezo surgery uses the piezoelectric effect to create ultrasonic oscillations. These oscillations, amplified and transferred to a vibrating tip, cause cavitation, enabling precise bone cutting while minimizing soft tissue damage. Advantages: Improved soft tissue protection, Mechanical and thermal injury can be avoided, Protect the tooth vitality, Reduced blood loss, Increased patient comfort, Reduce the incidence of coagulation necrosis of osteotomized fragments,

Disadvantages: Expensive, Technique sensitive, If surgeon is less experienced, it may induce damage of soft tissues like nerves and blood vessels and may increase the duration of surgery, Difficult to learn, High level surgical control is required.

Mechanism: Piezo surgery uses a piezoelectric headpiece, control unit, and foot switch. Various tips are available for different tasks. The device uses micro-vibrations with saline coolant to prevent overheating. Cutting efficiency depends on pressure, speed, and cooling. Light pressure ensures precise cutting; excessive pressure causes overheating and bone damage.

Clinical Applications: Sinus lift, Surgical removal of impacted third molars, Bone harvesting, Bone splitting/ridge expansion, Distraction osteogenesis, Alveolar nerve decompression, Cyst removal, Periodontic and endodontic surgery, Dental Implantology, Orthognathic surgeries, Osteotomies in the TMJ, Mental nerve transposition.

Conclusion: Piezosurgery is an emerging boom in the field of maxillofacial surgery for precise, safe and effective osteotomies sparing the adjacent vital structures. It facilitates the bone healing by inducing early increase in bone morphogenetic proteins and reduce the inflammatory process. Even though it is a time-consuming technique with a large learning curve, its clinical advantages overrules its drawbacks. Recently it was emerging as a promising surgical modality with a wide range of clinical applications throughout the whole field of surgery.

SUSTAINABLE DENTISTRY. HOW CLOSE ARE WE?

Presented by: Marwa Ali Zaher, Mai Matar

Supervisor: Dr. Meharunneesa aboo backer

College/University: City university ajman (UAE)

Need of the study: A sustainable health and care system is achieved by delivering high quality care and improved public health without exhausting natural resources or causing severe ecological damage. As the environmental impact of healthcare continues to gain attention globally, it is essential to assess how sustainability can be integrated into dentistry. Aim: This review will gather insights on the awareness of sustainable practices, the extent to which they are currently being implemented, and the key obstacles that hinder broader adoption.

Methodology: The methodology involved a comprehensive review of existing studies, articles, and reports related to sustainability, to identify key themes and trends in sustainability practices.

Results: While research on sustainability in dental education and practice is still limited, there is growing interest in the topic. Studies indicate that there is potential for significant

improvements in dental schools' curricula, clinical practices, and waste management strategies. However more research is needed to assess long term effectiveness of this initiation.

ADVANCEMENTS IN COMPOSITE RESINS

Presented by: Maanya CP, Shreya Tayal

Supervisor: Dr Vinutha- Reader

College/University: JSS

The introduction of resin-based dental materials around the mid of the last century was a revolution in restorative dentistry. The early formulations were characterised by numerous problems like improper handling characteristics, polymerization shrinkage, improper marginal adaptation, inappropriate proximal contact and most importantly secondary caries and inadequate wear resistance. Fortunately, these materials have been the focus of a great deal of research in recent years with the goal of improving restoration performance by changing the initiation system, monomers, and fillers and their coupling agents, and by developing novel polymerization strategies. Here, we review the general characteristics of the polymerization reaction and recent approaches that have been taken to improve composite restorative performance.

BREATHING NEW LIFE INTO SLEEP

Presented by: SAMALA DEVI N

Supervisor: Dr. Kalpana MDS

College/University: SRM

Obstructive sleep apnea (OSA) is a chronic condition characterized by repeated upper airway collapse during sleep, leading to fragmented sleep and systemic health complications. This poster focuses on current treatment modalities, with a particular emphasis on dental interventions. While continuous positive airway pressure (CPAP) remains the gold standard, oral appliance therapy (OAT) has emerged as an effective alternative for mild to moderate OSA and CPAP-intolerant patients. Mandibular advancement devices (MADs) improve airway patency by repositioning the mandible, reducing airway obstruction. Additionally, adjunctive therapies such as myofunctional therapy, orthodontic interventions, and surgical options, including maxillomandibular advancement (MMA), will be explored. The importance of

personalized treatment planning, patient adherence, and interdisciplinary collaboration in optimizing outcomes will also be discussed. By integrating dental expertise into OSA management, clinicians can play a pivotal role in improving patient quality of life and long-term health outcomes.

ORAL HEALTH IN CHILDREN SMILE NATURALLY- ANCIENT WISDOM FOR MODERN SMILES

Presented by: Ujjwal Kiran

Supervisor: Dr. Seema Deshmukh, Reader

College/University: JSS

Oral health is crucial for children's overall well-being and dental hygiene. Oral diseases, such as dental caries and periodontal diseases, are a global health concern due to microbial species in the oral cavity's microbiota. The need for safe, effective, and economical alternatives to traditional medicine arises from rising disease incidence, antibiotic resistance, and financial considerations in developing countries. Ayurveda, an ancient Indian system of healthcare, offers a holistic approach to health and illness, focusing on treating patients as an organic whole. The use of medicinal plants in Ayurvedic medicine may lead to novel preventive or therapeutic strategies for oral health. Integrating professional dental treatment modalities and complementary alternative medical systems can provide unique and effective treatments. Ayurvedic herbs have anti-inflammatory, wound healing, antimicrobial, and antioxidant properties, and recent studies explore their use for oral and dental health. However, traditional medicines can cause harmful reactions if not used properly or in conjunction with other medicines. Increased patient awareness and training are essential for safe use.

A RAY OF HOPE: PHOTODYNAMIC THERAPY IN ORAL ONCOLOGY

Presented by: Saanvi Chowdhary

Supervisor: Dr. David K.

College/University: MOCODS

Surgical, radiation and chemotherapeutic treatments for oral cancer pose a plethora of morbidities and is limited by the prospect of functional and aesthetic impairments, non-selective cytotoxicity of healthy tissues and finite cycles of re-treatment. In this era of scientific and technological advancement vis-à-vis minimally invasive treatments, cancer management has seen excellent results with Photodynamic Therapy. By harnessing the power of light,

photosensitive dye & cellular oxygen it is able to achieve promising results while overcoming aforementioned drawbacks of the 3 current regimens available. Nothing, however comes without its own limitations, no matter the significance of its benefits. PDT is an approved medical technology used as an alternative or adjunctive treatment of various malignant neoplasms, precancerous and non-cancerous diseases. With continuous evolution in its efficacy and methodology, PDT is progressing toward mainstream adoption, enhancing the quality of life for survivors. This poster highlights the mechanism of action and transformative impact of Photodynamic Therapy on oral cancer treatment and its potential to redefine therapeutic standards.

ESTHETIC VENEERS, CROWN AND BRIDGE: FIRST FIT SYSTEM

Presented by: M. Nazneen Farath

Supervisor: Dr. Abdul Mujeeb; BDS, MDS

College/University: SJM

Introduction: The first fit system in dentistry is a digital approach that ensures the precise placement of veneers, bridges and crown etc with minimal adjustment. This system uses advance CAD/CAM technology, digital impression and 3D printing or milling. This approach enhances precision, efficiency and patient satisfaction by ensuring an optimal fit on the first attempt.

Process and Key Advantages

Process includes :

1. Digital impression
2. CAD/CAM technology
3. Milling / 3D Printing
4. Placement and evaluation
5. Final adjustment

Key Advantages: High accuracy, reduced treatment time, improved patient comfort, better longevity.

Conclusion: This poster discusses how 'First Fit system' revolutionizes restorative dentistry by optimizing accuracy, efficiency and patient experience. By leveraging digital technology, it simplifies complex procedure, reducing chair time and enhancing clinical outcomes. As dentistry continues to evolve, adopting such innovation ensures better efficiency and superior patient care.

THE FUTURE OF SMILES: DIGITAL DESIGN REVOLUTION

Presented by: TEILABUROM WARSHONG

Supervisor: Dr. Abdul Mujeeb, BDS, MDS

College/University: SJM

Introduction: Smile designing is a branch of cosmetic dental procedure that connects imperfections of the teeth and restores dental health and appearance of the person. Today Digital Smile Design is changing the future of dental practice world-wide.

Digital Smile Design is a technical tool which is used to design and modify the smile of patients digitally and help them to visualize it beforehand by creating and presenting a digital mock-up of thin new smiles before treatment physically starts. It has allowed major improvement in the aesthetic and functional aspects of dental treatment.

Advantages:

- It helps in visual communication and involvement of the patients in their own smile design process, thus ensuring predictable treatment outcome and increasing case acceptance.
- It can address the patient concerns by showing digitally the final outcome, motivating, educating them about the benefits of the treatment.
- The patient may evaluate, provide opinion and approve the final shape of the new smiles before treatment procedures are performed thus enhancing patients satisfaction.

Conclusion: The poster obliterate the procedures of digital smile designing, evaluate its advantages, and understand the limitations of Digital Smile Designing. As digital design continues to evolve, we are entering an era where achieving the perfect smile is more accessible and efficient.

FLIES TO INFESTATION: ORAL MYIASIS

Presented by: Zainab Tameem

Supervisor: Dr.Tanveer Ahmed;BDS MDS(OMFS)

College/University: SJM

Introduction: The term myiasis comes from Greek words myia (fly) and iasis (disease). Oral myiasis is a rare parasitic infestation of the oral cavity caused by dipterous larvae (maggots). These larvae invade and feed on soft tissues in various parts of the mouth, including the gingiva, palate, and extraction wounds. This condition is more prevalent in tropics and developing countries.

Cause and Predisposing factors:

It is associated with poor oral hygiene, alcoholism, senility, suppurating lesions and severe halitosis.

- The primary cause is that female fly infests ova in open wound/dead tissue/ cavities (ear, nose and oral cavity)
- These subsequently hatch into larvae & draw nourishment from soft tissue.

Predisposing factors include:

- i. Oral hygiene
- ii. Open wounds/ulcer
- iii. Systemic Conditions (diabetes, immunosuppression)
- iv. Mouth breathing

Prognosis: With timely and appropriate treatment, the prognosis for oral myiasis is generally favourable. Complete removal of larvae and proper wound care typically lead to full recovery without significant complications. Delayed treatment can result in extensive tissue damage, secondary infection and in severe cases, systemic involvement.

Prevention and treatment: Preventive measures like regular brushing, flossing and dental check-up. covering oral lesions to prevent contact, use of protective gear in fly prevalent areas and for lip incompetency individuals to reduce exposure.

Treatment includes:

- ☆ Maggot removal
- ☆ Broad spectrum antibiotic
- ☆ Oral therapy using ivermectin.

Conclusion: Early diagnosis and prompt intervention are crucial in managing oral myiasis. Awareness and preventive measures can help reduce the risk, ensuring a favourable outcome for affected patients

ARTIFICIAL INTELLIGENCE IN PEDIATRIC DENTISTRY

Presented by: Annie Jane Dsa, Aiswarya Abraham

Supervisor: Dr Malvika Ganapathy

College/University: CIDS

In the global epidemic era, oral problems significantly impact a major population in children. The key to a child's optimal health is early diagnosis, prevention and treatment of these disorders. In the recent years, the field of Artificial intelligence has seen tremendous pace and progress. AI, in simple terms refers the use of computers and algorithms to perform the task technically which requires human intelligence, such as decision making, learning and pattern

recognition. Machine learning is a subset of AI that uses statistical models and algorithms to identify patterns within large datasets, enabling predictive analysis and decision-making based on the data. Neural networks represent a specific category of machine learning algorithms. The network imitates the structure of the human brain by forming a computational network of cells arranged in a series of layers. “Deep learning” (DL) refers to multi-layered neural networks, by improving performance on complex tasks in areas like image and sound processing. In pediatric dentistry, AI addresses several traditional challenges such as improving diagnostic accuracy and enhancing treatment planning for young patients. Pediatric dentistry often involves managing the behaviour of anxious or uncooperative children during dental visits. Given the growing focus on integrating AI into dental practices, this review explores the impact of AI on pediatric dentistry, particularly its role in enhancing diagnostic accuracy, treatment planning and behaviour management.

ARTIFICIAL INTELLIGENCE IN ORAL MEDICINE AND RADIOLOGY- A TURNING POINT IN DENTISTRY

Presented by: Aditya G Patil, Pradeep R Madagi

Supervisor: Dr. Shama B S,

College/University: CIDS

Artificial Intelligence (AI) is revolutionizing oral medicine and radiology by enhancing diagnostic accuracy, optimizing treatment planning, and improving patient care. AI-driven machine learning (ML) and deep learning (DL) algorithms analyze medical and radiographic images with high precision, aiding in the early detection of dental and maxillofacial diseases. AI applications in radiology include automated detection of dental caries, periodontal diseases, cysts, tumors, and temporomandibular joint disorders. These systems assist clinicians by reducing diagnostic errors, improving efficiency, and ensuring consistent results. In oral medicine, AI-powered tools help in screening and diagnosing conditions such as oral cancer, potentially malignant disorders, and systemic diseases with oral manifestations. AI-driven decision support systems guide treatment strategies based on large datasets, leading to personalized patient care. Moreover, AI enhances administrative efficiency through automated appointment scheduling, electronic health record management, and virtual patient consultations. Despite its transformative potential, challenges remain, including ethical concerns, data security, and the need for extensive clinical validation before widespread adoption. The integration of AI into dental practice requires collaboration between technologists and healthcare professionals to ensure accuracy, reliability, and patient safety. Overall, AI in oral medicine and radiology holds immense promise in improving diagnostic capabilities, reducing workload, and enhancing patient outcomes. Continued research and innovation will drive its future applications, making dental healthcare more precise and accessible.

