IRIS Scientific Group

Dental 2026

International conference on

DENTISTRY AND ORAL HEALTH

20-21
April, 2026

Paris
France



Venue:

Hotel CIS Paris Ravel

6 Av. Maurice Ravel, 75012

Paris, France

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Keynote Speakers



Sergey Suchkov

N.D. Zelinskii Institute for Organic Chemistry of the Russian Academy of Sciences, Russian Federation



João Eduardo Gomes Filho

Sao Paulo State University, Brazil



Xavier Riaud

National Academy of Dental Surgery, France



Masaru Murata

Health Sciences University of Hokkaido, Japan



Gustavo Feser

National University of Rosario, Argentina



Alok Dubey

Jazan University, Saudi Arabia



Welcome Message

On behalf of the Scientific Committee, I take great pleasure in welcoming you to **International Conference on Dentistry and Oral Health (Dental 2026)** here in the beautiful city of Paris, Fance. The theme of this year's conference is "*Novel trends and Techniques on Dental and Oral Health*", will focus improving outpatient treatment, improving patient health and experience and expanding data analysis abilities among nurses to embrace new challenges and advance the profession. While you are here, I sincerely hope that you take the opportunity to network, learn, share and collaborate with international experts. All of us on the Scientific Committee would take great pleasure in meeting you in person and learning more about your amazing work. I wish you an enjoyable and productive conference. I hope you enjoy your stay in this wonderful city and use pre and post conference times to enjoy the sites. We are enthusiastic about your attendance and participation. Enjoy the conference!

Dr Xavier Riaud

National Academy of Dental Surgery, France.

ABOUT US

Iris Scientific Group

Iris Scientific Group is started to fulfill the requirements and to seek after aggregate objectives of the scientific community particularly focusing in the field of Science and technology to support the efforts to exchange knowledge and ideas which encourage the cooperation between the researchers, scientists, academicians and analysts of interdisciplinary research or same field.

We are expert in conducting conferences, workshops, seminars, and meetings with the peerless and inspired speakers all around the world. We are here to provide you and your association with the opportunities to connect with others, explain your research and make your unique identity in front of others. Our conferences and workshops are known as the sea of learning where we help you to swim and learn everything you want.

In a very short period, Iris Scientific Group became successful in developing a unique platform for experts, budding researchers and professionals from different universities, countries, research institutions, hospitals, companies and industries. Here we provide an opportunity to easily discuss and socialize their techniques of research, goals, facts, latest science discoveries and news.



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KEYNOTE SESSIONS





Alok Dubey

Associate Professor, Department of Preventive Dental Sciences, College of Dentistry, Jazan University, Saudi Arabia

Commissaire maigret 032": Using human teeth in DNA profiling

Recent advancements in molecular biology have made DNA analysis a standard practice in crime laboratories. DNA serves as a powerful tool for identifying unknown human remains. Due to its protective encasement by dentin and enamel—collectively known as dental armor—human dental pulp provides an excellent and reliable source of DNA for forensic identification.

This Keynote presentation reviews current literature on the use of teeth as a DNA source and evaluates their suitability for DNA fingerprinting in forensic science.

Biography

Dr. Alok Dubey, is an associate professor and consultant in Pedodontics in College of Dentistry, Jazan University, K.S.A. Dr. Dubey has numerous scientific publications in ISI, Scopus and Pubmed indexed journals and has received many awards for paper and poster presentation globally. He received "Best Paper award" in August 2001 at 3rd IAOFG Conference at S.D.M. Dharwad, India. Dr. Dubey was also awarded "Best Poster Award" in June 2012 at 10th Triple O National Symposium, Lucknow, India. He has also received "Third prize in poster presentation " at 3rd Research Day, College of Dentistry, Jazan University, KSA in April 2018. In September 2020; He again bagged "Best Poster Award" in Dentrenz Virtual Summit, India



Feser G, Barros A, Funosas E, Antuna MV, Boccio I.

