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ABSTRACT BOOK

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INDEX

Keynote Seasons

8	Title: Accuracy of New-Generation Intraoral Scanners in Digitizing All-on-Four Implant Models with Varying Posterior Implant Angulations: An In Vitro Trueness and Precision Evaluation
	Yousra Ahmed , King Fhad Security College, Saudi Arabia

Featured Seassions

9	Title: To Compare Effectiveness and Safety of Arthrocentesis - PRP (A+PRP) and Arthrocentesis - Intra-articular Corticosetriod (A+IACs) in Patients With TMJ Osteoarthritis: A Randomized Comparative Study
	Cheena Singh, *PGIDS Rohathak, India*
10	Title: Comparative Study of Anti-COVID Mouthwash and Remineralization Agents on Dentinal Tubular Occlusion: An In Vitro Study
	Somayeh Hosseini Tabatabaei, *Zahedan University of Medical Sciences, Iran*
11	Title: Physics-Informed Neural Networks with PDFP Optimization for Regularization-Free Solutions of Backward Time-Fractional Parabolic Equations
	Yosaphat Bayu Rosanto, *Universitas Gadjah Mada, Indonesia*
12	Title: Assessment of Ebselen-Loaded Silver-Containing Mesoporous Bioactive Glass as an advanced pulp-capping material
	Jung-Chang Kung, *Kaohsiung Medical University, Kaohsiung, Taiwan*
13	Title: Managing Dental Anxiety in Pediatric Dentistry: A Review of Non-Pharmacological Interventions
	Lina Kim, *Korea High School, Korea*
14	Title: Creator of AI Advantage, empowering dental teams to adopt AI solutions
	Kathryn Alderman, *Founder of Intelligent Care Alliance, United States*

Tomiko Ryu MD, PhD

Tokyo Yamate Medical Center, Horinouchi Hospital

Acquired immunodeficiency syndrome with suspected early inflammatory bowel disease diagnosed following gastrointestinal symptoms

A 36-year-old man who has sex with men (MSM) visited another hospital for soft stools, lower abdominal pain, and nausea. Gastroscopy (GS) and colonoscopy (CS) revealed esophageal candidiasis and rectal ulcers, for which fluconazole and metronidazole were prescribed. Four days later, the patient was referred to our hospital. Blood tests showed human immunodeficiency virus (HIV) infection (CD4: 116/μL, HIV-1mRNA: 2.4 × 105 copies/mL). Computed tomography (CT) revealed rectal wall thickening and fluid retention. CS showed the ulcers in the rectum, and pathological findings of ulcer margins showed disturbances in running of the crypts and a decrease in goblet cells. Symptoms improved with fasting and fluid replacement. After discharge, gastrointestinal symptoms flared up and he was readmitted. CT revealed mild wall thickening and fluid retention in the entire colon. However, CS revealed that the rectal ulcers tended to regress. Since the clinical manifestations, CT and CS findings were not consistent, biopsies were performed at nine random sites from the ileum to the rectum. Pathological findings showed inflammation in the entire colon, compatible with inflammatory bowel disease (IBD). As there was a dissociation between the rectal mucosal lesions and the submucosal lesions of the entire colon, the patient was diagnosed with early-stage IBD. One month later, antiretroviral therapy (ART) was initiated. Three months later, CS revealed that the ulcers in the rectum were scarred, and pathological findings from the nine randomly biopsied sites showed disappearances of inflammation. Conclusion: HIV infection and IBD are both immunemediated inflammatory

diseases (IMIDs) and are associated with the development of other IMIDs. However, the risk of developing IBD after HIV infection remains unknown. In people living with HIV (PLWH) who develop gastrointestinal symptoms, IBD should be considered as a differential diagnosis. Moreover, IBD can cause a variety of extraintestinal complications including the oral mucosa and throughout the body. It is important to recognize that HIV/IBD is a systemic disease and to provide comprehensive medical care for early diagnosis and treatment.

Biography:

Tomiko Ryu After graduating from Teikyo University School of Medicine in Tokyo, she entered its graduate school and earned her Ph.D. in 1986.

From 1988 to 1990, she worked as a researcher in the Department of Hematology at Michigan State University. From 1992, she was engaged in clinical work as Head/Director of the Department of Hematology and HIV Medical Care at Tokyo Yamate Medical Center in Tokyo. Since 2025, she has been working in the Department of Internal Medicine/Hematology and HIV Treatmentat at Horinouchi Hospital in Saitama Prefecture.

She engages in clinical practice with a research mindset, empathetic to her patients' feelings.

Dr. Cheena singh

Associate Professor, Dept. Of Oral Medicine And Radiology, Fellowship in TMDs, orofacial pain and DSM,USA

Trigger Point Injections: A Conservative Method for Treating Myofascial Pain

Day- by- day incidence of orofacial pain is increasing globally. This can include TMDs, Headaches, Neuralgia and Neuropathy . In this lecture I will throw some light on Myofascial pain. This may be secondary to stress and overuse of muscle. However, There are many other predisposing factors such as hormonal, age etc. the exact reason behind myalgia is formation of trigger point. Present lecture will include following subheadings:

- Introduction of pain(IASP) –Old to New
- What Is Trigger Point
- History
- Etiopathogenesis
- Classification
- Type of pain
- Perpetuating factors
- Types Of Needling : Wet And Dry Needling
- Selection & Angulation Of Needle
- Different types of anesthetic solutions
- Local anesthetics used for wet needing
- Maximal needling solution and frequency of needling
- Clinical Guidelines For Application of Needling Therapies
- Post Needling Procedures

- Possible Reasons For Failure Of Trigger Point Injections
- Few cases for clinical evidence.

Biography:

Completed BDS IN 2011 from MDU, Rohtak and post grdaution form TMDCRC, Moradabad in 2014. Worked for 9 months in GH SEC-6 Panchkula, Haryana as Emergency Medical Trainer. She is BLS and ACLS INSTRUCTOR from AHA. Awarded best paper and poster prize in variuos national and international conferences.

Awarded felowship in forensic odontology, from Dharwad, kartaka. Awarded felowship in orofacial pain, TMDs and DSM from Roseman University College Of Dental Medicine, Utah,USA. EC member of Indopacific Academy Of Forensic Odontology , Chandigardh in 2017-2020. . AWARDED WITH YOUNG RESEARCHER AWARD IN 2024 . PG GUIDE ALSO . She has Published more than 30 papers and two books related to oral cancer, fluoride application. in rumored diaries and has been filling in as a publication board individual from notoriety.

Dr. Laresh N. Mistry

Associate Professor, Department of Pediatric and Preventive Dentistry, Bharati Vidyapeeth Dental College and Hospital, Navi Mumbai

One Fault to Fail Them All: Rethinking Endodontics in Primary Teeth

Despite advancements in pediatric endodontics, the long-term success of pulpectomy in primary teeth remains inconsistent. A critical but often overlooked factor contributing to failure is the inadequate sealing of accessory canals, particularly in the furcation region. These anatomical intricacies—unique to primary molars—serve as potential escape routes for microbial infiltration even when conventional canal obturation appears radiographically satisfactory. This abstract explores the premise that the failure to hermetically seal accessory canals in the furcation area is the singular most decisive determinant of endodontic failure in primary teeth. Unlike permanent dentition, where apical closure is emphasized, the anatomy of primary teeth demands a shift in focus to the furcation zone, where the proximity to the periodontal ligament and follicular tissues poses a high risk of periradicular breakdown. In many cases, obturation materials fail to penetrate or adapt to the irregular accessory canal network, resulting in persistent microleakage, furcal radiolucencies, and eventual exfoliative anomalies. This analysis challenges the traditional reliance on coronal and apical sealing as the benchmarks of success, advocating instead for furcationfocused strategies in diagnosis, instrumentation, and obturation. It also underscores the need for material innovation and technique modification aimed at enhancing the seal in the furcal accessory canals. By isolating and addressing this “one fault,” pediatric endodontics may transcend current limitations and move toward predictable, biologically sound outcomes. Ultimately,

rethinking endodontic success through the lens of furcation integrity may redefine clinical standards in primary tooth preservation.