BIAS RISK IN AI IN DENTISTRY

Presented by: Kavya B N, Nethravathi S V

Supervisor: Dr. Shashidhara R,

College/University: CIDS

As world increase their use of AI in our day-to-day life. It has made its way over to healthcare facilities as well. People are concerned about the biases made out. It is critical part of decision making in healthcare. AI bias refers to situations where an AI system produces results due to flaws in the machine learning process. This bias often originates from the data used for training, the design of the algorithm, or even the objectives it's programmed. However, it requires the large data. Racial and gender bias are difficult to eliminate in real world. This review paper explores what AI bias is, why addressing it is essential in ensuring trust and better result in Healthcare and how to overcome it.

A REVIEW ON LEFT VENTRICLE

Presented by: Akshay Kumar B, David Ponanna

Supervisor: Dr. Alexander V

College/University: CIDS

For centuries, the left ventricle has been a subject of much research. It was described by physicians of the Hippocratic era as having thicker walls and a more irregular interior when compared to the right. Such differences were ascribed to the left ventricle as being the site of heat production and the “pure air of life”. Since then, scientists, physicians, and anatomists such as Aristotle, have dismissed such theories and have chronicled the chambers of the heart in precise details. Moreover, with the advent of tomography and other imaging modalities such as three-dimensional echocardiography, the left ventricle and additional chambers of the heart can be described with even more accuracy. The left ventricle is situated posterior to the right ventricle, and like its counterpart comprises an inlet portion, apical trabeculae, and an outlet portion. Its inlet incorporates the mitral valve apparatus, while its outlet portion leads to the aortic valve which is limited by the muscular ventricular septum anterosuperiorly and the aortic leaflet of the mitral valve posteroinferiorly. The left ventricle extends forward and forms most of the sternocostal, left, and diaphragmatic cardiac surfaces of the heart via its obtuse margin, and it is only prominent posteriorly at its inferior end. 2. General and external features the left ventricle is cone-shaped, more extensive and narrower than the right; it slopes from its base in the plane of the atrioventricular groove to the cardiac apex. The limit of its territories is designated by both the anterior and posterior (inferior) interventricular grooves which indicate the lines of mural attachment of the ventricular septum. 2.1. Apex The anatomical apex of the heart is the apex of the conical left ventricle and is commonly located in the fifth left intercostal space, near the midclavicular line. It is directed anteroinferior to the left, overlapped by the left

lung and pleura, and close to, but isolated from the right ventricular apex by the interventricular septal wall. This location is also often used as entry into the left ventricle for valvular therapies. At the apex, the myocardium is relatively thin; as a result,

SOLITARY MEDIAN MAXILLARY CENTRAL INCISOR SYNDROME

Presented by: Padavi Lokesh

Supervisor: Dr. Chandru T P

College/University: CIDS

Solitary median maxillary central incisor syndrome is a complex disorder consisting of multiple, mainly midline defects of development resulting from unknown factors operating in utero about 35th -38th days from conception. Missense mutation in the SHH gene at 7q36 may be associated with SMMCI. Congenital nasal malformation is positively associated with SMMCI and can be associated with serious anomalies like holoprosencephaly, congenital anomalies (severe to mild intellectual disability, congenital heart disease, cleft lip/ palate, convergent strabismus, oesophageal and duodenal atresia, cervical hemivertebrae, scoliosis, ambiguous genitalia), short stature is present in half of the children. Diagnosis should be made by 8th months of age but can be made at birth and even prenatally at 18-22 weeks from the routine mid-trimester ultrasound scan. Management depends upon the individual anomalies present. SMMCI tooth itself is mainly an aesthetic problem, which is ideally managed by combined orthodontic, prosthodontic and oral surgical treatment, alternatively it can be left Untreated. By studying SMMCI syndrome, researchers can gain a deeper understanding of the underlying causes and consequences of this rare condition, ultimately improving diagnosis, treatment, and quality of life for affected individuals.

REVOLUTIONIZING ORTHODONTICS - FUTURE TRENDS IN TADS APPLICATIONS

Presented by: Jilna AC

Supervisor: Dr, Goutham Reddy

College/University: CIDS

Orthodontic implants have become a reliable method in orthodontic practice for providing temporary additional anchorage. These devices are useful to control skeletal anchorage in less compliant patients or in cases where absolute anchorage is necessary. There are a great number of advantages in this new approach which include easy insertion, decreased patient discomfort,

low price, immediate loading, reduced diameter, versatility in the forces to be used, ease of cleaning and ease of removal.

However, a proper management of the screws by the practitioner is necessary in order to increase the success rate of this technique.

In routine orthodontic practice anchorage is a critical factor in determining the success of an orthodontic treatment. Many modalities have been tried for preventing the anchorage loss by using the extra oral and intraoral devices, yet the orthodontists did not find any convenient solutions to solve this problem until the mini- implants had emerged to the specialty.

The implants are used in orthodontics for Intrusion of molars and anterior teeth, retraction of anterior teeth, up righting of molars, extrusion of teeth, closing edentulous spaces, mesiodistal tooth movement, open bite correction, molar mesialization, rotation of tooth, expansion and protraction of maxilla, etc.

Through this poster I'll be presenting different clinical applications of TADS in Orthodontics.

CAN METHYLPHENIDATE USE IN CHILDREN/ADOLESCENTS FOR TREATMENT OF ADHD LEAD TO DEVELOPMENT OF BRUXISM: SYSTEMATIC REVIEW

Presented by: Keerthana A M, Jennifer Peo

Supervisor: Dr Lamea Afnan

College/University: CIDS

Aim: This review poster aims to evaluate if there is any association between methylphenidate usage in children with Attention Deficit Hyperactivity Disorder (ADHD) and development of Bruxism.

Materials and Methods: Prospero registered (CRD42024538678). PubMed, Scopus, Web of Science, Google scholar was searched using pre-specified search strategy. Clinical studies, case-reports and case series are included for the data synthesis. Exclusion criteria is narrative and systematic reviews.

Results: A total of 135 titles were screened rigorously by two independent evaluators and after duplicate exclusion, removal of irrelevant titles, 10 articles were included for full text analysis out of which 8 qualified for final data synthesis.

Conclusion: Most of the studies included in the current review suggests that there is an association between methylphenidate usage and development of Bruxism in children with ADHD but the evidence is weak as most of the included studies are case reports and more studies are required to confirm the same.

BIOMIMICRY IN RESTORATIVE AND REGENERATIVE DENTISTRY

Presented by: Srushti Desai

Supervisor: dr. Janina Loren Dsouza

College/University: MOCODS

Biomimetics is a specialized branch of science that focuses on preserving intact tooth structures while restoring the functionality and biomechanics of natural teeth. Biomimetic dentistry encompasses the art and science of repairing damaged teeth through restorations that closely resemble living tissues. This approach is especially relevant in the fields of restorative and regenerative dentistry. In biomimetic regenerative dentistry, two primary concepts are emphasised: remineralisation and regeneration. Remineralisation involves the re-deposition of lost mineral ions into demineralised tooth structures, effectively restoring their integrity. The process of biomimetic remineralisation adopts an advanced method to refill demineralised dentin collagen with liquid-like amorphous calcium phosphate nano precursor particles, which are stabilised by biomimetic analogs of non-collagenous proteins. Conversely, regeneration refers to restoring vitality and function to damaged or lost tooth tissue. An illustrative example is regenerative endodontic procedures, such as pulp revascularization, which present an innovative alternative to traditional root canal treatments. This review aims to underscore recent advancements within the emerging field of biomimetics. Integrating biomimicry in clinical practice enhances patient outcomes and fosters an interdisciplinary approach encompassing medicine, bioengineering, biotechnology, and computational sciences. This collaborative framework is essential to advance current research within clinical settings. A comparative analysis of various biomimetic materials will also be provided, enhancing understanding of their distinctive properties and capabilities.

CALCIUM SERUM LEVELS

Presented by: Kushal, Sherin

Supervisor: Vamshi

College/University: CIDS

Quest Diagnostics: Parathyroid Dysfunction: Laboratory Testing for Diagnosis and Management. This Clinical Focus discusses the role laboratory testing in the diagnosis and management of parathyroid dysfunction, including primary, secondary, and tertiary categories of hyperparathyroidism and hypoparathyroidism.

Clinical background: Parathyroid dysfunction is characterized by abnormal production and secretion of parathyroid hormone (PTH), an 84-amino acid protein important for calcium homeostasis and metabolism. Calcium homeostasis is a complex process that involves PTH, serum calcium, serum phosphate, and 1,25-dihydroxyvitamin D3 (ie, calcitriol or 1,25(OH)2D3), which is the most biologically active form of vitamin D. Diagnosis and management of parathyroid dysfunction includes laboratory assessment of these and other measures of calcium homeostasis.

Hyperparathyroidism (overproduction of PTH) is the most common form of dysfunction and is associated with hypercalcemia and hypophosphatemia, which result in overt skeletal and renal complications. 3–5 Hypoparathyroidism (underproduction or no production of PTH) is uncommon and associated with hypocalcemia resulting in cardiovascular, neurological, and renal complications that can be life-threatening and require prompt diagnosis and treatment.

This Clinical Focus discusses the important role that laboratory testing plays in the diagnosis and management of parathyroid dysfunction, including primary, secondary, and tertiary categories of hyperparathyroidism and hypoparathyroidism. This information is not intended as medical advice. Test selection and interpretation, diagnosis, and patient management decisions should be based on the physician's education, clinical expertise, and assessment.

ROBOTICS: A NEW BUZZ IN ORTHODONTICS

Presented by: Venkatesh Nambiar

Supervisor: Dr Goutham Reddy,

College/University: CIDS

Orthodontics is a rapidly growing profession in the modern world, where patient comfort, aesthetics, and the desire to successfully speed the course of treatment are important factors. Even though surgical robots have been used in experiments since the early 1920s, their lack of accuracy prevented them from being widely used. The purpose of robots is to expedite the

process of creating orthodontic equipment while maintaining precision. The use of robotic technology in orthodontics is a natural endeavor to improve the efficiency of clinical and laboratory procedures. The application of robotics in orthodontics has made it easier for us to carry out difficult procedures that call for a high degree of precision. The orthodontics practitioner will have the luxury of allocating more time to diagnostic and treatment planning as new avenues for its application are explored, rather than having to devote time to laborious tasks like wire bending and appliance production.

NEURO ANATOMY OF SPINAL CORD

Presented by: Shree Vidya P, Chaithanya

Supervisor: Mr. Alexander. V

College/University: CIDS

Need: The spinal cord acts as a primary conduit for information transfer between the brain and the rest of the body. The spinal cord is the highway for signal transmission between the nerves, enabling the movements of sensations and autonomic functions like Respiration & vasomotor changes.

PITUITARY GLAND

Presented by: Nishchitha N, Shivani

Supervisor: Mr. Alexander. V

College/University: CIDS

The pituitary gland is the master of endocrine gland of the body. It is composed of endocrine cells. The gland can be divided into Adenohypophysis and Neurohypophysis. These are responsible for the release of hormones.

BASAL GANGLIA, REVIEW OF LITERATURE

Presented by: Sanjana. S, Ananya. K. R.

Supervisor: Mr Alexander V

College/University: CIDS

Basal ganglia within the brain play a crucial role in motor control as well as cognitive, motivational processes, also involved in learning, habit formation, emotional regulation. Understanding the anatomy and functions of basal ganglia is critical for developing targeted treatments for Parkinson's disease and Huntington's disease.

ORTHODONTIC TRACTION OF IMPACTED MAXILLARY CANINE

Presented by: Likitha CS

Supervisor: Dr. Goutham,

College/University: CIDS

Orthodontic traction of impacted canines stands as a major challenge for Orthodontists. Maxillary canines are the second most frequently impacted teeth after the third molars. Canines play a critical role in creating an aesthetic smile as they support the part of facial muscle. In some cases, it is possible to retract canines into their correct position by orthodontic treatment.

This poster presents a review of the main concepts involving etiology and sector classification of impacted canines, and describes the different clinical management options that would help solve the problem and risks following the treatment. Surgical exposure of the impacted canine, and the complex orthodontic mechanics applied to align the tooth back into the arch, may frequently lead to complications involving supporting tissues, not to mention the long treatment time and high costs imposed to patients.

It is a relatively frequent clinical complaint which requires a multidisciplinary approach. Proper treatment of an impacted canine is required as it causes functional and esthetic disharmony, as well as it can cause root absorption of adjacent teeth.

THE EFFECT OF CARBONATED DRINKS ON TOOTH

Presented by: Divyashree G U, Sanidhya K U

Supervisor: Abhishek M K

College/University: CIDS

The present study was conducted to analyze the erosive potential of the ever-increasing conception of carbonated drinks on the dental surface. To identify relevant studies, a comprehensive search was conducted on Pub Med scopus and Web of Science covering the last five years articles. Carbonated drinks pH and duration of exposure have different deleterious effect on enamel. An abuse of carbonated acid substances leads to an increase in the possibility of dental erosion, with consequence structural disintegration and reduction of physical and mechanical properties of enamel. Each time you sip a sugary soda, the sugar interacts with bacteria in your mouth. This creates an acid that erodes tooth enamel and allows decay to set in quickly leading to hypersensitivity of teeth. Ingredients of carbonated drinks are carbon dioxide, water, carbonic acid, phosphoric acid and some sweeteners can potentially promote bacterial colonization leading to alteration of pH in the mouth.