Periodontics Division., Faculty of Dentistry. National University of Rosario. Argentina

Non-surgical therapy of periodontal disease: Scope of a new treatment protocol

One of the main etiological agents of periodontal diseases are periodontal bacteria and the response that each individual produces to this infection will depend on genetic factors and those found in the environment that surrounds them. The objectives of periodontal therapies are the elimination of a large number of bacteria and their degradation products to allow the short-term resolution of the established pathology and the control of periodontal infection. The responsibility of microorganisms in the initiation and progression of gingival and periodontal diseases has been demonstrated in several studies.Currently, there are several therapeutic methodologies that can be used individually or in combination to achieve change in the bacterial ecosystem and thus allow resolution of the pathology.The present study evaluated the efficacy of a novel protocol combining non-surgical periodontal therapy with Piezosurgery (woodpecker bone piezosurgery) with systemic administration of specific antibiotics. Clinical and microscopic evaluations were recorded. The treatment protocol demonstrated rapid resolution of the pathology with good stability in subsequent evaluations and rapid recuperation of gingival tissues.

The audience take away from your presentation:

Current therapeutic modalities for the treatment of periodontal disease

Biography

Dentist graduated from the Faculty of Dentistry of the National University of Rosario in 1993.
Doctor in Dentistry from the National University of Rosario.
Professor of the Periodontics Chair of the Faculty of Dentistry of the National University of Rosario.
Researcher categorized III in the Secretary of Science and Technology of the National University of Rosario.
Member of the Examining Board of the Undergraduate Course of the Periodontics division. UNR.
Member of the Scientific Committee of the Periodontics Specialist Career of the Faculty of Dentistry. UNR.
Member and teacher of postgraduate courses in the Orthodontic Specialist career of the Faculty of Dentistry. UNR.
Former Director of the Department of Periodontics and Implants of the British Sanatorium. Rosario. Santa Fe.
Former president of the Periodontics and Implants Group of the Argentine Society of Dental Research.
External evaluator of SIGEVA CONICET University of Buenos Aires for Science and Technology Research projects.
Teacher and lecturer of courses in the Periodontics Residency of the Faculty of Dentistry. UNR.
Member of the steering committee of the Periodontology and Implants Group of the Argentine Society of Dental Research, Argentine division of the International Association of Dental Research.
Referee and evaluator of research papers presented at the Argentine Society of Dental Research.
Active member of the Argentine Society of Periodontology.



João Eduardo Gomes Filho

Endodontics, Ph.D, São Paulo State University, Brazil

Nutraceuticals: Scientific potential in endodontics

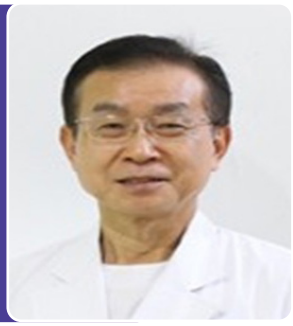
This presentation focus on the emerging evidence that suggests nutraceutical supplementation could benefit endodontic outcomes by directly modulating periapical inflammation and supporting bone repair. Various bioactive compounds are being explored for their therapeutic effects in this context. Examples include resveratrol, quercetin, curcumin, omega-3 fatty acids, propolis, melatonin, and probiotics. Collectively, these nutraceuticals exhibit notable antioxidant, anti-inflammatory, and immunomodulatory properties. They can reduce oxidative stress, neutralize free radicals, and downregulate pro-inflammatory cytokines while stimulating host defense mechanisms. Ultimately, the goal of adjunctive nutraceutical therapy in endodontics is to recalibrate the host's immune response by reducing excess pro-inflammatory mediators and tissue-degrading enzymes while enhancing anti-inflammatory factors and natural inhibitory molecules. Importantly, this strategy is not intended to replace standard antimicrobial disinfection of the root canal system, but to complement it by strengthening the host's defenses and modulating the inflammatory cascade.

Audience Take Away

- The presentation aims to explain the rational of nutraceutical supplementation as potential coadjutant in endodontics.
- This approach is not intended to replace standard antimicrobial disinfection of the root canal system but to complement it.