Biography:

Dr. Laresh N. Mistry is a distinguished pediatric dental clinician, recognized for his comprehensive proficiency across the full spectrum of clinical pediatric dental procedures. He combines his clinical excellence with a deep commitment to postgraduate education and a growing portfolio of research in evidence-based pediatric dentistry, particularly in the domains of systematic reviews and clinical investigations. Dr. Mistry has authored almost 50 publications, including systematic reviews, original research articles, and case reports in journals indexed with PubMed, Scopus and Web of Science. He currently serves as a full-time postgraduate faculty member and active researcher at Bharati Vidyapeeth Dental College and Hospital, Navi Mumbai, India. In parallel, he maintains a robust consulting pediatric dental practice in Navi Mumbai and Thane, Maharashtra, India. His academic credentials include a prestigious Fellowship from the Orthodontic

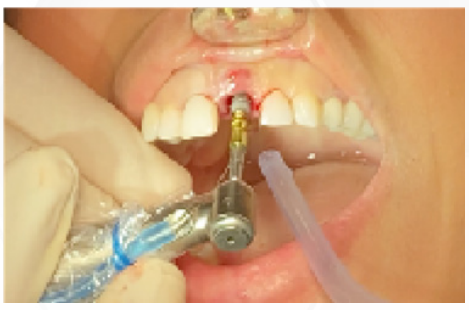
World Institute in Barcelona, Spain, and formal training in Advanced Dental Leadership from the United Kingdom. He is also advancing his expertise in clinical research through specialized coursework offered by the Indian Council of Medical Research (ICMR). Dr. Mistry's primary areas of clinical interest encompass Pediatric Restorative Dentistry, Endodontics, and Orofacial Growth and Development, reflecting a holistic approach to child oral health and developmental care.

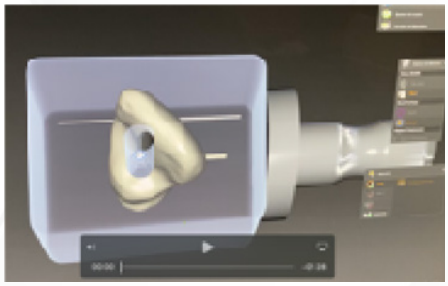
Docteur Cyrille FONTENEAU
Paris, France

Immediate aesthetic provisional prosthesis with “Cad Cam” technology after extraction/implantation in the anterior sector

Replacing an anterior tooth is a challenge for the dental surgeon and a major issue for our patients. Implant protocols and therapeutic sequences evolve with the evolution of our knowledge. Today the studies seem to reach a consensus: When the conditions are met, the protocol of immediate extraction / implantation followed by immediate implant-supported aesthetics prosthesis is the therapy of choice for the preservation of the aesthetic capital of the tooth and the periimplant tissues. The latest digital techniques available for the dental practice (CAD-CAM “chairside”) facilitate this therapeutic approach and allow the dental surgeon to be the architect of its implementation.
Clinical Cas.

Day 1
Day +7





Day + 3 months

Marco Paluszny

Departamento de Matemáticas, Universidad Nacional de Colombia, sede Medellin

Interactive CBCT Interface for Patient Education

We introduce a cutting-edge application designed to facilitate joint exploration of a patient's maxillofacial structure by both dental health providers and patients. The interface features an interactive 3D visualization of the patient´s dental anatomy as retrieved from a CBCT, allowing users to rotate and inspect individual teeth through touch gestures. Additionally, a radial, carousel-like display provides detailed cross-sectional views of each tooth, controlled intuitively via a dial. Optimized for Mac OS, Windows, and Android, the app ensures fast loading times and seamless interactive responses to user touch and drag inputs. Designed for patient accessibility, it resides on mobile devices and integrates messaging and email services to enhance communication between healthcare providers and patients, promoting efficient and informed dental care. .

Biography:

Jeronimo is an undergraduate in Computer Science and Marco Paluszny is a research/innovation professor at the Department of Mathematics of Universidad Nacional de Colombia, sede Medellin. We are both passionate about personalized medicine and especially patient education in maxillofacial care. In our work we blend geometric techniques with computer graphics to develop powerful and easy to use medical visualization techniques.

Marco Paluszny has published in excess of 80 geometry papers in real life applications

Mehmet Sarikaya
DMXI, 3729 NE 194th St, Seattle, WA, 98155, USA

Biomimetic Remineralization towards Effective Dental Care

Demineralization, the loss of minerals from dental tissues, is the root cause of various oral diseases, including dental caries—one of the most prevalent global health issues. Left untreated, it can weaken enamel, dentin, and cementum, leading to sensitivity, gum recession, gingivitis, and eventual tooth loss. Traditional whitening products, often based on hydrogen peroxide (HP), improve aesthetics by oxidizing stains but can exacerbate demineralization, eroding enamel in the process. Enamel, the protective crown of teeth, is highly vulnerable due to biome exposure and mechanical stress but lacks regenerative capacity. Mineral loss typically begins with incipient or deep caries, dentin cavities, and cementum erosion, gradually progressing if unaddressed. Remineralization aims to replenish lost minerals on the tooth surface, but current commercial solutions frequently fail to achieve true remineralization. Many products form transient deposits— glass, nano- or microparticles, ionomers, or biomolecules—without fully restoring enamel's structural integrity. Fluoride incorporation is sometimes classified as remineralization, yet it does
not conformally rebuild enamel layers. A more effective approach involves biomimetic remineralization, using amelogenin-derived peptides to regenerate hydroxyapatite (HAp) microlayers that fully integrate with enamel, dentin, and cementum, while also safely whitening teeth. The method supports primary remineralization, restoring the lost tissue, integrating and reestablishing mechanical integrity. Biomimetic strategies present a transformative prospect for preventive, restorative,

and cosmetic dentistry, demonstrating superior outcomes across in vitro, animal, and clinical studies.

Biography:

Mehmet Sarikaya is Professor Emeritus of Materials Science and Engineering, Chemical Engineering, and Oral Health Sciences at the University of Washington, Seattle. Trained as a materials scientist and condensed matter physicist, his research spans nanoscale structure-function correlations in materials, drawing inspiration from biology. Through Molecular Biomimetics, he pioneered the use of genetically engineered peptides as fundamental building blocks for designing advanced materials and systems for technology and medicine. His convergence science approach seamlessly integrates biology, genetics, materials science, and engineering, enhanced by computational modeling, informatics, and AI-driven methods. With over 250 publications, five edited books, 20+ international patents, and three startup companies, his work has shaped biomimetic material innovations globally.

Aesha Fetaiha
Al-Quds University School of Public Health, Palestine

Exploring Oral Health Related Awareness, Perceptions, Practices and Experiences Among Type 2 Diabetes Mellitus Patients: A Mixed Method Design

Background/Objective: The World Health Organization has classified diabetes mellitus as a pandemic disease, which is causing it to become a major worldwide health concern. It can have significant long-term repercussions, especially on dental health, if treatment is not received. The study aimed to explore patients with type 2 diabetes, awareness to, perceptions to and practices regarding oral health, in addition to their experiences.

Materials and Methods: convergent triangulation was applied from May to November 2022. 376 patients with type 2 diabetes mellitus participated in the quantitative part and 13 patients involved in the qualitative study. The quantitative study was applied in five primary health centers representing the five Gaza governorates using self-developed semi-structured questionnaire. The qualitative study was applied in two central primary health centers. Descriptive analysis was applied using the SPSS software and thematic analysis was approached for the qualitative study.

Results: 64,4% of patients see themselves susceptible to oral health problems, and 67,8% perceived severity of oral complications of diabetes mellitus. Moreover, 73,2% perceived benefits from oral health practices and 56,2% perceived barriers to oral health practices. Patients' awareness regarding oral health complications

from DM and oral health practices are inadequate (57,6%), as well as oral health habits (42,5%). Main themes elucidated from the qualitative study are dental care service quality, patient-dentist interaction, oral hygiene and self-care, and the patient's experiences with oral health problems.