Preventive measure for caries: Brush your teeth twice a day fluoride rich toothpaste. Floss between your teeth. Cut down on sugar, and other lifestyle tips. Cut down carbonated drinks, instead use some normal water.

Use of topical fluorides. Visit dentist for restoration of caries.

Keywords: Bacterial colonization, demineralization, Carbonic acid, soft drinks, carbonated drinks, enamel erosion, tooth, dental hypersensitivity, oral pH.

CUSTOMISED ORTHODONTIC APPLIANCES - IS THIS THE FUTURE?

Presented by: Liana Sibi

Supervisor: DR Goutham Reddy

College/University: CIDS

Advancements in orthodontics have led to the development of customized appliances tailored to individual patient needs. Traditional orthodontic devices require frequent adjustments and prolonged treatment, whereas personalized solutions enhance efficiency, precision, and comfort. This study explores the latest innovations in customized orthodontic appliances and their impact on patient care.

Aim: To analyze different types of customized orthodontic appliances, their design principles, and their effects on treatment efficiency and patient experience.

Methodology: A comparative analysis was conducted on traditional and customized orthodontic appliances, focusing on design, materials, biomechanics, and personalization. Technologies such as CAD/CAM, 3D printing, and precision indirect bonding were reviewed, along with customized solutions like clear aligners, custom labial and lingual brackets, and individualized expanders.

Results: Customized appliances offer superior precision and adaptability. Clear aligners provide a discreet, removable option, while personalized brackets improve tooth movement accuracy. Innovations like Incognito lingual braces, Insignia brackets, and digitally designed expanders (e.g., MARPE, BRAVA) enhance treatment efficiency and patient comfort. Digital workflows enable more predictable, tailored treatment plans, improving clinical outcomes.

Conclusion: Orthodontics is shifting toward fully customized appliances, optimizing treatment efficiency and patient satisfaction. With continuous advancements in digital orthodontics, personalized treatment plans are becoming more accessible, revolutionizing modern orthodontic care.

METHODS OF HEMOSTASIS IN ORAL AND MAXILLOFACIAL SURGERY

Presented by: Varshitha K V

Supervisor: Dr. Simon Chummar

College/University: CIDS

Introduction; Hemostasis is a critical aspect of oral and maxillofacial surgery as it involves the control and prevention of bleeding during and after surgical procedures. Effective hemostasis ensures minimal blood loss, reduces the risk of complications, and promotes optimal healing. Various methods are employed to achieve hemostasis in oral surgery, including mechanical techniques [such as direct pressure, ligatures, haemostatic sponges, burnishing of bone, and adrenaline swabs] thermal methods [electrocautery and laser coagulation], pharmacological approaches [local hemostatic agents like tranexamic acid and hemostatic gels], and systemic methods [transfusion of cryoprecipitate, clotting, and blood transfusion]. Additionally, advanced surgical therapies, such as the use of platelet-rich plasma and fibrin sealants, have gained attention for their potential in enhancing wound healing and reducing bleeding. The selection of hemostatic methods depends on the nature of the procedure, the patient's medical history, and the surgeon's expertise. This paper reviews the various hemostatic techniques used in oral surgery, discussing their advantages, limitations, and the latest advancements in achieving effective bleeding control.

INTRANASAL ANESTHESIA AND SEDATIVES

Presented by: Snehapriya V.D, Sona Saju

Supervisor: Dr. Sunil S.M

College/University: CIDS

Introduction: Intranasal anaesthesia refers to the application of local anaesthetics directly into the nasal cavity, numbing the tissues within the nose by spraying or applying a topical aesthetic solution.

It has become common practice in recent times owing to the ease of administration, atraumatic dispensation and higher bioavailability due to bypass of first pass metabolism and increased vascularity of nasal mucosa, while also offering potential for pain relief in certain facial areas due to its access to the trigeminal nerve endings in the nasal mucosa. Depending on the indication, satisfactory nasal anaesthesia may be obtained by the use of topical sprays and pledgets, local injections, regional nerve blocks, or a combination of these.

In Dentistry: intranasal anaesthesia is primarily used to deliver a sedative medication, allowing patients to experience a relaxed state during dental procedures, particularly for those with severe dental anxiety or difficulty in tolerating traditional needle injection for intravenous sedation. This method is especially beneficial for patients who have a strong needle phobia or other conditions that make intravenous access challenging. Some of the commonly used pre medication drugs in dentistry includes midazolam, dexmedetomidine and tetracaine, lidocaine. Intranasal anaesthesia and sedation offer a viable alternative to traditional routes of administration, providing a rapid and non-invasive means of achieving adequate anaesthesia and sedation. However, careful patient selection, dosing and monitoring are essential to ensure safety and efficacy.

This poster highlights the effectiveness, techniques, methods of application, indications, contraindications, and complications of the intranasal anesthetic drugs.

ORAL MANIFESTATIONS IN IRON DEFICIENCY ANAEMIA

Presented by: Kavya. N

Supervisor: Mrs. Vamshi

College/University: CIDS

Oral disease interventions primarily focus on behavioural changes like dietary improvements and ensuring better oral hygiene. However, recognizing the influence of biological factors,

including genetics and early-life nutrition, is crucial. Iron deficiency anaemia is the most prevalent nutritional deficiency worldwide, accounting for approximately 50% of all cases of anaemia.

Source: Iron Deficiency Anaemia and Its Impact on Oral Health article by Kabilan Velliyagounder, Krupa Chavan, and book references from Shafer's Textbook of Oral Pathology.

Mesh terms: iron deficiency, iron deficiency anaemia, oral diseases, oral manifestations, dental caries, oral candidiasis

Result: In conclusion, studies are essential to deepen our understanding of the IDA. Investigating the underlying biological mechanisms is critical to developing effective interventions, particularly for vulnerable populations affected by IDA

TELE DENTISTRY REMOTE DENTAL CONSULTATION

Presented by: Anu Sara Abraham Archana P Gowda

Supervisor: Dr Shama

College/University: CIDS

Tele-dentistry refers to the use of digital communication technologies to provide remote dental consultations, diagnosis and treatment planning. It involves the use of tools such as video calls, phone calls and digital imaging to facilitate communication between patients and dental professionals without the need for in person visit. The primary aim of tele-dentistry is to provide convenient, accessible and cost-effective dental care to patient by utilizing technology. In short tele-dentistry is revolutionizing the way dental care is delivered making it more accessible and convenient especially for routine or non- emergency dental issues. However, its effectiveness depends on the nature of the dental concern and the available technology. Tele-reporting of CBCTs is a game-changer, offering swift access to vital diagnostic information and enabling the delivery of reports without the necessity of having a radiologist physically present at the location. This enhances efficiency and ensures timely diagnoses. The current poster describes the role of tele-dentistry in dental care.

GUIDED ENDODONTICS

Presented by: Sangeetha M

Supervisor: Dr. Keerthan

College/University: CIDS

Guided endodontics is revolutionizing root canal therapy through a personalized and precise approach. The process initiates with meticulous examination and data collection using advanced imaging technologies like Cone Beam Computed Tomography (CBCT). This data is essential for the subsequent digital planning phase where a virtual 3D model of the tooth is created, allowing for the development of customized surgical guides. These guides enable dental professionals to perform precise drilling and access challenging canals with enhanced accuracy and efficiency.

The application of guided endodontics is particularly advantageous in treating complex cases, such as calcified or narrow canals, significantly improving the safety and outcomes of procedures. However, the method does present certain limitations, including reliance on specialized equipment, time-intensive planning and manufacturing processes, and higher associated costs.

This poster outlines the essential components of this innovative technique, emphasizing its core mission: delivering excellence in endodontic treatment.

VARIATIONS IN FACIAL NERVE

Presented by: Vyshnavi P. P

Supervisor: MANJULA V

College/University: CIDS

This literature review aims for documenting the variations in facial nerve. with the keywords “Facial nerve anatomy”, “Variation of facial nerve”, “branches of facial nerve”. Facial nerve is the 7th cranial nerve and carries nerve fibers that controls the facial movements and expressions. The nerve arises from the brain stem and travels through the facial canal in the temporal bone from where it exits through the stylomastoid foramen. It then divides into terminal branches at the posterior edge of parotid gland. The branches are, from top to bottom-frontal (temporal), zygomatic, buccal, marginal mandibular and cervical. 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 maxillo facial surgeon is facial nerve paralysis. Awareness about differences in the anatomy of the facial nerve assisted useful information to surgeon to preserve facial nerve during parotidectomies. 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.

TERATOGENIC DRUGS

Presented by: Tharanum Z, Veda Kulkarni

Supervisor: Neha Shetty

College/University: CIDS

Teratogens are substances that cause congenital disorders in a developing embryo or foetus. A teratogen is anything a person is exposed to or ingests during pregnancy that's known to cause foetal abnormalities.

The effects of teratogenic drugs are influenced by factors such as the timing of exposure, dosage, genetic predisposition and maternal health.

Drugs, medicine, chemicals, certain infections and toxic substances are examples of teratogens. Teratogens can also increase the risk for miscarriage, preterm labor or stillbirth. However, the risk is slightly higher during the first eight weeks of pregnancy. This is because many organs and systems are developing, making the fetus more sensitive to the harmful effects of teratogens

DIGITAL COMPLETE DENTURE

Presented by: Ashna Sherin, Aleena Zainab

Supervisor: Dr. Jinsa Yohanan

College/University: CIDS

The integration of modern technologies in removable prosthodontics in terms of complete denture fabrication has revolutionized fabrication procedures, improved outcomes, and led to advancements in denture materials. Numerous publications have described the digital techniques of complete denture fabrication. The steps described in these publications for the proposed digital workflow are diverse. This is suggestive of the flexibility of these modern techniques in terms of their integration with the steps of conventional protocols. Automated technologies have reduced the need for skilled manual work, while particular knowledge and a new skills set are required for both clinicians and dental technicians. Moreover, the effectiveness and efficacy of these modern technologies in complete denture fabrication are yet to be determined. To consolidate the existing literature on digital techniques of complete denture fabrication, this review summarizes the current digital workflows of the clinical and

laboratory stages, describes the digital alternatives in each step, and discusses their advantages and limitations.

TOOTHBRUSHE: A CLEANSER OR A RESERVOIR

Presented by: Ashira M, Fathimath Sahala Parvin

Supervisor: Dr Jithesh Jain

College/University: CIDS

Oral health is an essential part of systemic health and the overall well-being of an individual. Oral microbiome consists of various bacteria, viruses, and fungi that are responsible for causing a number of oral diseases. Toothbrush is the most widely used tool for oral care maintenance. However, toothbrushes often get contaminated with use and improper storage. Toothbrushes are generally stored in a common container in the bathroom, where the moist and humid conditions can be conducive for bacterial growth and cross-contamination through aerosols from toilet flushing, contaminated fingers, and skin commensals. Microbial load increases with every further use and serves as a reservoir to reintroduce the pathogenic microbes leading to repeated infections affecting both oral and systemic health. There is an inadequate knowledge and lack of awareness among the general public regarding the proper care and maintenance of toothbrush. So there is an urgent need to educate the public about the proper storage, usage, replacement and disinfection of toothbrushes.

ALTERNATIVES TO TOPICAL ANAESTHESIA- A LESS TRODDEN PATH

Presented by: Likitha CS, Anaswara K Ayyappan

Supervisor: Dr Chandru T.P

College/University: CIDS

Managing pain and anxiety in patients has been an essential part of dentistry. To prevent pain, dentists administer local anesthesia via a needle injection. Unfortunately, traditional local anesthetic methods, often evoke fear and discomfort, especially in pediatric patients, which is a barrier in receiving dental treatment. The pursuit of comfortable dental treatments has driven advancements in alternative anesthetic techniques. As a result, the dental profession has explored innovative approaches to achieve effective anesthesia while improving the patient comfort and reduce anxiety. This poster explores various approaches to achieve anesthesia in dental procedures. Techniques such as topical anesthetics, TENS, computerized anesthetic delivery systems, and the use of nitrous oxide sedation are highlighted. Additionally, methods like needle-free jet injectors, laser anesthesia, cryotherapy, iontophoresis, sonophoresis and pharmacological alternatives, including intranasal sprays and sublingual tablets are available. Topical anesthetics, applied directly to mucosal surfaces, provide localized numbing. TENS

uses electrical impulses to block pain signals. Computerized anesthetic delivery systems, such as The Wand®, precisely control the flow and pressure of anesthetic agents. By embracing these advancements, dental practitioners can offer less invasive anesthetic solutions, enhancing the overall patient experience while maintaining effective pain management.