Biography

Graduated in Dentistry from the Bauru School of Dentistry-USP (1995), PhD in Dental Clinic Endodontics from the Piracicaba School of Dentistry-UNICAMP (2001). He held a Post-Doctoral at the University of Michigan (USA) working with tissue engineering using stem cells (2011). He has acting as a Visiting Professor at the University of Sydney (Australia) as Endodontic Medicine Theme (2019-2020). He is currently Full Professor of Endodontics at the Araçatuba School of Dentistry-São Paulo State University and responsible for the network with the internationalization of University program.



Masaru Murata*, (DDS, PhD), Young-Kyun Kim, (DDS, PhD),In-Woong Um, (DDS, PhD),Toshiyuki Akazawa, (PhD),

Oral Regenerative Medicine, Health Sciences University of Hokkaido, Japan
Oral and Maxillofacial Surgery, Seoul National University Bundang Hospital, Korea
Research and Developmental Institute, Korea Tooth Bank, Korea
Industrial Technology and Environment Research Development, Hokkaido Research Organization, Japan

Demineralized dentin autograft for bone regeneration - Bone is reborn by dentin

Dentin and bone consist of 70% apatite, 20% collagen and 10% body fluid in weight. C.B.Huggins (Nobel award winner) and M.R.Urist (BMP discoverer) reported in 1970 that rat demineralized dentin matrix (DDM) induced bone at 4 weeks1). We confirmed human DDM induced bone and cartilage independently at 4 weeks. The demineralization process for dentin and bone increases their osteo-inductivity and kills bacteria. Several shapes of DDM can be prepared. We achieved the DDM autograft for sinus augmentation as a first clinical case in 2002 for dental implants, and published the 20 years-follow up2). Our idea is a bio-recycle use of the extracted tooth as an absorbable, collagenous material with natural cross-linking and growth factors for bone regeneration3).

Case 1: A 46-year-old male presented a sever atrophic posterior left maxilla.Autograft using non-functional teeth (#17,18)-derived partially demineralized dentin matrix (DDM) granules was done for sinus augmentation in 2002. Bone biopsies at 5 months were carried out from the implant sites, and three fixtures were placed into the augmented bone. The biopsy tissues showed continuous trabecular bone connected with DDM. Newly formed bone was found on DDM and the surface of DDM appeared slightly irregular. Dental X-ray photos in 2009 and 2021 showed the healthy bone shadow near the fixture-necks, and the top outline of the augmented bone showed irregular.

Case 2: A 66-year-old female presented a bony healing failure in the extracted socket (#36) for 2 months. A non-functional, vital wisdom tooth was crushed by our newly developed electric mill, decalcified in 2.0% HNO3 solution, and rinsed extensively in cold distilled water. The immediate graft of DDM was carried out in 2009, and biopsy was taken at 5 months after surgery. The biopsy tissue showed that new bone formation occurred directly on dentin and cementum area. DDM was harmonized with the original tissue, and remodeled by bone.

These evidences indicated that DDM could be recycled for successful bone regeneration, and opened a novel way as biological scaffolds. In this seminar, Dentin Science will be introduced for patients in wonderful Paris.

1. Dentin matrix transformation. Science 167:896-898, 1970

2. Twenty Years-Passed Case of Demineralized Dentin Matrix Autograft for Sinus Bone Augmentation - A First

Case of Dentin Graft in Human –. Journal of Clinical and Experimental Dentistry, 15(10) e861-5, 2023

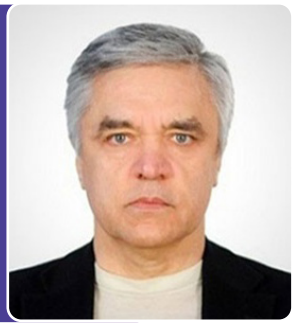
3. Advances in Oral Tissue Engineering. Masaru Murata, In-Woong Um (Ed.), Quintessence Publishing, 2014