Conclusions: there is a need to strengthen the primary health care system toward improving oral health care, awareness and meeting patients' needs. .

Biography:

Dr. Aesha Fetaiha is a dedicated dental professional and public health advocate based in the Gaza Strip, Palestine. She holds a bachelor's degree in Dentistry from Cairo University and a Master's degree in Public Health from Al-Quds University.

Dr. Fetaiha currently serves as a practicing dentist at Dr. Aesha Fetaiha Dental Clinic in Gaza, where she provides comprehensive dental care to the community. In addition to her clinical work, she plays a vital role in humanitarian healthcare as the Medical Activity Supervisor for Medical Aid for Palestinians (MAP), overseeing critical medical support programs and public health initiatives in the region.

With a strong commitment to improving health outcomes through both clinical service and public health leadership, Dr. Fetaiha brings valuable insight into the intersection of healthcare delivery, community health, and medical outreach in challenging environments.

Her work reflects a deep passion for equitable healthcare access and evidence-based practice, and she is honored to contribute her experience to international platforms focused on advancing health and well-being.

yousra ahmed
Assistant Professor of Prosthodontics

Accuracy of New-Generation Intraoral Scanners in Digitizing All-on-Four Implant Models with Varying Posterior Implant Angulations: An In Vitro Trueness and Precision Evaluation

Background: The increasing adoption of digital workflows in implant dentistry necessitates rigorous assessment of intraoral scanning, particularly for complex full-arch rehabilitations like Allon-Four prostheses where posterior implant angulation may impact the accuracy of optical data acquisition.

Objectives: This in vitro study aimed to assess the accuracy of digital intraoral scanners in scanning All-on-Four implant models with different posterior implant angulations.

Methods: Two epoxy resin All-on-Four implant models were fabricated with two posterior implant angulations (30-degree and 45-degree). Both models were digitized to obtain control datasets using a Smart Optics reference scanner (REF). Four intraoral scanners were comparatively assessed: Cerec Omnicam AC (OMN), Trios 4 (TRI), Cerec Primescan AC (PRI), and Medit i700 (MED), with nine scans per each scanner (n=9). All STL files were exported and analyzed using Geomagic Control X with root mean square (RMS) values computed for trueness and precision assessments.

Results: The comparison between IOS types in terms of trueness revealed that

with 30° angulation, the MED group showed the statistically significant least deviation (p =402). With 45° angulation, both PRI and OMN scanners showed the statistically significant highest deviation values (p = 0.047 and 0.007, respectively). MED again showed the statistically significant least deviation (p =402). For precision evaluation in 30° angulation models, PRI and OMN scanners showed statistically significant least deviation values (p =402 and < 0.001, respectively). While, in 45° angulation models, no statistically significant inter-scanner differences were observed.

Conclusions: While MED, PRI, and OMN scanners demonstrated clinical validity for 30° angled posterior implants, only the MED system achieved sufficient accuracy for 45° tilt. These findings emphasize the critical relationship between scanner selection and extreme implant angulations in full-arch digital workflows.

Biography:

Dr. Yousra El-Sayed Ahmed is an Assistant Professor of Prosthodontics with over four years of academic experience. She earned her PhD in Prosthodontics from Al-Azhar University in 2021. Her work focuses on advanced prosthetic rehabilitation, digital dentistry, and implant-supported prostheses. Dr. Yousra is actively engaged in both clinical teaching and research, contributing to innovations in prosthodontic techniques and materials.

Dr. Cheena Singh
Associate Professor, Dept. of OMDR, PGIDS, Rohtak

To Compare Effectiveness and Safety of Arthrocentesis – PRP (A+PRP) and Arthrocentesis - Intra-articular Corticosetriod (A+IACs) in Patients With TMJ Osteoarthritis: A Randomized Comparative Study

Introduction :

Temporomandibular joint (TMJ) is a compound joint also called as synovial joint, including temporal bone , movable mandible, numerous musculatures, articular disc and ligaments. Temporomandicbular joint disorders are progressive painful conditions and can manifest as limited range of mandibuar motion, deviation or deflection upon opening and closing, pre-auricular tenderness, clicking or crepitus. There are various low grade inflammatory joint diseases which include osteoarthritis (TMJ-OA) and high grade joint inflammatory diseases which include arthritis (RA- Rhematoid Arthritis). Due to paucity of literature, showing the comparative effect of arthrocentesis, PRP (A+PRP) and arthrocentesis – intra-articular corticosetriod (A+IACs) in 20 patients with TMJ osteoarthritis the present study is planned to compare safety and effectiveness of arthrocentesis – PRP (A+PRP) and arthrocentesis - corticosetriod (A+IACs) in patients with TMJ osteoarthritis.

Biography:

Completed BDS IN 2011 from MDU, Rohtak and post grdaution form TMDCRC, Moradabad in 2014. Worked for 9 months in GH SEC-6 Panchkula, Haryana as Emergency Medical Trainer. She is BLS and ACLS INSTRUCTOR from AHA. Awarded best paper and poster prize in variuos national and international conferences.

Awarded felowship in forensic odontology, from Dharwad, kartaka. Awarded felowship in orofacial pain, TMDs and DSM from Roseman University College Of Dental Medicine, Utah,USA. EC member of Indopacific Academy Of Forensic Odontology , Chandigardh in 2017-2020. . AWARDED WITH YOUNG RESEARCHER AWARD IN 2024 . PG GUIDE ALSO . She has Published more than 30 papers and two books related to oral cancer, fluoride application. in rumored diaries and has been filling in as a publication board individual from notoriety.

Somayeh Hosseini Tabatabaei

Oral and Dental Diseases Research Center, Assistant Professor, Department of Operative Dentistry, Faculty of Dentistry, Zahedan University of Medical Sciences, Zahedan, Iran

Effect of nano-hydroxyapatite toothpaste on tooth sensitivity, colour change, and gingival index during at-home bleaching: randomized controlled trial Running head: Nano-hydroxyapatite toothpaste and at-home bleaching

Objectives: Tooth bleaching is widely used as a conservative approach to treat discolored teeth. However, this treatment has side effects, like tooth sensitivity and gingival irritation. This study appraised the impact of toothpastes containing nano-hydroxyapatite (n-HAP) particles on sensitivity, gingival index, and tooth color change during home bleaching.

Materials and methods: In this double-blind, randomized, controlled clinical trial, forty participants meeting the inclusion criteria underwent home bleaching treatment. They were randomly assigned to two groups; the conventional toothpaste and n-HAP toothpaste groups. Patients were scheduled for follow-up visits on days 1, 3, 7, 10, 14, and 30 after initiation of bleaching. Intergroup comparisons of qualitative data were performed using the Chi-Square test, and the Mann-Whitney test was employed to analyze quantitative data.

Results: The n-HAP toothpaste group showed significantly lower levels of tooth sensitivity on days 10 and 14 after initiation of therapy ($P < 0.001$, $P < 0.001$). No significant differences in the gingival index and tooth color change were observed on all follow-up days between the two groups ($P > 0.05$).

Conclusion: The use of n-HAP toothpastes during home bleaching treatment gradually reduces tooth sensitivity and has no impact on tooth color change and gingival inflammation.

Further investigations could elucidate how varying concentrations and formulations of n-HAP affect sensitivity and its impact on oral health, including microbial changes and enamel remineralization.

Biography:

Listeria monocytogenes is a critical foodborne pathogen responsible for listeriosis, a disease that can range from mild illness in healthy individuals to severe complications in high-risk populations. It is commonly associated with ready-to-eat (RTE) foods and has been implicated in numerous outbreaks globally, particularly through contaminated meat, fish, and dairy products. Regulatory bodies enforce microbiological criteria to ensure food safety and public health.