MICROSTOMIA A TREATMENT CHALLENGE TO A PROSTHODONTIST

Presented by: Diya Fathima, Neha Amal

Supervisor: Dr Ashika

College/University: CIDS

The branch of prosthodontics is not only a science but also an art of handling patient who present with limitation in continuing with normal procedure. An abnormal small mouth opening is called as microstomia. The common reason for this condition includes scleroderma, orofacial malignancies, surgery, burns, TMJ ankylosis, trauma, cleft lip. Microstomia frequently leads to several incapacitating sequelae such as in ability to masticate, speech problems, impaired delivery of oral hygiene or dental care, and psychological problems secondary to facial disfigurement. Prosthodontic management of edentulous patients with microstomia is a challenging task. Use of conventional method for recording an impression and fabricating prosthesis is not effective in such patients. Impression can be made for patients with microstomia by using specialized impression techniques with sectional trays and flexible materials to accurately capture the oral anatomy, which can be assembled, disassembled in the mouth and reassembled outside the mouth. Provision of well-fitting prosthesis in microstomia patient will restore aesthetic, comfort, and function with oral and systemic function wellbeing. This poster focuses on fabrication of sectional trays and sectional dentures that could enable easier and competent in a patient with limited oral opening

ADVANCEMENTS IN TISSUE REGENERATION

Presented by: Sahana Korada, Shreehari G Raj

Supervisor: Dr. Abdul Mujeeb, BDS, MDS

College/University: SJM

Regenerative dentistry is revolutionizing oral healthcare by leveraging stem cells, biomaterials, and tissue engineering to restore damaged dental structures. Recent breakthroughs focus on harnessing mesenchymal stem cells from dental pulp, periodontal ligament, and bone marrow to regenerate dentin, pulp, and periodontal tissues. Advances in biomimetic scaffolds, such as hydrogels and nano materials, provide structural support and enhance cellular differentiation, promoting tissue repair. The integration of nanotechnology in regenerative dentistry improves drug delivery systems, antimicrobial properties, and scaffold designs, accelerating healing.

Personalised regenerative approaches, guided by patient - specific stem cells and biomaterials, are enhancing clinical outcomes. While challenges such as immune rejection, ethical concerns, and long - term efficacy remain, continuous research is making regenerative dentistry a promising alternative to conventional restorations. As technology evolves, regenerative dentistry holds the potential to revolutionize dental treatments, offering biologically driven solutions for tooth repair and replacement, ultimately improving oral health and patient quality of life.

ANATOMICAL VARIATION OF MARGINAL MANDIBULAR NERVE

Presented by: Laya Sai Praveen, Angel Jose

Supervisor: Dr. Ajoy Vijay

College/University: CIDS

The marginal mandibular nerve is a branch of facial nerve. Muscle supplied by this nerve is responsible for facial symmetry, expressions and phonation. It emerges from the anterior border of the lower part of the parotid gland where it lies in the platysma and deep fascia. The cervical portion of the nerve is vulnerable to injury while dissecting the submandibular triangle to clear lymph nodes which can result in facial asymmetry, deviation of angle of mouth, drooling of saliva and difficulty of speech and chewing. The study was conducted among 202 patients where there were 144 males and 58 females who underwent neck dissection as part of treatment for head and neck cancers. It took place between June 2005 and October 2006 at the head and neck service of regional cancer centre, Trivandrum, India. The upper part of the neck was exposed raising the upper cervical flap in subplatysmal plane. The facial artery was dissected till the marginal mandibular nerve was found crossing the artery. The distance from the lower border of the mandible to the point where the marginal mandibular nerve crosses the facial artery was measured. The number of branches were noted and the distance of each branch from the lower border of the mandible to the point where it crosses the facial artery was measured. 79.7% patients had an MMN of single division, 12.9 %had two branches, 6.9% had three branches and one patient had four branches. The position of the MMN varies in different person. MMN with two or more division may cross the facial artery above, below or at the lower border of the mandible. The marginal mandibular nerve shows considerable variation in branching and location.

In conclusion, a detailed knowledge of its course in the neck and its anatomic variation is required to prevent injury while performing clearance of level 1b nodes during neck dissection for oral cancer.

A REVIEW ON IMMEDIATE DENTIN SEALING

Presented by: Sahana T S, Dia Palangappa K

Supervisor: Dr. Salin Nanjappa,

College/University: CIDS

IDS is a procedure recommended before final impression making to preserve the dentinal collagen network and develop an adequate hybrid layer. IDS technique is a process of application of a dentin bonding agent to freshly cut dentin when exposed after tooth preparation for indirect restorations; restorations such as inlays/onlays and crowns. IDS technique provides stress free dentin bond development, decreases post operative sensitivity and also increases retention when combined with restorative materials such as GIC. This poster aims to provide an insight into this very technique and how effective it is in regularly conducted restorative procedures.

DYNAMIC ABUTMENTS IN IMPLANTS

Presented by: A K Sangeetha Vasudevan, Aryasree Puthalath

Supervisor: Dr Ashika

College/University: CIDS

Dynamic abutments represent a significant advancement in implant dentistry, offering a solution for cases where implant placement is constrained by anatomical limitations. When a screw-retained restoration is anticipated, an implant that is angled too far facially would be esthetically unacceptable. An abutment called the Dynamic Abutment became commercially available. These abutments enable angular correction, typically up to 28 degrees, allowing for better prosthetic alignment and improved aesthetics. Their use is particularly advantageous in complex cases, such as anterior region restorations and full-arch rehabilitations, where conventional abutments may not provide optimal prosthetic positioning. This poster reviews the design, biomechanical considerations, clinical applications, and advantages of dynamic abutments, highlighting their role in modern implant prosthodontics.

GBS OUTBREAK

Presented by: Shiana Ponnappa, Sudeepthi Chandassu

Supervisor: Mrs Pavithra

College/University: CIDS

GBS is a rare autoimmune condition in which immune system attacks peripheral nerves, which leads to weakness, tingling and numbness in the limbs and can progress to acute flaccid paralysis. About 1 lakh people worldwide develop GBS every year. In May 2019, national surveillance in Peru detected an increase in GBS cases in excess of the expected incidence of 1.2 cases/100,000 population. Several clinical and epidemiological findings suggested association between GBS outbreak and *Campylobacter jejuni* infection. In the first seven months of 2023, Peru reported over 200 suspected cases and at least four deaths of GBS, prompting the government to declare a national health emergency and strengthen public health measures. Two-thirds of the cases were linked to *Campylobacter jejuni*. In India, apart from Pune, other regions experiencing a rise in GBS cases include West Bengal, Telangana and Assam with suspected cases reported in children and adults. The reported mortality rate varies between 3 - 13%, depending on severity and quality of health care support. After the onset of the COVID-19 pandemic, several cases of GBS following infections with SARS-CoV-2 were reported around the world. However, the high prevalence of COVID-19 and severe complications of GBS, for example, autonomic dysfunction and respiratory failure, highlighted the importance of post-COVID-19 GBS.

SOLITARY MEDIAN MAXILLARY CENTRAL INCISOR SYNDROME

Presented by: Padavi Lokesh

Supervisor: Dr.Chandru T P

College/University: CIDS

Solitary median maxillary central incisor syndrome is a complex disorder consisting of multiple, mainly midline defects of development resulting from unknown factors operating in utero about 35th -38th days from conception. Missense mutation in the SHH gene at 7q36 may be associated with SMMCI. Congenital nasal malformation is positively associated with SMMCI and can be associated with serious anomalies like holoprosencephaly, congenital anomalies (severe to mild intellectual disability, congenital heart disease, cleft lip/ palate, convergent strabismus, oesophageal and duodenal atresia, cervical hemivertebrae, scoliosis, ambiguous genitalia), short stature is present in half of the children. Diagnosis should be made by 8th months of age but can be made at birth and even prenatally at 18-22 weeks from the routine mid-trimester ultrasound scan. Management depends upon the individual anomalies present. SMMCI tooth itself is mainly an aesthetic problem, which is ideally managed by combined orthodontic, prosthodontic and oral surgical treatment, alternatively it can be left Untreated. By studying SMMCI syndrome, researchers can gain a deeper understanding of the

underlying causes and consequences of this rare condition, ultimately improving diagnosis, treatment, and quality of life for affected individuals.

LASER AND ITS APPLICATION IN PERIODONTICS

Presented by: Kailash C

Supervisor: Dr. Rashmi

College/University: CIDS

Abstract – 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 lasers, it is also used on dental hard tissues. Hard tissues laser may be considered as an effective alternative to conventional laser, offering clinicians a better field of work that promotes positive outcome and better treatment outcomes. Laser therapy has influenced periodontal treatments in many aspects. In this poster we will be focusing on Laser and its applications in periodontics.

SCOPING REVIEW OF TUBARIAL GLANDS

Presented by: Sinchana Gowda, Naziya Falak

Supervisor: Dr Shashidhar

College/University: CIDS

Introduction: After the years 2020 and 2021 these so-called newly discovered ‘Tubarial glands’ appeared in the scientific literature. Hence, we decided to revisit the concept of Tubaril salivary glands by doing the scoping review. A pair of salivary glands named tubarial glands was discovered in 2020 and found between the nasal cavity and throat at the nasopharynx, lateral walls overlying the torus tubarius by the Netherlands Cancer Institute while working on radiation toxicity among prostate cancer patients. They play a significant role in nasopharyngeal lubrication and failure to protect them during radiotherapy treatment of patients with cancers of the head and neck.

Material and Methods: A total of 32 review articles were collected from PubMed Central from the year 2020-205. The methods followed in the article procurement are via mesh advanced research tools. The included articles were review articles, case reports, and technical notes. Duplicates were excluded and also articles that were not written in English language were excluded.

Results: A scoping review was performed using 24 articles.

OZONE THERAPY IN DENTISTRY

Presented by: Malavika T M

Supervisor: Dr. Shama B S

College/University: CIDS

Ozone has been successfully used in medicine for over 100 years due to its microbiological qualities. Its powerful oxidation impact, which results in the production of free radicals, and its ability to cause the direct death of nearly all microorganisms is the basis for its bactericide, virucide, and fungicide properties. Ozone also has a medicinal impact that speeds up blood flow and aids wound healing. Ozone may be applied as a gas or dissolved in water for medical purposes. Despite the benefits of using ozone therapeutically, concerns about its use in dentistry still exist. This poster aims to provide a summary of the current uses of ozone in dentistry. Application of ozone in oral care comes as new and alternative treatment modality in dentistry. The impact of biological and digital information leads to use of ozone application by various means for numerous treatment options in oral cavity. Ozone is a form of oxygen, which has an effective role in management of oral diseases. Ozonated water, ozonated olive oil, and ozone gas are forms of ozone used in dentistry. This review mainly emphasizes on utility of ozone in oral health care management. It's therapeutic potential and its clinical application in oral pathologies, periodontology, endodontics, oral surgery, prosthodontics, orthodontics, restorative dentistry, wound healing, tooth mineralization as treatment choice is reviewed.

ORAL MANIFESTATIONS IN DIABETES MELLITUS

Presented by: Lisha R Karkera, Vedashree A S

Supervisor: Mrs. Vamshi Thimanna,

College/University: CIDS

Diabetes mellitus is a group of metabolic disease that lead to high levels of blood glucose (hyperglycemia) which occur when the body does not make any or enough Insulin.

Oral manifestations of uncontrolled diabetes include Xerostomia, Burning sensation in the mouth, impaired delayed wound healing, Infections, Parotid salivary gland enlargement, Periodontal disease.

Source: Oral manifestations in patients with diabetes mellitus article by Biya Rohini, and textbook reference from Shafer's textbook of oral pathology.

Mesh works: Diabetes Mellitus, oral disease, oral manifestations.

Result: Diabetes is relatively common condition, practicing dentists are likely to encounter it's frequency. Although patients with diabetes often recognize the signs and symptoms of Hypoglycaemias staff should be trained to recognise the signs and treat through medical history review, ask about Diabetes diagnosis, blood sugar control, medications to assess potential risks.

DENTAL FLUOROSIS

Presented by: Sinchana Lakshmish

Supervisor: Mr. Abhishek ,

College/University: CIDS

Ingesting fluoride for prolonged periods or in doses higher than those recommended during enamel formation produces changes from the appearance of very thin white lines to serious structural defects, resulting in a pathological entity known as dental fluorosis.

Need: Primarily, dental fluorosis is important to know about because it can affect the appearance of teeth, causing white spots or discoloration, especially when excessive fluoride is consumed during tooth development. Since, it is directly linked to high fluoride intake, dental fluorosis acts as a marker for potential Overexposure to fluoride, prompting adjustments in fluoride use if necessary.

Keywords: Dental fluorosis, discoloration, skeletal fluorosis, fluoride toxicity, fluoride ingestion.

Source of DATA: "Dental fluorosis" article by Casey J krol, "Dental fluorosis" statpearls by National library of medicine, Dental fluorosis article by Dr. Jenny Abanto Alvarez -University of Sao Paulo

Result: Dental fluorosis level depends on fluoride amount intake during the age of 8-10 years old. Hence, understanding the risk of dental fluorosis emphasizes the importance of monitoring fluoride intake, especially in children during tooth development.

ROLE OF HOMEBOX GENES IN TOOTH DEVELOPMENT AND REPAIR: A NEW HORIZON

Presented by: Nadhiya T

Supervisor: Dr.shashidhara and Dr. Aklesha behera

College/University: CIDS

Introduction: A homeobox is a DNA sequence found within genes that are involved in the regulation of patterns of anatomical development in human beings. The homeobox is about 180 base pairs long. It encodes a protein domain which when expressed (as protein) help in binding with the DNA. During embryogenesis, through the early recognition property of the homeodomain, the homeoproteins are believed to regulate the entire expression of genes and also direct the formation of many body structures. Homeobox genes encode transcription factors that can regulate expression of other genes.