Audience Take Away

- Dentin autograft with histological evidences
- Dentin matrix includes growth factors as similar to bone
- How to prepare DDM in dental clinic
- Successful DDM cases in Japan and Korea

Biography

Prof. Masaru Murata is Chief Professor of Oral Regenerative Surgery at the Health Sciences University of Hokkaido (HSUH), Japan, with a distinguished career spanning clinical practice, teaching, and research in oral and maxillofacial surgery. He earned his D.D.S. in 1988 from Hokkaido University, where he also completed his residency in Oral Surgery, followed by a Ph.D. in 1993. His academic journey includes appointments as Assistant Professor of Oral Pathology at Okayama University, researcher in Medical Biology at the University of Louis Pasteur in France, and later Assistant Professor and Lecturer at HSUH. He has led pioneering projects such as the Japan METI-funded Bio-recycle Medical System of Teeth (2004–2005), and served as Visiting Professor at Pioneer Dental College, Dhaka, Bangladesh (2013–2016). Since 2017, he has directed the Oral Regenerative Surgery division at HSUH, focusing on bone morphogenetic proteins (BMPs), bone regeneration, and absorbable biomaterials. Prof. Murata holds three Japanese patents and one U.S. patent, underscoring his contributions to innovation in dental and surgical sciences.



Sergey Suchkov[1-13,15*], Shawn Murphy[16,17],Laila Akhlaghi[18], Holland Cheng[14]

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[4]Member, New York Academy of Sciences, New York, USA
[5]Member: EPMA (European Association for Predictive, Preventive and Personal-ized Medicine), Brussels, EU
[6]Member, ISPM (International Society for Personalized Medicine), Tokyo, Japan
[7]Member, PMC (Personalized Medicine Coalition), Washington, DC, USA
[8]Member, AMEE (Association for Medical Education in Europe), Centre for Medi-cal Education, Dundee, Scotland
[9]Member, ACS (American Chemical Society), Washington, DC, USA
[10]Member, AHA (American Heart Association), Dallas, TX, USA
[11]Member, ARVO (The Association in Research in Vision & Ophthalmology), Rockville, MD, USA
[12]ISER (International Society for Eye Research), Anchorage, AK USA
[13]Secretary General, United Cultural Convention (UCC), Cambridge, UK
[14]College of Biological Sciences,UC Davis, CA, USA
[15]Russian Academy of Natural Sciences, Moscow, Russia
[16]Harvard Medical School, Boston, MA, USA
[17]MGH, Boston, MA, USA
[18]College of Dental Medicine, Division of Oral and Maxillofacial Surgery, Columbia University Irving Medical Center, New York, NY USA

Personalized and precision medicine (PPM) through biodesign-inspired translational applications and integrating dentistry into inter-professional healthcare to secure human oral health and biosafety

Traditionally a disease has been defined by its clinical presentation and observable characteristics, not by the underlying molecular mechanisms, pathways and systems biology-related processes specific to a particular patient (ignoring persons-at-risk). A new systems approach to subclinical and/or diseased states and wellness resulted in a new trend in the healthcare services, namely***, personalized and precision medicine (PPM).***

Despite breakthroughs in research that have led to an increased understanding of PPM-based human disease, the translation of discoveries into therapies for patients has not kept pace with medical need. It would be extremely useful to integrate data harvesting from different databanks for applications such as prediction and personalization of further treatment to thus provide more tailored measures for the patients and persons-at-risk resulting in improved outcomes and more cost effective use of the latest health care resources including diagnostic (companion ones), preventive and therapeutic (targeted molecular and cellular) etc.

Translational researchers, bio-designers and manufacturers are beginning to realize the promise of PPM, translating to direct benefit to clinical practice. For instance, companion diagnostics tools, theranosticums, molecular imaging and targeted therapies represent important stakes for the Biopharma in terms of market access, of return on investment and of image among the prescribers. So developing the next-generation medicines and diagnostic tools requires changes to traditional clinical trial designs, that result in new types of data. Making the best use of those innovations and being ready to demonstrate results for regulatory bodies requires specialized knowledge that many clinical development teams do not have.