Yosaphat Bayu Rosanto

Ph.D. Student of Faculty of Dentistry, Universitas Gadjah Mada

Enhanced Osteogenesis of Abalone Shell–Derived Hydroxyapatite via Strontium Substitution and Hyaluronic Acid Incorporation in MC3T3-E1 Osteoblasts

Alveolar bone resorption inevitably occurs after tooth extraction. Dimensional reduction, both horizontally and vertically, will complicate future dental implant placement. Alveolar bone preservation procedures are highly recommended to maintain alveolar bone volume. This procedure requires a biocompatible, osteoconductive, and osteoinductive bone graft material. Abalone shell, naturally rich in CaCO3, has the potential to be a raw material for hydroxyapatite (HA) synthesis. However, abalone shell HA requires modification to improve its physicochemical and biological properties. This study evaluated the effects of strontium (Sr) substitution and hyaluronic acid (HyA) addition to abalone shell-derived hydroxyapatite on material characteristics, biocompatibility, and osteogenic properties in MC3T3-E1 osteoblast cells.

Material characterization was performed using FTIR, SEM, and EDX. In vitro experiments were performed on MC3T3-E1 cells using the CCK-8 assay to assess viability and proliferation. Osteogenic potential was evaluated by examining the expression of BMP-2, OPN, and OCN genes using RT-PCR.

FTIR spectra confirmed the presence of characteristic phosphate and hydroxyl groups in HA, and the shift in absorption bands after Sr substitution indicated

successful ionic integration into HA. SEM analysis showed that SrHA exhibited a rougher and more porous surface compared to unmodified HA, providing a favorable topography for cell attachment. Sr substitution also improved the particle size distribution, resulting in a more biocompatible interface. EDX analysis revealed the atomic weights of Ca, P, and Sr ions. The Ca+Sr/P ratio in SrHA corresponds to the Ca/P ratio in natural human bone.

All SrHA:HyA formulations demonstrated >90% viability, indicating good biocompatibility. The SrHA:HyA3:4 formulation yielded the most optimal results, consistently maintaining viability above 107% and promoting higher proliferation compared to the control and commercial bone grafts. Further PCR analysis highlighted that the SrHA:HyA3:4 formulation significantly increased the expression of BMP-2, an early osteogenic marker, while upregulating OPN and OCN, markers of mid-to-late differentiation. These findings indicate that the combined effect of Sr substitution and HyA addition not only improves the material's structural properties but also actively accelerates the osteogenic signaling pathway, providing a biological foundation for superior bone regeneration capacity.

In conclusion, the addition of HyA and Sr substitutions improves the characteristics of abalone shell-derived HA material in terms of crystal structure, morphology, and chemical composition, while enhancing its biocompatibility and osteogenic potential. The SrHA:HA3:4 formulation emerged as the most promising candidate, with superior properties compared to control and commercial products, demonstrating its potential as a new and effective bone graft material. .

Biography:

Presenter is Ph.D. student at 37 years old years in Faculty of Dentistry, Universitas Gadjah Mada (UGM). He is specialist of Oral and Maxillofacial Surgery (OMFS), Subspecialist of Implant Dental and Maxillofacial since 2020. He works as a lecture in Departement of OMFS and as an OMF Surgeon in UGM Prof. Soedomo Dental Hospital, Siloam Hospital, and Hermina Hospital. He is the chief of Community Service Departement in faculty. He is part of Association of Indonesian Oral and Maxillofacial Surgeon (PABMI) and Association of Indonesian Dentist (PDGI). He has published in excess of 10 papers since 2020.

Jung-Chang Kung

Department of Fragrance and Cosmetic Science, College of Pharmacy, Kaohsiung Medical University, Kaohsiung, Taiwan

Assessment of Ebselen-Loaded Silver-Containing Mesoporous Bioactive Glass as an advanced pulp-capping material

Recent studies indicate that over 90% of adults develop pulp pathology secondary to dental caries, trauma, or restorative procedures. Microbial insult initiates pulpal inflammation, and conventional root canal therapy (RCT) employs mechanical shaping and chemical irrigation (e.g., sodium hypochlorite) to remove neurovascular tissues, residual biofilm, and debris, aiming to prevent persistent periapical infection. Incomplete debridement can necessitate adjunctive antibiotic use; repeated exposure fosters antimicrobial resistance and heightens the risk of treatment failure or extraction.

Regenerative endodontic approaches (pulpotomy, apexogenesis) seek to conserve or re-establish vital pulp structure and function. Pulpotomy preserves remaining vital pulp after coronal removal, whereas apexogenesis induces controlled apical bleeding post-disinfection to sustain root development. Both rely critically on pulp-capping materials that couple mineral induction with durable antibacterial performance to reduce reinfection risk.

Current capping agents—calcium hydroxide, mineral trioxide aggregate (MTA), and bioactive calcium silicate systems such as Biodentine—remain standard. Calcium hydroxide provides high alkalinity (pH ~12.5) and broad antimicrobial action but may degrade over time, permit microleakage, and form a thin, porous dentin

bridge. MTA (calcium silicate–based with radiopacifier) releases calcium hydroxide upon hydration, delivering sealing ability, biocompatibility, radiopacity, and dentin bridge induction, yet its prolonged setting time impairs clinical efficiency. These limitations underscore the need to refine existing systems or develop more efficient alternatives.

To address this gap, we developed an ebselen-loaded silver-containing mesoporous bioactive glass (Ebselen/MBG-Ag) as an advanced pulp-capping candidate. The material exhibited antibacterial activity against key root canal pathogens Enterococcus faecalis, Streptococcus mutans, and the anaerobe Fusobacterium nucleatum, with minimum inhibitory concentrations (MICs) of 10, 2.5, and 2.5 mg/mL, respectively, and significantly suppressed biofilm formation in vitro. Mineralization assays using bovine dentin specimens revealed discrete hydroxyapatite (HA) nucleation after 4 days of immersion, progressing to near-complete coverage of previously exposed dentin surfaces by day 7, indicating robust remineralization potential.

Biography:

Professor Jung-Chang Kung is an Associate Professor in the School of Dentistry at Kaohsiung Medical University and serves as Director of the Division of Periodontics in the Dental Outpatient Department. His expertise centers on the development of antibacterial and osteo-regenerative dental biomaterials. In recent years, his research has focused on emerging multifunctional dental materials, and he has led multiple research projects and published SCI-indexed articles.

Lina Kim
Korea High School

Managing Dental Anxiety in Pediatric Dentistry: A Review of Non-Pharmacological Interventions

Dental fear and anxiety (DFA) presents significant challenges in pediatric dentistry, often leading to avoidance of treatment and poor oral health outcomes in children. While pharmacological interventions such as sedation and anesthesia are traditionally used to manage DFA, they come with potential health risks and ethical concerns. This review explores non-pharmacological strategies for managing DFA in pediatric patients, focusing on three main interventions: physical restraint, audiovisual distraction (AVD), and psychological/therapeutic techniques. The paper examines the effectiveness, benefits, and limitations of each approach, drawing from recent studies and clinical findings. Physical restraints, such as the Papoose Board, are effective but controversial, raising concerns about psychological harm and ethical practice. AVD methods, including music, cartoons, and virtual reality, demonstrate strong efficacy in reducing anxiety by engaging multiple senses. Psychological interventions, including Magic Distraction Therapy (MDT), Cognitive Behavioral Therapy (CBT), and hypnosis, offer promising outcomes, though accessibility and implementation remain barriers. Emphasizing a patient-centered approach, this review highlights the need for ethical, individualized strategies that improve pediatric dental experiences and encourage long-term oral health. Future research should continue refining these techniques to promote safer and more effective anxiety management in pediatric dentistry.

Biography:

My name is Seohyun Kim. I am passionate about pursuing a career in oral health and dentistry. In my free time, I enjoy reflecting, daydreaming, and finding moments of rest to recharge and stay creative.

Bezal
University of sulaymany, Iraq

Clinical significance of serum miR-21, CA153 and CEA in breast cancer

Objective: one of the essential regulators of carcinogenesis is MicroRNA-21 (miR21). Yet little light has been shed on its effectiveness as a tumor marker compared to the conventional ones. Comparing the diagnostic value of established tumor markers in breast cancer (BC) such as carcinoembryonic antigen (CEA) and CA153 with circulating level of miR-21 is the aim of this study.