Materials and Methods: an electronic search was undertaken using combination of keywords e.g. homeobox genes, tooth development, dental disease, stem cells induced pluripotent stem cells, gene control region was used as search terms in PUBMED and Web Of Science and relevant Full text articles and abstract were retrieved that were written in English. A manual hand search in textbooks were also carried out. Articles related to homeobox genes in dentistry, regenerative medicine of odontogenesis were selected.

Results: the possible perspective of stem cells technology in odontogenesis and subsequent analysis of gene correction pertaining to dental disorders through the possibility of induced pluripotent stem cells technology is also inferred, here we revealed for the first time that MSX1 is indispensable for osteoblast-like differentiation and calcification in hDPSCs derived from deciduous teeth. Furthermore, MSX1 was found to modulate a wide variety of genes including cholesterol synthesis -related genes, during osteogenic differentiation of hDPSCs. We have not examined the effects of MSX1 siRNA In definitive teeth, although MSX1 May also function as a positive regulator of osteogenesis in definitive teeth as MSX1 mRNA levels are high in both definitive and deciduous teeth .Our findings will provide new insights the role of MSX1 in development and repair of teeth and maybe useful in DPSC-based regenerative therapy

Conclusion: we demonstrate the promising role of regenerative medicine on odontogenesis, which can generate new ray of hope in the field of dental sciences.

HAIS-IS IT RELEVANT IN IN DENTISTRY??

Presented by: Sudeepthi Chandassu, Nivetha N

Supervisor: Mrs Pavithra B

College/University: CIDS

Healthcare associated infections (HAIs) are infections that occur while receiving health care, developed in a hospital or other health care facility that first appear 48 hours or more after hospital admission or within 30 days after having received health care. The US Center for Disease Control and Prevention identifies that nearly 1.7 million hospitalized patients annually acquire HAIs while being treated for other health issues and that more than 98,000 patients (one in 17) die due to these. Several studies suggest that infection-control measures such as hand hygiene can help prevent HAIs and save lives, reduce morbidity and minimize health care costs.

In India, a large segment of the population seeks in-patient health-care at secondary or district-level health facilities in public and private sectors, many of which have inadequate infection prevention and control measures. The major barriers to infection prevention and control implementation are scarcity of dedicated and trained staff, availability and inappropriate use of PPE and sanitary and hygiene measures, compounded with patient overcrowding. The widespread transmission of infection in health facilities during the COVID-19 pandemic underscores the need for strengthening infection prevention and control practices. We being dental health professionals are a part of health care system and should not overlook IPC (infection prevention and control) to safeguard our health and of our patients.

GREEN DENTISTRY

Presented by: Ashira M, Navya Aravind Nambiar

Supervisor: Dr. KAVITHA A.P

College/University: CIDS

Health care facilities in medical and dental field have witnessed substantial development and advanced technologies in providing diagnostic facilities and treatment modalities. This has enhanced the quality of life however; this has led to significant generation of carbon footprint with increasing non-degradable biomedical waste which is burdening the existing deteriorating environment conditions. Health care providers across all sectors need to meticulously plan the integration of sustainable clinical practise without compromising on the hygiene measures in place. Dentists can contribute to greener sustainable earth by incorporating simple shifts into routine practise which on long term can lead to reduction in carbon footprint and cleaner environment. Sustainable practise in dentistry can be integrated into the curriculum that enable the younger generation successfully achieve the reduction in carbon footprint and reduction of waste. The provision of good dentistry translates into comprehensive restorative procedures with fewer visits, switching to digital dentistry that can reduce radiographic, prosthodontic, orthodontic materials. With the development of newer algorithms in artificial intelligence dentistry can witness further advancements by minimizing the impact on natural resources and cleaner environment for all. This poster provides an overview of the provisions for sustainable dental practise.

KETO ON YOUR PLATE, EFFECT ON YOUR TEETH

Presented by: Angel Rose Mathew, Anns Mariya Johnson

Supervisor: Dr Asmin P K

College/University: CIDS

The ketogenic (KETO) diet, characterized by high-fat, moderate-protein, and low-carbohydrate intake, has gained significant popularity for weight management and metabolic health benefits. However, its effects on oral health have not been extensively studied. The KETO diet can lead to changes in oral microbiota, acid production, and the overall health of teeth and gums. Low carbohydrate intake may reduce the food sources available for harmful bacteria that typically thrive on sugars, potentially lowering the risk of cavities. However, the increased fat intake and subsequent changes in metabolic processes may also contribute to dry mouth (xerostomia) and altered salivary composition, which can affect oral health. Additionally, the formation of ketones in the body, notably acetone, may lead to a distinctive "Keto breath," which can be perceived as unpleasant. This abstract aims to explore both the positive and negative aspects of the KETO diet on oral health, highlighting the need for further research to understand its long-term impacts on the oral cavity, including the potential risks for periodontal disease, tooth decay, and overall oral hygiene management in individuals following this dietary regimen.

ENERGY MALNUTRITION: THE IMPACT ON PREGNANCY, BIRTH OUTCOMES, AND INFANT HEALTH

Presented by: Sowmya Prasad, Apsara

Supervisor: Mr. Abhishek. M. K

College/University: CIDS

“Maternal protein-energy malnutrition” is a condition where a pregnant woman is deficient in both protein and energy intake. The nutritional status of a woman before and during the pregnancy is important for a healthy pregnancy outcome. Maternal malnutrition is a key contributor to poor fetal growth, low birth weight and infant morbidity and mortality.

Insufficient protein and energy can lead to Intrauterine growth restriction (IUGR) which means that the baby doesn't grow at a normal rate in the womb which essentially results in the low birth weight. Apart from IUGR, Kwashiorkor is also a prominent disease which causes edema, bloating and dry skin in babies.

Oral manifestation of the maternal protein-energy malnutrition are: defect in tooth eruption, enamel hypoplasia, reduced salivary flow, angular cheilitis and delayed wound healing in the oral cavity.

Understanding the dietary interventions and addressing the underlying factors is the necessary treatment for this.

Key words: Intrauterine growth restriction, Kwashiorkor, Enamel hypoplasia, angular cheilitis, dietary interventions.

Source: The above information is obtained from “National Institute of Health” and “World Health Organisation” where we obtained a large number of articles out of which the most essentially relatable ones are chosen.

PEEK

Presented by: Sreejaya Manoj, Nishitha Bekal

Supervisor: Dr. Ashika B K

College/University: CIDS

Polyetheretherketone (PEEK) has become a useful polymeric biomaterial due to its superior properties and has been increasingly used in dentistry, especially in prosthetic dentistry and dental implantology. Promising applications of PEEK in dentistry are dental implants, temporary abutment, implant-supported provisional crowns, fixed prosthesis, removable

denture framework, and finger prosthesis. PEEK as a long-term provisional implant restoration has not been studied much. Hence, this poster aims to review PEEK as a long-term provisional implant restoration for applications focusing on implant dentistry. Articles published in English on PEEK biomaterial for long-term provisional implant restoration were searched in Google Scholar, ScienceDirect, PubMed/MEDLINE, and Scopus. Then, relevant articles were selected and included in this poster. PEEK presents suitable properties for various implant components in implant dentistry, including temporary and long-term provisional restorations. The modifications of PEEK result in wider applications in clinical dentistry. The PEEK reinforced by 30–50% carbon fibers can be a suitable material for the various implant components in dentistry.

INTRAARTICULAR INJECTIONS TO TMJ

Presented by: John Mathew, Navjyod TP

Supervisor: Dr Simon

College/University: CIDS

An intra-articular injection is a type of shot that's placed directly into a joint to relieve pain. Corticosteroids (steroids), local anesthetics, hyaluronic acid, and Botox are the most common substances injected into joints for this treatment.¹ Besides treating pain, intra-articular injections can have other purposes, and different injected medications are used for different purposes. These injections may also be used to deliver chemotherapy drugs like Doxil (doxorubicin) directly into a joint affected by cancer.² Intra-articular treatments are most commonly used to treat osteoarthritis, acute gout, and rheumatoid arthritis of the knee.³ While Intraarticular injection to TMJ is given in conditions like - dislocation of disc between the ball and socket joint, TMJ arthritis, degenerative joint disease, myofascial pain disorder and in acute trauma.⁴

CAUSES OF DENTAL IMPLANT FAILURES

Presented by: Nivetha N, Kanakalakshmi H V

Supervisor: Dr Ashika B K

College/University: CIDS

Aim: The purpose of the present narrative is to review the etiological factors that lead to implant failure. **CONTEXT:** Dental implant treatment is turning into a widely accepted and popular treatment option for patients. With the growing era of dental implant therapy, complications and failures have also become common. Such intricacies are becoming a vexing issue for clinicians as well as patients. Implant failures can be due to mechanical or biological reasons. Failure of osseointegration of the implant falls under biological failures, whereas

mechanical complications include fracture of the implant, framework or prosthetic components. Diligently observing the implant after placement is the first step in managing the declining circumstances. It is important to have a thorough understanding of how and why implants fail to achieve successful treatment outcomes in the long run.

ROUTES OF DRUG ADMINISTRATION

Presented by: Haseena BH Zeeniya AP

Supervisor: Neha Shetty

College/University: CIDS

The route of administration is the way through which the dosage form is administered into the body for treatment of various diseases and disorders. Various routes of administrations play a marked role in the bioavailability of the active drug in the body. In present review these routes are included with their advantages and limitations. This is an attempt for the initials of field to familiarize with the routes of administrations with their signific Drugs can be introduced into the body by many routes, such as enteric (oral, peroral, rectal), parenteral (intravascular, intramuscular, subcutaneous, and inhalation administration) or topical (skin and mucosal membranes), among others, and must be determined considering the varying of individual ages (e.g., neonates, children, adults, geriatrics), weights and states of illness. The parenteral route refers to administering liquids, such as nutrition or medications, by bypassing the gastrointestinal system. Parenteral nutrition (PN) refers explicitly to administering liquid nutrition intravenously to an individual unable to use their digestive system. The term parenteral translates to "outside of the digestive tract" and allows an individual to bypass the usual process of eating and digestion. Nutritional products administered parenterally contain carbohydrates, proteins, fats, vitamins, minerals, and electrolytes. Parenteral nutrition may be administered as a continuous 24-hour or cyclic infusion, generally over 8 to 12 hours. Cyclic infusion allows individual freedom from the intravenous tubing and pump apparatus. The parenteral route is also used for medication administration when a rapid drug effect is desired; a precise serum drug level is needed; or when drugs are unstable or poorly absorbed in the gastrointestinal tract.

ULCA ABUTMENTS IN IMPLANTS

Presented by: Sudeepthi Chandassu , Shiana Ponnappa

Supervisor: Dr Ashika B K

College/University: CIDS

Aim: To depict the role of UCLA abutments in implants for the restoration of osseointegration and angulation. **CONTEXT:** An implant abutment is a prosthetic component

that connects a dental implant to a crown, bridge, or denture, serving as an intermediary to support and stabilize the prosthetic tooth or appliance. A castable abutment, also known as a UCLA abutment, is a prefabricated component used in dental implants to create custom abutments. It consists of a plastic or metal coping that are modified and cast into various materials to fit the specific needs of the patient's prosthesis. This allows for a high degree of customization, ensuring a precise fit and optimal support for the dental restoration. The design of the abutment allows fabrication of the restoration directly to the implant fixture, bypassing the transmucosal abutment cylinder. This technique is valuable in overcoming problems of limited interocclusal distance, implant angulation, soft tissue response and aesthetic. UCLA abutments can be made from a variety of materials including gold, titanium, chrome cobalt and polymers. They can be used to correct angle up to 30 degrees. They can be used to fabricate screw-retained prostheses PFM (Porcelain fused to metal).

BIOMEDICAL WASTE MANAGEMENT IN PROSTHODONTICS

Presented by: Najiya Sherin K P, Sreya K B

Supervisor: Dr Jinsa Yohannan

College/University: CIDS

Biomedical waste [BMW] is a global issue today. Dental healthcare staff should be aware of the proper handling and the management of dental waste. A lot of biomedical waste [BMW] is generated in dental practices that can be harmful to the environment and to those who encounter it, if not dealt with appropriately. Prosthodontic materials are used on a daily basis in clinics which include impression materials, gypsum products and cements. To prevent their harmful effects on health and the environment it is required to follow proper segregation protocol. A simplified system provides a good model to be followed in developing countries like India and improves understanding among dental practitioners and dental staff, due to its self-explanatory nature.

THE RISING THREAT OF ANTIMICROBIAL RESISTANCE IN DENTAL CARE

Presented by: Zunaira Azeema, Chethana S

Supervisor: Dr.Chandan S N

College/University: JSS

Introduction: Mortality due to infections was very high during pre-antimicrobial era. However, it was drastically reduced with the advent of antimicrobials in the early 1900's. This is also true in regards to oro-facial infections resulting from pulpal and periodontal infections. Antimicrobial agents have substantially reduced the spread of these infections and sepsis.

However, due to overzealous and unjustified use of antimicrobial agents we are currently moving towards a post antimicrobial era. This is due to the development of antimicrobial resistance (AMR).

In this poster we are reviewing the current status and future implications of AMR in relation to odontogenic infections.

Methodology: In this study, we conducted a literature search within PubMed, Scopus, Science direct, and other scientific platforms for the research articles published in the last 10 years with the key words “antimicrobial resistance (AMR)” and “Dental” and “Infections” by following inclusion criteria.