PPM has revolutionized also oral health and disease management by enabling tailored treatment approaches based on individual genetic, molecular, and microbiome profiles. For instance, tissue engineering, regenerative medicine, incorporating platelet-rich plasma (PRP) and bone morphogenetic proteins (BMPs), have enhanced tissue healing and repair in dental

procedures. By embracing PPM resources, preventive screening, and the strategic use of micronutrients and targeted drugs, dental care can become more effective, reducing the incidence of oral diseases and improving patient outcomes. Utilizing biomarkers and point-of-care technologies, clinicians can improve early diagnostic accuracy and tailor treatments to individual needs. By integrating patient-specific genetic, molecular, and pharmacogenomic data into clinical processes, this emerging paradigm in dentistry known as PPM-guided dentistry in completely changing the diagnosis, prevention, and treatment of oral illnesses. The strategy makes use of technologies including salivary biomarkers, next-generation sequencing, and genome-wide association studies to facilitate earlier identification, more precise risk assessment, and tailored treatment plans. Bridging oral and systemic health is emphasized as a key strategy to enhance patient quality of life, underscoring the need for ongoing interdisciplinary collaboration in dentistry.

PPM-guided dentistry is a data-driven approach that classifies patients into subgroups that allow tailored treatments and interventions - the success of this approach depends on its ability to be predictive, preventive, personalized and prophylactic. PPM-guided dentistry is thus an innovative concept within the current development of medicine, supported by genomic and OMICS diagnostic techniques. These are diagnostic tools that allow pre-early detection of alterations with a partial or total genetic basis and that give meaning to the clinical manifestations or phenotypes.

Future research and biodesign-driven applications should focus on refining immunotherapy applications, expanding microbiome-targeted treatments, and improving computational modeling for PPM-guided care.

Healthcare is undergoing a transformation, and it is imperative to leverage new technologies to support the advent of PPM. And it is urgently needed to to discover, to develop and to create new (targeted and/or smart/intelligent) drugs. And with the support of nanotechnology, new targeted therapeutic agents and biomaterials, or aid the development of assays for disease biomarkers and identification of potential biomarker-target-ligand (drug) tandems to be used for the targeting, PPM is making phenomenal steps in the future to come. This is the reason for developing global scientific, clinical, social, and educational projects in the area of PPM and design-driven translational medicine to elicit the content of the new trend. The latter would provide a unique platform for dialogue and collaboration among thought leaders and stakeholders in government, academia, industry, foundations, and disease and patient advocacy with an interest in improving the system of healthcare delivery on one hand and drug discovery, development, and translation, on the other one. So, the Grand Change and Challenge to secure our Health and Wellness are rooted not in Medicine, and not even in Science! Just imagine WHERE?! In the upgradedHi-Tech Culture!

Keywords: Personalized & precision medicine, biomarkers, targets, nanoparticles, nanocarriers, nanotheranostics, nanobiomedicine, nanotechnologies

Biography

Sergey Suchkov was born in the City of Astrakhan, Russia, in a family of dynasty medical doctors. In 1980, graduated from Astrakhan State Medical University and was awarded with MD. In 1985, Suchkov maintained his PhD as a PhD student of the I.M. Sechenov Moscow Medical Academy and Institute of Medical Enzymology. In 2001, Suchkov maintained his Doctor Degree at the National Institute of Immunology, Russia. From 1989 through 1995, Dr Suchkov was being a Head of the Lab of Clinical Immunology, Helmholtz Eye Research Institute in Moscow. From 1995 through 2004 - a Chair of the Dept for Clinical Immunology, Moscow Clinical Research Institute (MONIKI). In 1993-1996, Dr Suchkov was a Secretary-in-Chief of the Editorial Board, Biomedical Science, an international journal published jointly by the USSR Academy of Sciences and the Royal Society of Chemistry, UK.