Methods: The study included 89 BC patients. Amplification of the circulating levels of miR-21 and miR-16 done using real-time PCR qualitative detection, while electrochemiluminescence assays was used to detect circulating levels of CEA and CA153. The diagnostic sensitivity for BC was compared between the three.

Results: the serum miR-21 levels were high significantly BC patients, as the latter had much higher levels ($P<0.001$). the CA153 and CEA sensitivities were 15.73% and 22.47% respectively, while miR-21 Sensitivity and specificity were 87.6% and 87.3%.

Conclusion: in BC patients miR-21 exhibits far higher sensitivity for diagnoses than both CEA and CA153. Thus especially in the early stages of BC, miR-21 can become a potential indicator for diagnosis, albeit the clinical stage, PR and ER statuses were not correlated in this study.

Keywords: real-time polymerase chain reaction (real-time PCR); breast cancer (BC); MicroRNA-21 (miR-21).

Cancer is one of the illnesses where the stage at which the disease is diagnosed plays a crucial role patients survival and quality of life [1]. A diagnostic indicator that can detect cancer in early stages is of great significance, especially for breast cancer (BC), as it is the most common cancer in woman [2]. One field of interested is that of tumor markers, due to their noninvasive, rapid and simple nature [3]. Despite their low sensitivity and specificity, the carcinoembryogenic antigen (CEA) and cancer antigen 153 (CA153) are the commonest markers used. MicroRNAs are found to have close ties with development and formation of tumors and are involved in regulating many cellular processes. They are a class of noncoding RNAs composed of 19-25 nucleotides [4]. miR-21 is involved in oncogenic process and has been demonstrated to be an essential regulator, and due to its involvement in tumor formation, its level is raised in majority of human tumors. The overexpression of miR-21 in BC tissue was noticed by Iorio et al. [1] and suggested it can be an effective marker; however getting tissue is an invasive procedure. Easy monitoring, little invasiveness and simple collection is an obvious advantage of serum sampling [5,6]. miR-21 expression was evaluated in 89 BC patients using SYBR-Green as a base and miR-16 as reference for the stem-loop real-time reverse transcription-polymerase chain reaction (RT- PCR) [7]. Considering the hormone receptor status and disease stage, miR-21 expression levels were compared, and then its sensitivity for diagnosing BC was pitted against CEA and CA153.

Materials and methods Subjects

The study was performed in Kurdistan Hospital and approved by its Ethic committee. All patients agreed to a written informed consent. The BC women confirmed by medical examination were aged between 28 to 60 years, with 50 as a median age and blood samples were collected from March 2011 to April 2011. All the patients had a confirmed diagnosis for primary BC by histology and were undergoing therapy at the time of study, aged between 29 and 40 years, with 36 as a median age. Samples were collected between March 2011 and May 2011.

miR-21 detection
Serum samples and total RNA preparation:
The samples were stored until processing at 80 ℃. Adhering to manufactures instructions, the TRIzol reagent from Invitrogen life technologies was used for extraction of total RNAs from serum.

Reverse transcription
Each 10 mL RNA sample was mixed with 3 mL stem-loop RT primers of miR-16 and miR-21, and 4 mL of 5× RT Buffer, 1 mL of Moloney murine leukemia virus (MMLV) reverse transcriptase [Promega (Beijing) Biotech Co., Ltd.], 0.5 mL of dNTPs [Tiangen Biotech (Beijing) Co., Ltd]. ,0.2 mL of RNasin [Tiangen Biotech (Beijing) Co., Ltd.]., and 2 μL of 1 mol/L dithiothreitol [DTT; Tiangen Biotech (Beijing) Co., Ltd.] were added (Table 1). The final volume of the mixture was 20.7 L and incubated at various temperatures for different durations, at 61 ℃ for 30 min, 73℃for 30 min and 170 ℃ for 10 min, and lastly was held at 4 ℃.

Real-time PCR
1.6 μL cDNA is the product of reverse transcription, and this product is mixed with 10 μL SYBR Green Master (Roche Co., Ltd.) and 1 μL PCR primers along with other PCR reagents (Table 2). The entire reaction was performed in the ABI 700 Fast PCR system, the conditions for the PCR was denaturing for 10 min at 95 ℃, after which 40 cycles of 95 ℃ for 15s is applied, followed by 60 ℃ for 1 min.

CEA and CA153 detection electrochemiluminescence assays was used to calculate CEA and CA153 levels and through Roche E170 MODULAR Immunoassay Analyzer the reaction is carried out.

Statistical analysis
Using relative change folds, normalization of circulating miR-21 expression was done. The characteristics of miR-21 relative expression levels is their range from 25th to 75th percentile and by their median. The connection of patient's hormone receptor status with their miR-21is analyzed with mann-whitney test, while the association with of their clinical stage with their miR-21 is calculated through Kruskal-Wallis test. Mann-whitney test was also used to measure miR-21's expression between healthy and BC individuals. The receiver operating characteristic curve

(ROC) was used to determine the cut-off value, which was used to identify the specificity and sensitivity values. SPSS 16.0 software was used for all statistical anaylysis and statistically significant threshold was set as $P < 0.05$.

Resutls Target gene amplification

Pure homogenous products of miR-21 and miR-16 from PCR was obtained (figure 1), as indicated from their melting curves (figure 2) with narrow peak and sharply defined curves.

The expression of miR-21 in BC miR-21 expression was evaluated in in 89 BC diagnosed patients. The patients showed high level of miR-21 which was significantly high among BC patients (30.82), resulting in ($P < 0.001$) with a ratio of 3.39 (figure 3).

miR-21 ROC curve

13.22 was the best designated cut-off value, and 92.9% was determined to be the area under ROC curve (ROC-AUC) (95% confidence interval: 88.3%, 97.4%), while 87.6% and 87.3% were sensitivity and specificity values respectively, as shown in (figure 4).

Clinical and pathological feature's association with miR021 expression levels According to status of hormone receptors and clinical stage of the patients, they were classified into groups and miR-21 median expression level is shown according in table 3. However, no correlation was observed between patient's clinical stage and hormone receptor statuses against their miR-21($P>0.05$).

miR-21 comparison with traditional tumor markers CEA and CA153

Patients are grouped into different classes according to their clinical stage in table 4, and listing their CEA, CA153 and miR-21 median expression levels. Significant difference is detected as the overall sensitivity of CEA and CA153 were merely 15.73% and 22.47% respectively, while miR-21's overall sensitivity was 87.64%. Particularly in early stage (stage I), the sensitivity of CEA and CA153 is only (4.76%), while miR-21 boasts a marked diagnostic sensitivity of (95.24) (Table 4).

Discussion

It is 19-25 nucleotides that make up the molecule of miRNAs, Small indeed, but various biological signaling pathways are regulated by them [8]. The close relationship between the many characteristics of tumors including their development, invasion and metastasis and miRNA has been demonstrated by many studies, and in cancer therapy, this could be a bases for entirely new strategies to fight cancer [9].

Many malignant tumors have shown increased miRNA serum expression [10]. And as a diagnostic and prognostic marker, it is been getting increasingly more attention. It is to no surprise that an early diagnostic indicator for the commonest cancer among woman, that is BC, is of great value, affecting prognosis. Due to their simple and less invasive nature, serum markers are the focus of interest. Despite their low sensitivity and specificity, especially in early stages [11], CEA and CA153 are still commonly used in BC patients monitoring, since relapse is associated with high levels of these markers. Furthermore, CEA cannot be used in diagnosis early stages of BC, since it has a lower positive rate, and it is a nonspecific tumor marker.