Conclusion: This review underscores the critical need for dental professionals to educate on antimicrobial use and spread awareness about antimicrobial resistance. This review explores the importance of prevention of AMR in population.

DIAGNOSTIC AND PROGNOSTIC ROLE OF SPECIAL STAINS IN SALIVARY GLAND NEOPLASMS: AN INSIGHT INTO HISTOGENESIS

Presented by: Sanjana H

Supervisor: Dr Hajira Khatoon

College/University: M S Ramaiah Dental College

Introduction: Salivary gland neoplasms (SGNs) are a diverse group of tumours with complex histogenesis and varying biological behaviours. Accurate diagnosis and classification are crucial for effective management. This study highlights histogenesis and the application of special stains in SGN diagnosis.

Methods: A literature review of the past five years was conducted, focusing on SGN histogenesis and the role of special stains in diagnosis. Data from PubMed, Scopus, and other databases were analyzed to assess mucin stains' utility. Studies on tumour differentiation, classification, and diagnostic accuracy were reviewed.

Results: SGNs arise from acinar, ductal, and myoepithelial cells, leading to diverse tumour types. Special stains such as Periodic Acid-Schiff (PAS), Alcian Blue, and Mucicarmine aid in identifying mucin-producing tumours. Pleomorphic adenoma was the most common tumour, followed by Warthin tumour, basal cell adenoma, and oncocytoma. Mucoepidermoid carcinoma was the most common malignant tumour, followed by adenoid cystic carcinoma, acinic cell carcinoma, polymorphous adenocarcinoma, epithelial-myoepithelial carcinoma, squamous cell carcinoma, and lymphoma. The parotid gland was the most common site for both benign and malignant tumours. Females were more commonly affected than males. Mucin staining patterns were noted.

Discussion: Histogenesis insights, combined with special stains, improve SGN classification.

Specific mucins help determine the differentiation in mucoepidermoid carcinomas, crucial for accurate diagnosis, prognosis, and personalized treatment.

Keywords: Salivary gland neoplasms, histogenesis, special stains, mucin stains, mucoepidermoid carcinoma.

SPIT TEST REVOLUTION: HOW SALIVA BIOMARKERS ARE CHANGING MENTALCARE

Presented by: Kanan Agarwal

Supervisor: Dr. Shreeshyla HS

College/University: JSS

Introduction: Biomarkers are used in diagnosis, prognosis, disease monitoring, and treatment response evaluation. Saliva is an emerging non-invasive and painless diagnostic tool for detecting systemic diseases due to its rich composition of proteins, metabolites, DNA, RNA, miRNAs, and inflammatory markers. Psychiatric Disorders are a raise, more youngsters are in need for immediate action.

Objectives: This poster will review the components of saliva that could be helpful in the quick diagnosis of stress, anxiety, depression, bipolar disease, Alzheimer's disease and other psychological disorders.

Methods: Extensive literature search was done using various search engines, with related key terms such as salivary biomarkers, psychological disorders, etc. The collected literature was reviewed.

Results: Content was reviewed regarding: -

-Collection and preparation of saliva samples, such as passive drool, absorbent pads, or specialized collection devices.

Methods of Analysis

-Polymerase Chain Reaction and Next-Generation Sequencing

-Mass Spectrometry

-Biosensors and Lab-on-a-Chip Devices

-Enzymatic Assays

-Promising salivary biomarkers of stress, anxiety or depression: cortisol, immunoglobulin A, lysozyme, melatonin, chromogranin A and fibroblast growth factor 2. Currently, there has been a dramatic increase in studies evaluating salivary biomarkers of stress. Salivary cortisol is used as an endocrine marker and salivary alpha-amylase activity as a sympathetic nervous system stress marker. These salivary biomarkers can provide valuable information about HPA axis and CNS activity and are activated in response to stress and other psychological diseases.

Conclusion: In this review, some studies about stress and salivary stress biomarkers were significantly correlated with diseases (periodontal, cancer).

ROTATIONAL PATH REMOVABLE PARTIAL DENTURE

Presented by: Devika S, Merin C Baiju

Supervisor: Dr Ashika MDS

College/University: CIDS

Devika S, Merin C Baiju

It can be esthetically and financially daunting for patients to lose teeth in an anterior region of the mouth. For these patients, traditional treatment options presented in the past have included fixed partial denture, implants, and conventional removable partial denture (RPD). For patients faced with financial, anatomical, and/or esthetic limitations, the edentulous region can be restored successfully with a rotational path RPD. Rotational path RPD designs have often been overlooked by the dental profession due to its complex concepts involving the prosthetic design and sensitive laboratory techniques. With better understanding of the concepts and design, the dental clinician can deliver the highest esthetic outcome in compromised areas in which other treatment options may often face limitations. This paper reviews the method used to esthetically design and plan a posterior-anterior rotational path RPD in an edentulous mandibular anterior region for a patient missing the mandibular incisors.

3D IMAGING IN IMPLANTOLOGY: CBCT AND THE EVOLUTION OF SCANNING PROTOCOLS

Presented by: Pranjal Kalwani, Lamiya Huda

Supervisor: Dr. Javeed Afroz Ahmed

College/University: JSS

Introduction: Dental implants have become a treatment option widely used for the replacement of lost teeth. Success of implants often depends on proper diagnosis, meticulous treatment planning, surgical methods and placement. Pre-surgical planning and accurate placement is guided by quality and quantity of bone as well as the position of teeth for best functional and esthetic result. This can be achieved by means of surgical guide along with CBCT, which provides adequate information regarding implant placement wherein surgical guides can be either bone supported, tissue supported or tooth supported depending upon patient's clinical scenario. High accuracy in treatment planning and execution of surgical procedures is important in securing a high success rate which can be achieved by CBCT, 3D digital implant planning software, image-guided template production techniques and computer

aided surgery. Computer generated surgical guide provides a link between treatment plan and actual surgery which is fabricated using stereolithographic process and is custom manufactured for each patient.

Methods: This review outline clinical goals for implant planning and placement and describe the anatomical and prosthetic requirements for successful implant placement. Presenting the imaging solutions, including CBCT scanning and software analysis, to the clinical goals.

Results: This poster reviews the role of CBCT together with various surgical guides with their fabrication, advantages, disadvantages and a review of computer aided surgical guides and software aided digital implant planning (Blue-sky bio) in predictive and accurate placement of dental implants.

Discussion: Earlier dentists were intended to place implants where the greatest amount of bone was present, with less regard to placement of final definitive restoration with less accuracy.

THE NEXT ERA OF CLEAR ALIGNER THERAPY

Presented by: Kalpitha Prakash, Bhoomika Gowda HP

Supervisor: Dr Sowmya S

College/University: JSS

Introduction: Malocclusion is a misalignment or incorrect relationship between the upper and lower dental arches. Treatment of malocclusion are braces or aligners.

Materials and Method: Clear aligners are removable orthodontic devices used to gradually straighten teeth without the use of brackets or aligners. They are made of special type of proprietary plastic material that applies pressure to the teeth which moves them into optimal alignment.

Result: The recent integration of digital technology has accelerated innovation in material science, treatment planning and manufacturing processes:

- *New advancement in biocompatible polymers has improved aligner durability and patient comfort.

- *Computer-aided design (CAD) and adoption of intraoral scanners enable highly accurate treatment prediction and staging.

- *Customization of treatment plans are now possible through AI integration.

DISCUSSION:

The poster explores the recent digital advancement associated with clear aligner therapy.

NAVIGATING THE COMPLEXITIES OF PERIODONTAL DISEASE AND SYSTEMIC HEALTH

Presented by: Keerthi Nanaiah

Supervisor: Dr. Meenakshi S

College/University: JSS

Research initiatives have been centered on the connection between oral and systemic health for several decades. Periodontal infections have been identified by scientific evidence collected from numerous laboratories as a potential risk factor for chronic medical conditions such as cardiovascular disease, cerebrovascular accidents, and low birth weight infants. Most systemic disorders caused by oral bacteria are manifestations of transient bacteraemia, which can arise from dental foci of infection, from daily manipulations including brushing, flossing, or mastication, or from dental treatments. Herpes viruses can cause adverse systemic disorders in persons with impaired immune systems, and inflamed gingiva is a major reservoir for these viruses. In diabetic individuals, periodontal disease can aggravate long-term insulin insensitivity and interfere with glycaemic control. The risk for mortality is 3.2 times higher in type 2 diabetics with severe periodontal disease than in those without or with mild periodontitis. It has been established that periodontal therapy positively impacts glycaemic control in individuals with type 2 diabetes. Maternal infection, preterm birth, low birth weight, and pre-eclampsia are all associated with periodontitis.

In conclusion, a growing body of research indicates that periodontal disease may play a significant role in the morbidity and mortality of a number of systemic disorders, particularly in those with compromised host defenses. The most effective defense against systemic disorders resulting from oral infections is to maintain a healthy dentition and periodontium through routine dental treatment and daily oral hygiene practices.

VENTRICULAR SYSTEM OF BRAIN

Presented by: Ashritha.D.Y, Inchara.S.Rampur

Supervisor: Mr Alexander.V, HOD of anatomy department

College/University: CIDS

Ventricles of brain is responsible for producing and circulating CSF (which acts as a protective cushion for the brain), they also acts as a diagnostic marker for hydrocephalus, which is a significant indicator of neurological disorders.

BASAL IMPLANTS

Presented by: Sangeetha M

Supervisor: DR ASHIKA

College/University: CIDS

The basal implantology, which is also called cortical, or biocortical implant system, has been developed and it includes the positioning of implants at the basal cortical bone, which offers exceptional quality cortical bones because of preservation of those complex implants. A basal implant is a specialized dental implant anchored in the basal part of the bone, also known as the cortical bone, the strongest and most mineralized section of the jawbone. Unlike traditional implants that depend on osseointegration in the softer spongy bone and require lengthy treatment times, basal implants utilize the durable cortical bone for immediate stability. This poster reviews about the types, placement, advantages and disadvantages of basal implants, and their role in modern prosthodontics.

ORAL MUCOSA DEMYSTIFIED: HEALTH, DISEASE AND BEYOND

Presented by: Cherian P Fredy

Supervisor: Dr. Varsha V K

College/University: RRDCH

The oral mucosa serves as a dynamic barrier and plays a crucial role in maintaining oral and systemic health. This specialized tissue is constantly exposed to mechanical, microbial, and chemical challenges, making it susceptible to a range of physiological and pathological changes. Understanding its structure, function, and response to various stimuli is essential for diagnosing and managing oral diseases.

This review explores the intricate anatomy and histology of the oral mucosa, highlighting its role in immune defense, wound healing, and interaction with the microbiome. Common oral mucosal conditions, including inflammatory, infectious, autoimmune, and neoplastic diseases, are discussed, emphasizing their clinical presentations, diagnostic markers, and treatment strategies. Additionally, the impact of systemic conditions such as diabetes mellitus, stress-related disorders, and immunodeficiencies on oral mucosal health is examined. Beyond disease, this review delves into emerging research areas, including regenerative medicine, biomaterials for mucosal repair, and the influence of diet and lifestyle on mucosal integrity. Advances in molecular diagnostics and targeted therapies are also explored, offering insights into the future of personalized oral healthcare.

By bridging fundamental knowledge with clinical applications, this paper aims to demystify the complexities of the oral mucosa, equipping healthcare professionals with a comprehensive understanding of its role in health and disease. Through a multidisciplinary approach, we underscore the significance of early detection, preventive strategies, and novel therapeutic interventions in optimizing oral mucosal health and overall well-being.

Key words: Oral Mucosa, Mucosal immunity, regenerative medicine, systemic conditions

Technical notes

Content

S. No	Title	Page No
1	Digital Oral Pathology	142
2	AI Of Oral Pathology	142

DIGITAL ORAL PATHOLOGY

Presented by: Lakshmi PN

Supervisor: Savitha

College/University: RRDCH

In the context of rapid technological advancements, the narrative review titled "Digital oral Pathology: Transforming Diagnosis in the Digital Age" explores the significant impact of digital Oral pathology in reshaping diagnostic approaches. This review delves into the various effects of the field, including remote consultations and artificial intelligence (AI)- assisted analysis, revealing the ongoing transformation taking place. and benefits of digital Oral Pathology, the investigation explores the process of digitizing traditional glass slides, which aims to improve accessibility and facilitate sharing. Additionally, it addresses the complexities associated with data security and standardization challenges. Incorporating AI enhances pathologists' diagnostic capabilities and accelerates analytical procedures. Furthermore, the review highlights the growing importance of collaborative networks facilitating global knowledge sharing. It also emphasizes the significant impact of this technology medical education and patient care. This narrative review aims to provide an overview of digital Oral pathology's transformative and innovative potential, highlighting it's disruptive nature in reshaping diagnostic practices

AI Of Oral Pathology

Presented by: Manvith A narayan

Supervisor: Dr. Savitha

College/University: RRDCH

Artificial Intelligence (AI) is revolutionizing oral pathology by enhancing diagnostic accuracy, efficiency, and treatment planning. With the integration of machine learning (ML) and deep learning (DL) models, AI can analyze histopathological images, identify abnormalities, and classify oral diseases with high precision. AI-driven image processing techniques assist in detecting oral cancers, precancerous lesions, and other pathologies at an early stage, improving patient outcomes.