Differential expression of some miRNA in normal and BC tissues has been demonstrated recently, such as let-7a(8), miR-21, and miR-145 [12]. In BC cells, they take care of biological process regulation, and various roles in apoptosis and proliferation. The possibility of miRNA acting as a BC tumor marker for diagnositic and therapeutic purposes as been reported recently [13]. miR-21 has independent transcriptional units [10] and is located on 17q23.2. it has shown significant role in colon cancer development [10,11], lung cancer development [12,13], as well as stomach cancer [15] and finally BC [13] et al., as it partakes in expressing and regulating numerous tumor suppressor genes. Many studies have used various methods such as Northern blotting , in situ hybridization (ISH) , microarray, the profiling method of flow cytometric miRNA expression that is bead based, and finaly RT-PCR (20-23) to prove that in BC, miR-21 is up-regulated both in in vitro and in vivo. And a preliminary study about miR-21 overexpression in BC tissue has been taken (1,21,24-26). the conclusion of the study was that miR-21 expression is correlated with pathological and clinical variables in BC tissues, and it is expression was higher than normal breast tissues [12]. Yet the study avoided the discussion of practical value of this finding in diagnosis of BC. In addition to the fact, that breast tissue was the center of previous studies, and little was mentioned about miR-21

serum levels, which is the focus of our study. miR-21 serum expression levels in BC patients was evaluated using stem-loop real-time RT-PCR which is based on SYBRGreen, and addressed the application of miR-21 as a diagnostic and monitoring marker in BC patients. The miR-21 expression level was (3.39) times higher in BC patients, which is statistically significant ($P<0.001$). Moreover in the diagnosis of BC, the miR-21 has demonstrated sensitivity and specificity of 87.6% and 87.3% respectively, which shines in comparison to traditional marker's sensitivity of CEA and CA153, that were merely 15.73% and 22.47%. our study also showed that there no correlation between clinical stages and miR-21 serum expression, as well as no correlation between hormone receptor statuses (Progesterone receptor and Estrogen receptor) and miR-21 expression. Similar results was reported by other studies [11]. In conclusion, the new serum marker miR-21 topples traditional serum markers like
CEA and CA153 in sensitivity, which can improve prognosis of BC by allowing earlier diagnostic sensitivity. miR-21 can be addressed as a potential early stage BC serum tumor marker. We will have a follow up study to this preliminary study, where we will have more in-depth analysis and increase the sample size, hopefully becoming a good basis for miR-21 as a diagnostic tool in BC [9].

Table 1 Reverse transcription reaction system

Reagent	Volume (μL)
Total RNA	10.0
RT primer	3.0
5× Buffer	4.0
1 mol/L DTT	2.0
RNasin	0.2
dNTPs	0.5
M-MLV	1.0

Table 2 Real-time PCR system

Reagent	Volume (μL)
SYBR Green Master	10.0
Forward primer	1.0
Reverse primer	1.0
DNA template	1.6
DEPC water	6.4

DEPC, diethylpyrocarbonate.

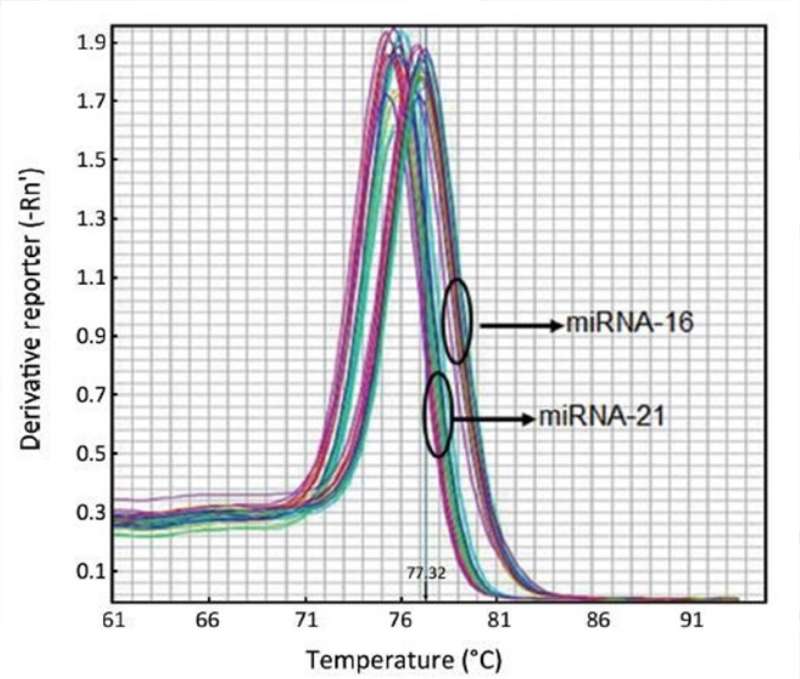


Figure 1 The melting curve of miR-21 and miR-16.

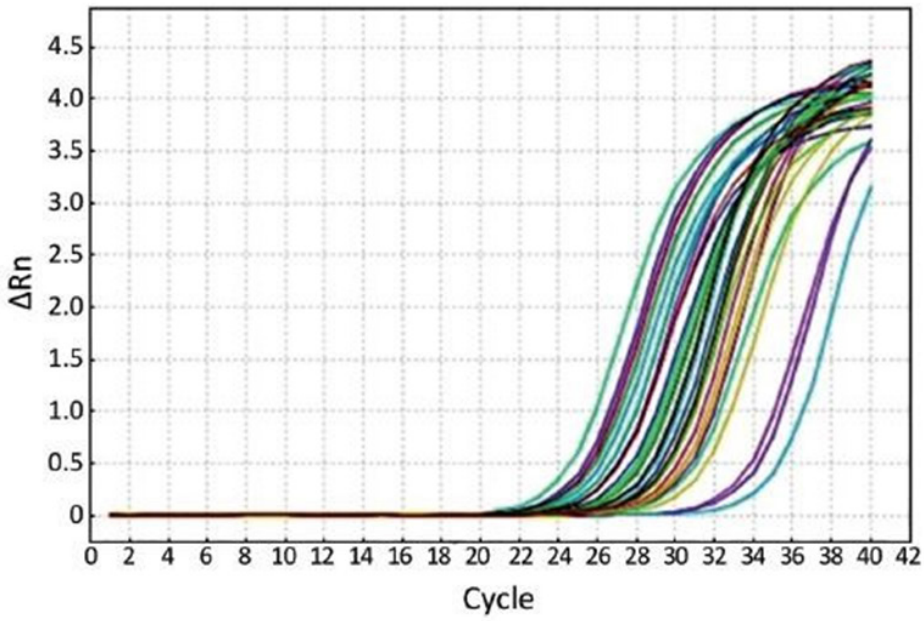


Figure 2 The amplification curve of miR-21 and miR-16.

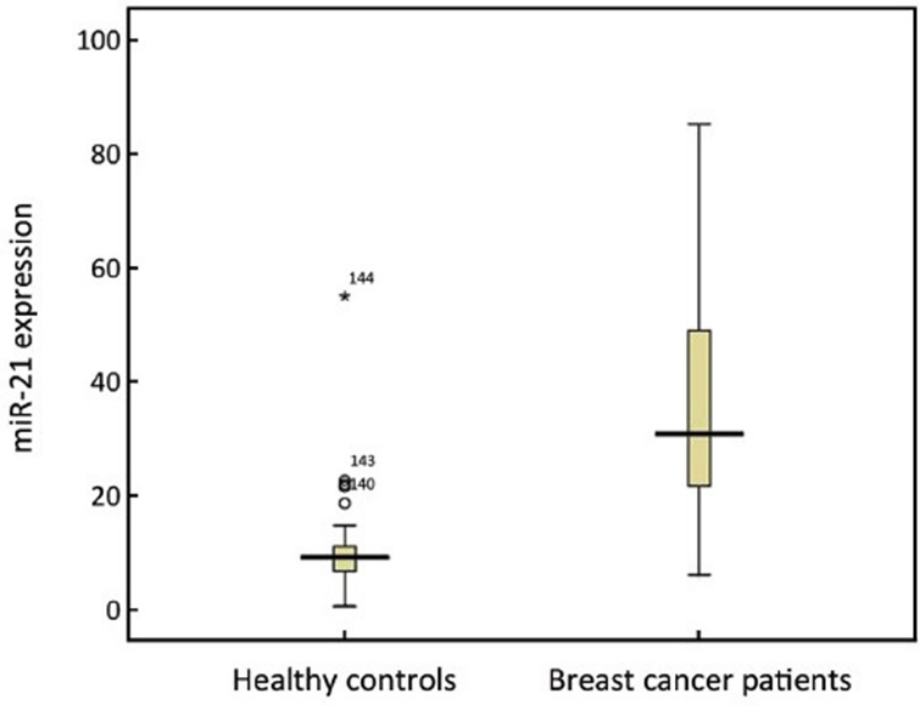


Figure 3 miR-21 expression in breast cancer patients and healthy controls.

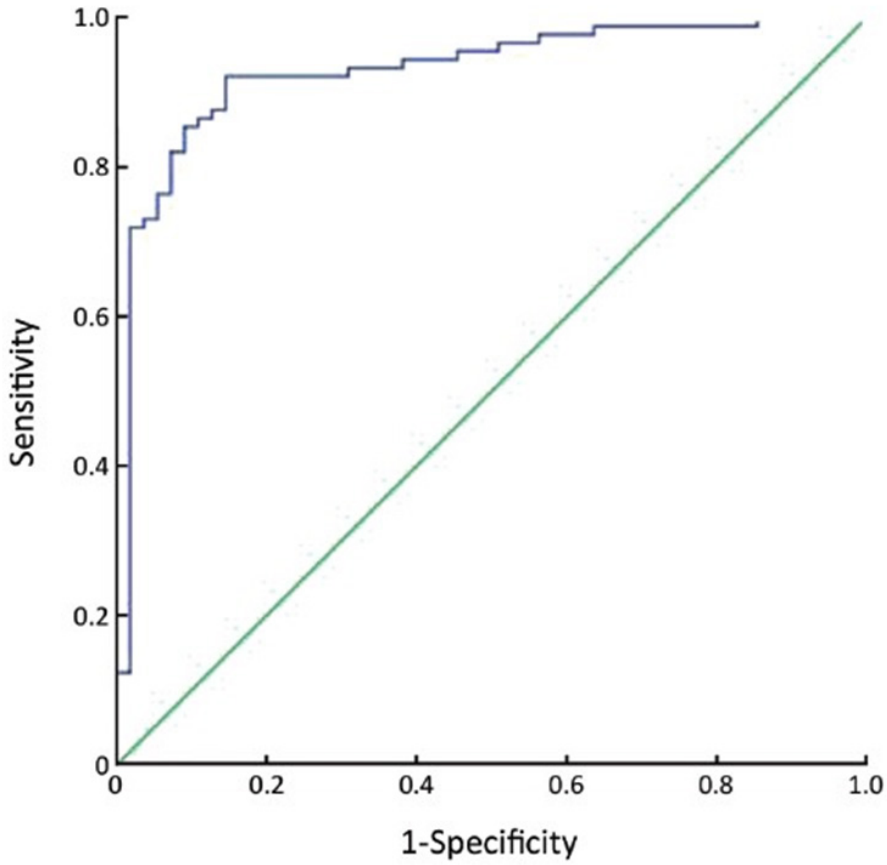


Figure 4 The ROC curve for miR-21.

Dr. Neelam Das

Sri Sai College of Dental Surgery, Vikarabad-501102, Telangana, India

Revolutionizing Periodontal Research with AI: From Smart Reviews to Precision Drug Delivery

The integration of Artificial Intelligence (AI) into periodontal research represents a paradigm shift in how data is selected, analyzed, interpreted, and published. This presentation aims to illuminate how AI-powered tools are reshaping every stage of periodontal research ranging from topic selection and sample size estimation to data analysis, systematic reviews, and publication enhancement while introducing clinical innovation through AI-supported local drug delivery research.

Strategic topic identification is enhanced through AI platforms like Yewno Discover, ArXiv Sanity Preserver, Semantic Scholar, and Scopus, which employ advanced algorithms to detect literature gaps, forecast emerging trends, and suggest novel research directions. AI-assisted tools such as G*Power, REDCap, and Qualtrics improve sample size accuracy and data collection, ensuring scientific rigor and methodological soundness.

The systematic review process is streamlined through powerful platforms like Rayyan, Covidence, DistillerSR, and EPPI-Reviewer. These tools expedite literature screening, automate bias detection, and facilitate comprehensive meta-analyses tasks that traditionally required extensive manual labor. Data interpretation is enhanced with advanced analytics tools such as SPSS Modeler, R, Python (Jupyter), and Tableau, enabling complex statistical modeling, high-throughput analy-

sis, and impactful data visualization.

Academic integrity and quality of writing are also supported through AI-driven solutions. Tools like Turnitin, iThenticate, and Unicheck ensure plagiarism-free content, while Grammarly, Writefull, and Typeset optimize grammar, scientific tone, and journal-specific formatting. Together, these systems reduce editorial burden and increase the likelihood of manuscript acceptance. A unique feature of this presentation is the practical integration of 34 AI tools applied specifically to local drug delivery studies in periodontitis. By incorporating AI into therapeutic modeling and response prediction, this segment illustrates how machine learning can lead to more targeted, efficient, and personalized treatments bridging the gap between research innovation and clinical practice.

This session provides a comprehensive framework for understanding how AI amplifies the quality, speed, and reliability of periodontal research. It not only saves time and resources but also enhances reproducibility, accuracy, and scientific impact. The insights presented here offer a vision for the future of dentistry, where AI and machine learning drive intelligent decision-making, improve clinical outcomes, and redefine the boundaries of dental research.

This presentation serves as both a guide and a call to action inviting researchers, clinicians, and academicians to adopt AI-driven methodologies that will shape the next era of periodontal discovery.

Biography:

Dr. Neelam Das, BDS, MDS, FPFA (USA), is an accomplished periodontist, Associate Professor, and internationally recognized researcher in Periodontology and Implantology at Sri Sai College of Dental Surgery, Vikarabad, India. A Gold Medalist and Fellow of the Pierre Fauchard Academy, she has authored five books, published over 100 research articles, and secured multiple patents in biomaterials, AI-integrated diagnostics, and drug delivery systems. Her expertise spans soft tissue surgeries, smile designing, and regenerative therapies. As a passionate academician and mentor, Dr. Das actively guides postgraduate research and serves on the Scientific Committee at her institution. A frequent guest speaker and awardee at national and international forums, she is especially noted for pioneering the integration of Artificial Intelligence into periodontal diagnostics and research workflows. Through her visionary leadership, Dr. Das continues to bridge innovation and clinical practice, striving to redefine the future of periodontology with evidence-based, technologyenhanced approaches.

Urfa Tabtila

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Biomimetic Endodontic and Fiber-Reinforced Restorative Approaches in Structurally Compromised Anterior Teeth: Two Case Reports

Endodontics is undergoing continuous transformation to address complex dental pathologies and extensive structural compromise. Contemporary concepts emphasize the use of bioactive cements and fiber-reinforced composites (FRC) to promote minimally invasive, biomimetic strategies that improve long-term prognosis, function, and esthetics. This case series illustrates two clinical applications that highlight the integration of advanced endodontic and restorative protocols in the management of compromised anterior teeth. Case 1: A 32-year-old patient presented with a maxillary left central incisor exhibiting an open apex. Mineral trioxide aggregate (MTA) was employed for apexification, followed by a definitive restoration with an indirect Ceramage crown. To enhance intraradicular retention and optimize stress distribution, a custom polyethylene fiber post was fabricated, providing a metal-free alternative consistent with biomimetic principles. Case 2: A 26-year-old patient with a maxillary right central incisor previously subjected to initiated therapy presented with symptomatic apical periodontitis and iatrogenic perforation. The treatment protocol included perforation repair with MTA and completion of root canal therapy. Short fiber composite was utilized for intracanal reinforcement, and definitive restoration was achieved with a lithium disilicate crown. Both cases demonstrated favorable clinical outcomes characterized by periapical healing, functional stability, and high esthetic value at follow-up. The combined application of bioactive cements, fiber-based reinforcement, and

advanced restorative ceramics underscores the potential of biomimetic protocols to transform the management of challenging endodontic-restorative cases. These clinical reports reinforce the importance of adopting emerging materials and minimally invasive approaches in modern dentistry to deliver durable, esthetic, and patient-centered care.