Natural Language Processing (NLP) enables AI to extract insights from medical records, research papers, and clinical reports, facilitating evidence-based decision-making. Additionally, AI-powered computer-aided diagnostic (CAD) systems enhance pathologists' workflow by reducing human error and standardizing diagnoses. Convolutional Neural Networks (CNNs) have shown promising results in detecting oral squamous cell carcinoma, leukoplakia, and other disorders with accuracy comparable to expert pathologists. AI also plays a crucial role in automating routine tasks such as tissue segmentation, anomaly detection, and data management, allowing specialists to focus on complex cases. Moreover,

predictive analytics help in assessing disease progression and prognosis, supporting personalized treatment plans. Despite its potential, challenges like data privacy, ethical concerns, and the need for extensive training datasets remain barriers to widespread AI adoption in oral pathology.

Future advancements in AI, combined with improved datasets and regulatory frameworks, will further refine diagnostic capabilities, making AI an indispensable tool in oral pathology. By augmenting human expertise with AI-driven precision, the field is poised for a significant transformation, ultimately enhancing patient care and clinical outcome

Case Reports

Content

S. No	Title	Page No
1	Trigeminal Neuralgia-A Case Report	146
2	Adenomatoid Odontogenic Tumor	146
3	Primary Squamous Cell Carcinoma Of Sub Mandibular Gland; A Rare Case Report	147
4	Presurgical Nasoalveolar Molding With 3d Printing For A Patient With Unilateral Cleft Lip Alveolus And Palate	147
5	Investigating The Wound Healing Potential Of Human Placental Extract Gel After Gingival Depigmentation	148
6	Oroantral Fistula	149
7	Condylar Fracture	150
8	Hematoma After Inferior Alveolar Nerve Block	150
9	Para Symphysis Fracture	151
10	Lip Lesions Beyond The Ordinary: Identifying And Managing- A Case Report	151
11	Pleomorphic Adenoma	152
12	Lip Repositioning For Gummy Smile	152

TRIGEMINAL NEURALGIA-A CASE REPORT

Presented by: Surbhi Singla, Sakshi Yadav

Supervisor: Dr. Varun Associate professor

College/University: SGT

Trigeminal neuralgia, also known as tic douloureux, is a rare nerve disorder of one or more branches of the fifth cranial nerve and considered to be one of the most painful human conditions. The incidence of new cases is approx. 12 per 1,00,000 people per year. The pain is episodic, usually unilateral, stabbing, brief and so severe that the patient may clutch the hand over the face and holds or rub the area. Historically, it was labelled as a suicidal disease just because of the agony, helplessness, and suffering it embarked on its owners. Even though, the characteristics are classical, misdiagnosis of TN as a dental disease is prevalent since many decades. Hence, dental practitioners need to be aware of typical presentation of TN to avoid unnecessary dental procedures and investigations. Through this paper, we present the case of a 40 year old female patient who suffered from trigeminal neuralgia since 2 years. This report outlines the clinical features, diagnosis and the treatment given to the patient in this case.

ADENOMATOID ODONTOGENIC TUMOR

Presented by: Sujan N

Supervisor: Dr. Prashant, Dr.Niveditha , Dr.Priya

College/University: VSDC

Introduction: The Adenomatoid Odontogenic Tumour (AOT) is more than 100 years old, known by different names and the term AOT was coined in 1969 by Philipsen and Birn. AOT is a rare tumor of epithelial origin comprising 3% of all the odontogenic tumors. It is a benign, painless, non-invasive, and slow-growing lesion, with a relative frequency of 2.2-13% and often misdiagnosed as an odontogenic cyst on clinical examination. AOT affects young individuals with a female predominance, occurs mainly in the second decade, and usually surrounds the crown of unerupted teeth. Therefore it is also called as the two-thirds disease. This lesion is most commonly located in the anterior maxilla and rarely in the mandible. It is usually associated with an impacted canine. AOT frequently resembles lesions like a dentigerous cyst or ameloblastoma.

Case Description: We present a case of a 18-year-old female referred for orthodontic management to expose an impacted canine.

During the routine radiographic evaluation, a well-defined radiolucency was noted at the apical region and around the crown of an impacted canine. Although initially considered for Differential diagnosis such as dentigerous cyst , further clinical and radiological correlation raised the suspicion of an Odontogenic tumor.

Surgical enucleation with the removal of canine was performed under local anaesthesia.

Histopathological Review: Microscopic examination of H &E-stained sections show well encapsulated mass comprising of odontogenic epithelium arranged in sheets, nests, islands, rosettes and whorled masses along with ductlike structures. The cells are cuboidal, columnar and polygonal in nature, with spindle shaped cells seen at the periphery. Few columnar cells lining the duct show hyperchromatic nuclei with reversal of polarity. Eosinophilic, amorphous, acellular material is seen adjacent to the tumour nodules. Stroma is hyalinised and shows numerous scattered dystrophic calcifications along with eosinophilic osteoid material.

Conclusion: This case underscores the importance of comprehensive radiographic assessment during routine orthodontic procedures, as incidental findings may reveal clinically significant lesions. Our present case yielded a favourable outcome.

PRIMARY SQUAMOUS CELL CARCINOMA OF SUB MANDIBULAR GLAND; A RARE CASE REPORT

Presented by: Priyanka Padmasai Bandhakavi, Manisha VS

Supervisor: Dr Priya, Dr Prashanth Rajaram, Dr Niveditha N

College/University: VSDC

Introduction: The most prevalent cancer affecting surface epithelium of oral cavity is oral squamous cell carcinoma. When it involves the glandular tissue of head and neck region., it becomes a rare phenomenon. Here is an attempt to present a case profile of one such neoplasm due to its rarity and diagnostic challenges.

Case report: A 50-year male patient presented with swelling in the sub mandibular region of 1 year duration. On examination, facial asymmetry was noted due to diffuse swelling. Intra orally, swelling in the floor of the mouth was evident. After histopathological examination, diagnosis of primary SCC of Sub mandibular gland was rendered. The involvement of sub mandibular lymph node was added clue to the diagnosis.

Discussion: Primary SCC of submandibular gland accounts for 2-11% and is a high-grade epithelial tumor which originates from the glandular tissue. This tumor needs to be differentiated from Muco-epidermoid carcinoma as it is a close mimic histologically.

Conclusion: Primary SCC of submandibular gland is a rare tumor with infiltrative nature and aggressive behavior which poses diagnostic challenges. Accurate diagnosis requires elaborate clinical evaluation and histopathological examination for further treatment planning.

Keywords: Submandibular Gland, Primary SCC, Salivary neoplasms

PRESURGICAL NASOALVEOLAR MOLDING WITH 3D PRINTING FOR A PATIENT WITH UNILATERAL CLEFT LIP ALVEOLUS AND PALATE

Presented by: D Latha Shree, Mayukh Dey

Supervisor: Dr. Vaishnavi

College/University: RRDCH

An 8-day-old male infant with unilateral cleft lip, alveolus, and palate had a wide alveolar defect, soft tissue deformity, and a markedly sunken nasal wing at the cleft side. The patient was treated with a series of 3D-printed presurgical nasoalveolar molding (PNAM) plates and with a nasal hook. Split-type 3D printing of PNAM was initiated with an impression wherein silicon rubber trays were used. The 3D models were acquired with the use of a laser scanning machine. A computer-aided design (CAD) and reverse engineering software system was applied to judge the digital geometric 3D model and formulate the treatment design. The CAD molding plate procedure was divided into 8 steps by selective removal and sequential addition of resin. The standard tessellation language (STL) file was then exported from the planning software and imported into the 3D printing software to set up and complete the print. The molding plate and the nasal appliance were separate in split-type 3D printing of PNAM. Unlike the conventional PNAM here the impression need not be taken multiple times and weekly visits are not required. Also, unfavourable projecting of the nasal tip leading to dislodgment of the molding plate and air obstruction is prohibited. These molding plates and nasal appliance is administered with artificial skin, clung to the infant's cheek as the base to protect the skin. Steri-Strip was used to bring lips together. An activation force of approximately 120g was given at first, and decreased by 20g per plate until the force was reduced to 60g. The cleft edges moved closer by 9mm at the alveolar ridge and the nasal wing was lifted considerably.

INVESTIGATING THE WOUND HEALING POTENTIAL OF HUMAN PLACENTAL EXTRACT GEL AFTER GINGIVAL DEPIGMENTATION

Presented by: Mehak Bhala

Supervisor: Dr. Akanksha

College/University: SDM

Introduction: The human placenta is described as an immunologically active, biogenic stimulator that holds therapeutic potential. It's aqueous form, like the human placental extract gel contains natural peptides, amino acids, polyribonucleotides which promotes wound healing through matrix production, fibrogenesis and neo- angiogenesis. It has a wide range of applications such as treating burns, non-healing ulcers, skin lesions, etc. In periodontics, it has been used as a local drug delivery agent to treat periodontitis, management of gingival enlargement and even to enhance wound healing following depigmentation. The following case report and literature review explores the wound healing properties of placental extract gel

following gingival depigmentation.

Materials/Methods: The case report includes two systemically healthy patients indicated for gingival depigmentation using a diode laser. Following the procedure, the patients were instructed to use the placental extract gel twice daily for 7 days. The Wound Healing Index and Visual Analogue Score were recorded immediate post-op, Day 3 and at Day 10. A literature review was also conducted to include other techniques of gingival depigmentation.

Results: Enhanced wound healing was seen by day 3 and complete healing by day 10 in both the patients. Moderate pain was seen at day 1 following the gel application but was nil by day 10.

Conclusion: The human placental extract gel shows promising wound healing potential following gingival depigmentation. Future histological studies are required to corroborate these results.

OROANTRAL FISTULA

Presented by: Susanna Parakkattu

Supervisor: DR. SIMON

College/University: CIDS

Oroantral fistula (OAF) is a pathological communication between the oral cavity and the maxillary sinus. Etiology includes extraction maxillary molars, premolars, or canines periapical lesions of teeth, implant, surgeries which are at vicinity of antrum lining, extensive facial trauma etc. Investigation to confirm the fistula include Nose blowing test, Mouth mirror test, Sinus probing, Water holding test and radiographic examination. The closure of the defect and prevention of the oral bacteria and food debris penetrating the sinus is the main objective in the management of oroantral fistula. Numerous surgical techniques can be used for the closure of the defect depending on the indication.

In this presentation a case study on a patient presented with oroantral fistula will be discussed, with case history, investigations and treatment done. Concluding with a detailed description on Caldwell-luc procedure.

The objective of this presentation is to give an understanding about clinical presentation of a patient with oroantral fistula and the treatment protocol advised for such patients.

CONDYLAR FRACTURE

Presented by: Thrupthi T

Supervisor: Dr Simon

College/University: CIDS

Condylar fractures of the mandible are amongst the most common facial fractures accounting for 23% of facial fractures, often resulting from trauma such as falls, sports injuries or road traffic accidents. These fractures can significantly impact mandibular function, leading to malocclusion, joint dysfunctions, and restricted mouth opening.

This case report presents a detailed evaluation of a patient who was diagnosed with a unilateral right condylar fracture with medial displacement following trauma. The clinical presentation, imaging findings, treatment are discussed. The patient was managed with open reduction and internal fixation of right sub condylar fracture under general anaesthesia, post treatment functional outcomes, potential complications, are also reviewed.

Open reduction and internal fixation (ORIF) is a widely used surgical approach for condylar fractures, offering direct access for precise anatomical reduction, stable fixation, improved functional outcomes including better occlusion, mandibular mobility, reduced risk of long-term complications such as malocclusion and joint dysfunction. This presentation aims to enhance understanding of condylar fracture management and provide insights into clinical decision making and patient outcomes.

HEMATOMA AFTER INFERIOR ALVEOLAR NERVE BLOCK

Presented by: Syeda Noor Kulsum, Zainab Tameem

Supervisor: Dr. Tanveer Ahmed

College/University: SJM

Case Report: A 45-year-old female patient underwent root canal treatment for the mandibular left first molar (36). A classical inferior alveolar nerve block (IANB) was administered. However, immediate post-injection swelling was observed intraorally at the injection site, diagnosed as a hematoma.

Introduction: Inferior alveolar nerve block (IANB) is a widely used local anesthetic technique in mandibular dentistry. It targets the inferior alveolar nerve near the mandibular foramen, where vessels like the inferior alveolar artery are present. Injury to these vessels can cause hematoma. Hematoma is basically effusion of blood into extravascular space which results from inadvertent nicking of a blood vessel during the injection of local anesthetic.

Objective: This paper discusses the etiology, risk factors, clinical presentation, prevention, and

management of hematoma following IANB to enhance patient safety.

Prevention and Management: A review of anatomical considerations, injection techniques, and post-injection complications is necessary. Preventive strategies include proper aspiration, needle selection, and patient assessment. Management involves immediate pressure application, cold compresses, and patient reassurance.

Conclusion: Hematoma, though minor, can cause swelling, pain, bruising, and functional limitations like trismus. This case emphasizes preventive strategies and prompt management to ensure patient safety in dental practice.

PARA SYMPHYSIS FRACTURE

Presented by: Anjali Suresh Kumar

Supervisor: Dr. Sunil and Dr. Simon,

College/University: CIDS

Road traffic accidents (RTAs) are a significant public health concern globally, and alcohol consumption is a major contributing factor to these incidents. Research indicates that alcohol impairs cognitive functions, motor skills, and reaction times, which are essential for safe driving.