Keywords: apexification, biomimetic dentistry, ceramage, fiber reinforced composite, lithium disilicate, MTA, perforation repair.

Biography:

Urfa Tabtila is currently a resident in Conservative Dentistry and Endodontics at the Faculty of Dentistry, Universitas Gadjah Mada, Indonesia, supported as an Indonesia Endowment Fund for Education Agency (LPDP) scholarship awardee. She completed her Bachelor and Professional Dental Education at the same university with distinction. Her academic interests include endodontics, adhesive dentistry, and biomimetic restorative approaches. She has been actively involved in research funded by national grants, focusing on oral wound healing, natural product innovation, and oral pathology. Her works have been published in peer-reviewed journals such as Archives of Orofacial Sciences and Majalah Kedokteran Gigi Indonesia. She is also a multiple gold medalist at the National Student Scientific Week (PIMNAS), the most prestigious student research competition in Indonesia, with achievements in both community service and experimental research categories. With experience in scientific research, clinical practice, and community service, she is committed to advancing minimally invasive and patient-centered dentistry in line with emerging global best practices.

Pr. Nawel ALLAL, H. Hassaine, W. Didi, L. Henaoui, D. Bouziane

University ABOU BEKR BELKAID faculty of medicine department of dental medicine TLEMCEN ALGERIA

Alternative Therapy With Curcuma Longa For The Prevention Of Caries Lesion

Caries disease is classified as one of the most common pathologies worldwide leading to early tooth loss. Medicinal plants have long been used to improve oral health. Curcuma longa is currently being studied for its numerous effects on general and oral health.

Objectives: To evaluate the antimicrobial effectiveness of a curcumin-based mouthwash to reduce the number of Streptococcus mutans and as an anti-plaque and anti-gingivitis agent compared to a placebo.

Materials and methods: The study sample consists of 80 patients in good general condition with a high caries risk, randomized into two groups of 40 patients (group 1: placebo, group 2: mouthwash). The enumeration of Streptococcus mutans was carried out by the Oratest test which is based on the use of sterile milk for saliva samples and methylene blue as an indicator, salivary pH is evaluated by pH strips, gingival inflammation and dental plaque are evaluated respectively by the Gingival Index (GI) and the Plaque Index (PI) of Silness and Loe. The time in minutes for the color of milk expectorate to change from blue (methylene blue) to white, salivary pH, dental plaque index and gingival index were recorded for each group between the first day (D0) and the last day (D21).

Results: A statistically significant difference was found when the means of these four parameters were calculated and compared between the two groups.

Conclusion: Curcumin-based mouthwash has proven to be a good therapy for the prevention of carious disease.

Biography:

Dr Nawel ALLAL Lecturer A in Conservative Odontology and Endodontics at the Faculty of Medicine at the Department of Dentistry Tlemcen (ALGERIA). In 2002 she began her studies in dentistry, between 2008 and 2012 she did her specialty and subsequently worked as a specialist at Tlemcen University Hospital until 2015 when she became a teacher at the Faculty of Medicine of Tlemcen. Holder of a subspecialization diploma in medical pedagogy 2018 and technician in medical hypnosis 2023.

Dr. Muhammad Usman

Armed Forcs Bone Marrow Transplant Center, Rwalpindi Pakistan

Bleeding Phenotype of Glanzmann Thrombasthenia (GT) and Treatment Outcomes in over one hundred patients: A two-center experience in North Pakistan

Glanzmann thrombasthenia (GT) is a rare disease with an autosomal recessive inheritance pattern. This disorder is not so uncommonly encountered in routine clinical practice and laboratory settings in Pakistan let alone in the rest of the world. To describe the bleeding phenotype of GT and treatment outcomes in over one hundred patients in north Pakistan, this descriptive, cross-sectional, retrospective study was conducted on patients from 2011 to 2023 using a convenience sampling technique. A total of 103 patients of all ages and both genders diagnosed as having inherited GT were included in the study . The median age of study population was 1.1 years with IQR of 0.8- 2. Out of total 55 (53%) patients were males and 48(47%) patients were females. Ninety-eight percent of patients were diagnosed using light transmission aggregometry and only 2(2%) patients by immunophenotyping. Due to the high incidence of interfamily marriages, 86(84%) patients were born to consanguineous marriages .Thirty-nine(38%) patients had an episode of major bleeding as defined by ISTH criteria. Epistaxis 73(71%), skin bruising 63(61%), gum bleeding 57(55%), were the most common bleeding symptoms. Thirty-two(31%) required use of r-VIIa for major bleeding, 5(5%) patients underwent fully matched allogenic HSCT. Graft versus host disease free relapse free survival (GRFS) were 80%. GT is still an under recognized and under diagnosed disorder particularly in resource limited settings where the estimated incidence seems to be much higher than reported.

Dr. Robertha Tulio
Master in Pediatric Dentist, Brazil

Forms of behavioral control in the success of neurodivergent dental treatment

Dental Surgeon, Master in Pediatric Dentistry from The São Leopoldo Mandic College - Campinas, University Teacher, President of the Technical Chamber of Sedation in Dentistry of CRORJ, Vice President of the Brazilian Association of Analgesia and Conscious Sedation in Dentistry - ABASCO; International speaker on sedation and dental treatment of people with disabilities in 8 countries; Qualified in Laser therapy by hospital Israelita Albert Einstein; Author of the Books Trained in Drug Sedation in Dentistry;

OBJECTIVES

Currently, one factor that has been detrimental to the success of dental treatment is patient behavior. Behavioral control is of great importance in the final result and especially in avoiding trauma.

Patients with Autism Spectrum Disorder are graded in terms of help support, and knowing the right behavioral control techniques will have an impact on the success of the final treatment.

This topic aims to list some essential techniques for applying this control, such as Iatro-sedation and Sedoanalgesia.

Seo Young Kim

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Association between masticatory function and cognitive ability in mild cognitive impairment

Mastication is linked to cognitive function and influences brain activity, blood flow, and neurotrophic factors. A decrease in masticatory function may exacerbate mild cognitive impairment (MCI), a reversible condition affecting older adults. Identifying the masticatory factors associated with the risk of developing MCI could help guide interventions. To investigate the relationship between masticatory function and the risk of developing MCI and identify oral functional factors that influence cognitive ability in older adults. A cross-sectional study was conducted on 137 participants (100 normal, 37 MCI), aged ≥65 years, recruited from Yonsei University Dental and Severance Hospitals (2020–2024). Participants with ≥20 teeth without systemic diseases or chewing problems were included. Patients with a KMMSE score than 27 were classified into the normal group, while those in the MCI group diagnosed by neurologists using neuropsychological assessment tools such as the KMMSE z-score of ≤ -1.5 SD adjusted for sex, age, and education level, as well as a Clinical Dementia Rating (CDR) of 0.5, a Korean Instrumental Activities of Daily Living (K-IADL) score of <0.4, or a seoul-instrumental activities of daily living (s-iadl) score <8. objective assessments (e.g., tongue pressure [tp], oral diadochokinesis [odk], and masseter muscle thickness [mmt]) subjective evaluations the korean mini-mental state examination [kmmse], food intake ability [fia]) were performed. statistical analyses conducted to identify associations between masticatory factors risk developing mci. significant differences in number

remaining teeth, posterior eichner index, tp, odk (pa , ta ka), mmt (all p<0.05) detected normal mci groups. logistic regression revealed that occlusal support (eichner index), significantly associated with such as patient health questionnaire (phq)-9, fia impact profile (ohip)-14 showed no differences. muscle-related are critical for preserving cognitive function. these findings suggest tailored interventions, including training rehabilitation, could mitigate older adults. odk, mmt) < body target=”_blank” rel=”noreferrer noopener”>.