The case report highlights the impact of alcohol consumption on road traffic accidents, emphasizing the role it plays in impairing motor skills, judgment, and decision-making abilities. We present a case involving a middle-aged male who was involved in a road traffic accident after consuming alcohol. The patient exhibited clear signs of alcohol intoxication, including slurred speech, unsteady gait, and impaired coordination at the accident scene. A comprehensive analysis of the accident, including its aftermath, reveals that alcohol was a contributing factor in the crash, underscoring the dangers of driving under the influence. It serves as a reminder of the importance of awareness campaigns, enforcement of driving laws, and measures to reduce alcohol consumption among drivers.

LIP LESIONS BEYOND THE ORDINARY: IDENTIFYING AND MANAGING- A CASE REPORT

Presented by: Sathvik K

Supervisor: Dr. Devishree Rai

College/University: AJ Institute of Dental Sciences

Background: Cheilitis Glandularis is a rare, chronic inflammatory disorder affecting the minor salivary glands of the lips, primarily the lower lip. It is characterized by lip swelling, eversion, and mucopurulent discharge from dilated ductal openings. Though its exact etiology remains unclear, chronic sun exposure, tobacco use, and bacterial infections have been implicated.

Cheilitis Glandularis is of particular clinical concern due to its potential association with malignant transformation. We present the case of a 23-year-old male with a 7-month history of progressive upper and lower lip. The swelling was associated with pain since 1 month which was sudden in onset, dull aching, intermittent, with no aggravating or relieving factors. Patient also gives history of upper and lower gum swelling since 7 months.

Discussion: Cheilitis Glandularis is an uncommon condition, often underdiagnosed due to its rarity and overlapping features with other lip disorders. While most cases are benign, long-term follow-up is essential due to the reported risk of squamous cell carcinoma. Early diagnosis and management can prevent complications.

Conclusion: This case highlights the importance of recognizing Cheilitis Glandularis as a differential diagnosis for chronic lip swelling and underscores the need for vigilant monitoring for malignant transformation.

PLEOMORPHIC ADENOMA

Presented by: Gopika CP, Alaina p Ajeesh

Supervisor: DR Damodaran A M

College/University: CIDS

Pleomorphic adenomas are benign Salivary gland tumors, which predominantly affect the superficial lobe of the parotid gland. The "pleomorphic" nature of the tumor can be explained on the basis of its epithelial and connective tissue origin. The tumor has a female predilection between 30 to 50 years of age. Slowly progressing asymptomatic swelling is the usual presentation of the tumor. Surgical excision of the tumor mass forms the mainstay of treatment, with utmost care taken to preserve the facial nerve.

LIP REPOSITIONING FOR GUMMY SMILE

Presented by: Likitha C S, Anaswara K Ayyappan

Supervisor: Dr. Rashmi

College/University: CIDS

Imbalance in the gingiva tooth ratio results in the predominant gingival appearance referred to as "gummy smile". It is a condition where an overexposure of the maxillary gingiva (>3mm) is present during smiling. There are different etiologies of a gummy smile, such as vertical maxillary excess, short and hyperactive upper lip, altered passive eruption, anterior dentoalveolar extrusion or a combination of this cause. Lip repositioning technique is done for the management of excessive gingival display related with vertical maxillary excess and

increase mobility of the upper lip. By restricting the muscle pull by elevator lip muscles, this procedure reduces excessive gingival display during smiling. This limits lip elevation on smiling and increases lip fullness. For patient, this procedure is safe, less invasive with minimal side effects and an alternative to orthognathic surgery in the correction of gummy smile.

CASE RPEORT POSTER

Content

S. No	Title	Page No
1	The Essence Of Contemporary Restoration-Tooth Colour Restoration	156

THE ESSENCE OF CONTEMPORARY RESTORATION-TOOTH COLOUR RESTORATION

Presented by: Nalina S, Namana

Supervisor: Dr Geeta. I B

College/University: RRDCH

“It is said that there’s nothing attractive than beautiful smile” The essence of tooth coloured restoration lies in its ability to seamlessly blend, esthetics, functionality and biocompatibility to restore dental structures while mimicking natural teeth. Contemporary restorative material such as composite resin, glass ionomer cement prioritise durability, wear resistance and optical properties that closely resemble enamel and dentin Advances in material science have led to restorations that mimic the natural appearance of teeth, including their translucency, colour and texture Furthermore, the esthetic advantages and ability to customise restorations to match individual tooth shades have made tooth-coloured restorations the preferred choice for both patients and practitioners

Esthetic integration-composite resin closely match the colour, translucency and texture of natural teeth Minimally invasive approach, versatility-used for anterior and posterior restoration, fillings, veneers and even minor reshaping, advanced material science Technique sensitivity-requires proper layering, curing and finishing for optimal performance and aesthetics

“This poster is the representation of case series done by us during our posting under rubber dam isolation”

POSTER WINNER LIST [OFFLINE]

S. No	Name	Prize	College
1.	Sahana TS, Dia Palangappa	1 ST	CIDS
2.	Sahana Korada, Sreehari G Raj	2 ND	SJM
3.	Sudeepthi Chandassu, Shiana Ponnappa	1 ST	CIDS
4.	Kanan Agarwal, Devika S, Merin C Baiju	2 ND	JSS CIDS
5.	Nadhiya T	1 ST	CIDS
6.	Angel rose Mathew, Anns Mariya, Sinchana Gowda, Naziya Falak.	2 ND	CIDS CIDS
7.	Keerthi Nanaiah	1 ST	JSS
8.	Sangeetha M Fiza Hafsath, Fathimath Shifa	2 ND	CIDS CIDS
9.	Kavya N	1 ST	CIDS
10.	Divyashree GU, Sanidhya KU	2 ND	CIDS
11.	Anshila Ragesh, Carlin Renee Cardoza	1 ST	JSS
12.	Kiran N Nambiar, Ujjwal Kumar, Alfina V K, Gayathri S Chandran	2 ND	JSS CIDS
13.	Deepthi. G, Krushika R K.	1 ST	CIDS
14.	Annie Jane Dsa, Aiswarya Abraham	1 ST	CIDS
15.	Jilna AC	2 ND	CIDS
16.	Dona Kaveramma KV, Hitha KaverammaB A	1 ST	CIDS
17.	Malavika T M	2 ND	CIDS

POSTER WINNER LIST [ONLINE]

S. No	Name	Prize	College
1.	Pavana MB, Anushree KM, Simran Mangsule	1 ST	RRDCH
2.	Le Van Anh	1 ST	Can Tho University of Medicine and Pharmacy
3.	Sanya Rao	2 ND	KLE
4.	Sakshi KM	1 ST	AJ
5.	Aaditya Biju, Aditi Sudarshan	2 ND	VSDC
6.	Grace Yuchan Xu, Irene Shuping Zhao	1 ST	The University of Hong Kong
7.	Zelda Ziyi ZHAO, Chun Hung CHU	2 ND	The University of Hong Kong
8.	Marwa Ali Zaher, Mai Matar	1 ST	City university ajman (UAE)
9.	Mayukh Dey	2 ND	RRDCH
10.	Tan Jium Jie, Celine Ko, Previnjit Kaur	1 ST	MAHSA University
11.	Yu Jie Teoh, Rosnani Mamat	1 ST	School of Dental Sciences, University Sains Malaysia
12.	Nam Le Hai Nguyen, Thanh Ngoc Thien Le	2 ND	Can Tho University of Medicine and Pharmacy
13.	Anthony Yihong Cheng, Kitty Jieyi Chen.	2 ND	The University of Hong Kong

PAPER ONLINE WINNER LIST

S. No	Name	Prize	College
1.	Sathya Narayanan R, Bhuvan Divekar	1 st	RRDCH
2.	Dang Minh Phuong, Tran Tat Thanh	2 nd	The University of Hong Kong
3.	Dr. Saiprasad Alva, Dr. Sai Rachana	3 rd	Ramaiah dental college.
4.	Pranjul Sharma	1 st	SGT dental college
5.	Pooja Ravichandran, Vachan A B, Maheshacharya M Badiger	2 nd	RRDCH
6.	Shail Kumari	1 st	Saveetha Dental College
7.	Ridhi Ranka.M	2 nd	RRDCH
8.	Mehak Bhala	1 st	SDM
9.	Sujan N	2 nd	VSDC

PAPER OFFLINE WINNER LIST

S. No	Name	Prize	College
1.	Sandeep Kolla	1 ST	
2.	Ashira M, Sam Kurien Thomas Diya Rajeshwari	2 ND	CIDS
3.	Keerthi Nanaiah Jennifer Peo, Lena Elizabeth Joji	1 ST	CIDS
4.	Samyuktha K, Sangeetha M	1 ST	CIDS
5.	Gayathri S Chandran	2 ND	CIDS
6.	Ashira M, Navya Aravind Nambiar	3 RD	CIDS
7.	Likitha C S, Anaswara K Ayyappan	1 ST	CIDS
8.	Gopika Cp, Alaina P Ajeesh	1 ST	CIDS
9.	Faariha Meher Pranjal Kalwani	2 ND	SJM
10.	Anshila Ragesh	1 ST	JSS
11.	Kiran N Nambiar, Ujjwal Kumar	2 ND	JSS
12.	Maanya Cp, Akash C	3 RD	JSS
13.	Shilpa, G Harshitha Shree	1 ST	CIDS
14.	Lavanya G Raypurmath, Koushik Gowda R	1 ST	CIDS
15.	Darshana Sunil Das, Anu Sarah Abraham	2 ND	CIDS
16.	Anaswara K Ayyappan, Likitha C S	3 RD	CIDS

OVER ALL WINNER IDEA SPONSORED

1. Samyuktha K, Sangeetha M
2. Lavanya G Raypurmath, Koushik Gowda R
3. Nethravathi S V, Kavya BN

NON-IDEA

1. NATIONAL –
 - a. SANDEEP KOLLA
2. INTERNATIONAL –
 - a. Anthony Yihong Cheng, Kitty Jieyi Chen
 - b. TAN JIUN JIE, CELINE KO,

TABLE CLINIC		
Prize	Participants	College
1 st Prize	Sathvik K Snitha Rao Navaneeth Shetty	AJ Institute Of Dental Sciences
2 nd Prize	Yvonne Wong Huey Chi Nabiha Binti Mohd Nawan Ong Jia Min	Universiti Sains Malaysia
	Ahmed Handy Brek Mohammed Brek Alameri.	Ajman University, UAE

SHERLOCK		
Prize	Participants	College
1 st Prize	Snitha Rao Sathvik K Navaneeth Shetty	AJ institute of dental sciences
2 nd Prize	Nam Le Hai Nguyen Thanh Ngoc Thien Le Anh Thi Phuong Bui	Can Tho University Of Medicine And Pharmacy, Vietnam
3 rd Prize	Sakshi yadav Nallini Lalwani Surbhi Singala	SGT University

PICTIONARY		
Prize	Participants	College
1 st Prize	1. Gowtham 2. Likitha 3. Padavi 4. Samyuktha 5. Sangeetha	Coorg Institute of Dental Sciences
2 nd Prize	1. Ameen 2. Farhana 3. Razik 4. Sahal 5. Shushail	AJ Institute of Dental Sciences
3 rd Prize	1. Keerthi 2. Maanya 3. Poornima 4. Sagarika 5. Suhani	KVG Dental College And Hospital, Sullia

QUIZ		
Prize	Participants	College
1 st Prize	Poornima KP Sagarika SN Suhani Jain	AJ Institute of Dental Sciences
2 nd Prize	Snitha Rao Sathvik K Navaneeth Shetty	JSS Dental College And Hospital
3 rd Prize	Mitesh Mukesh Khatavkr Manjesh Maurya D Neha Prasanna	Coorg Institute of Dental Sciences

COLLAGE		
Prize	Participants	College
1 st Prize	Hanna Mariyam Lena V Jolly Alina Ann Alex Sabira Beevi Farhana	KVG Dental College
2 nd Prize	Asfiya Divya Gayathri Jyoti Vaishnavi	Coorg Institute of Dental Sciences

DOODLING		
Prize	Participants	College
1 st Prize	1.Likitha 2.Anaswara 3.Samyuktha	Coorg Institute of Dental Sciences
2 nd Prize	1.Najiya Sherin 2.Sudeepthi Chandassu 3.Shiana Ponnappa	Coorg Institute of Dental Sciences
3 rd Prize	1. Satvik K 2. Navneeth Shetty 3. Snitha Rao	AJ Institute of Dental Sciences

SPELLATHON		
Prize	Participants	College
1 st Prize	Dr. Poornima K P Dr. Sagarika S N Dr. Suhani Jain	JSS Dental College And Hospital
2 nd Prize	Dr Sathvik K	AJ institute of dental sciences
3 rd Prize	Syeda Noor Zohra Aashif Zaid Chaitanya KM	KVG Dental College And Hospital

Documentary		
Prize	TOPIC	College
1 st Prize	CHATA - DAAYEG EE HATA	AJ Institute Of Dental Sciences,
2 nd Prize	Happy Mouth is a Happy Mind O!!	Coorg Institute of Dental Sciences
3 rd Prize	Oral Hygiene	Pacific dental college and Hospital, Rajasthan
	Oral Health Awareness	Government Dental College, Alappuzha
Consolation prize	Awareness about patient medical history.	Coorg institute of dental sciences

GREY'S ANATOMY		
Prize	Participants	College
1 st Prize	SNITHA RAO	AJ Institute Of Dental Sciences
2 nd Prize	KRUSHIKA. R. K	Coorg Institute of Dental Sciences
3 rd Prize	MITESH MUKESH KHATAVKAR	Coorg Institute of Dental Sciences