At present, Dr Sergey Suchkov, MD, PhD, is:

- Research and Development Director, National Center for Human Photosynthesis, Aguascalientes, México
- Senior Scientific Advisor, InMedStar, Russia-UAE
- Member, The Russian Academy of Natural Sciences, Moscow, Russia
- Member, New York Academy of Sciences, USA

Dr Suchkov is a member of the:

- American Chemical Society (ACS), USA;
- American Heart Association (AHA), USA;
- European Association for Medical Education (AMEE), Dundee, UK;
- EPMA (European Association for Predictive, Preventive and Personalized Medicine), Brussels, EU;
- ARVO (American Association for Research in Vision and Ophthalmology);
- ISER (International Society for Eye Research);
- Personalized Medicine Coalition (PMC), Washington, DC, USA



Xavier Riaud
National Academy of Dental Surgery, France

DNA, teeth and illnesses

Whether through the study of its DNA, which remains a costly process, or its mineral structure, a tooth provides endless scope of investigation provided the DNA is intact and is able to be used. This is based upon historical remains found on sites. A tooth is indestructible, withstanding very high temperatures (over 1000°C) and as a result, it is an extraordinary forensic tool, a source of knowledge which, if used well, provides an unlimited abundance of information.

Biography

Dr. Xavier Riaud received his Doctorate of Dental Surgery in the Faculty of Dental Surgery, Nantes, France in 1997 and a Ph. D in History of Sciences and Technics in François Viète Center, Nantes, France in 2007. He was laureate (1998), associate member (2011) and full member of the National Academy of Dental Surgery (2019). He was free member of the National Academy of Surgery in 2013. He was awarded Knight of the Order of Academic Palms in 2011 and Knight of the National Order of Merit in 2016. He was a Fellow of the Pierre Fauchard Academy (USA).He received the highest award from the National Council of the Order of French Dentists for his work in 2022. He has authored more than 600 research publications in peer-reviewed National and International journals. His articles was translated into 7 languages. He has edited/authored 44 books. Dr. Xavier Riaud serves as Editorial board member for more than 90 International/National journals and reviewer for many National and International journals. He has made more than 150 communications in French or in English all around the world.

BOOK OF ABSTRACTS



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WORKSHOP





Brynn L. Leroux

Associates in Pediatric Dentistry, United States

TOTS, lasers, airway and pediatric dentistry

This presentation shows numerous case studies of pediatric patients treated with frenectomies to help with feeding, speech, sleep, breathing, growth and development, dental health and more. Cases include infants, children, adolescents and teenagers and were performed using various levels of sedation specific to what was required to safely and successfully accomplish the procedure in each individual patient. Pre-op and postop histories are reviewed, including collaboration with therapists as needed based on each patient's individual needs.

Biography

Dr. Brynn Leroux is a graduate of LSU School of Dentistry and was ranked 2nd in her graduating class. She completed a residency in Pediatric Dentistry at the Medical University of South Carolina, acting as Chief Resident. A native of Maringouin, LA, Dr. Leroux graduated as Valedictorian from Catholic High School of Pointe Coupee and continued on to study Biological Sciences at LSU in Baton Rouge. Dr. Leroux is a Diplomate of both the American Board of Pediatric Dentistry and the American Board of Laser Surgery, with a specialty designation "In Pediatric and Special Patient Care Laser Dentistry." She is also Standard Proficiency Certified by the Academy of Laser Dentistry. Dr. Leroux is an active member of numerous local and international dental organizations and honorary societies, including the Greater Baton Rouge Dental Association, Louisiana Dental Association, American Dental Association, Southwestern Society of Pediatric Dentistry, American Academy of Pediatric Dentistry, OKU National Dental Society, C.E. Kells Honorary Society, and Pierre Fauchard Honor Society. Dr. Leroux is also a board member for the Capital Area Partners Cleft Initiative at OLOL Children's Hospital, supporting, educating and encouraging families throughout the state of LA in their cleft and craniofacial journeys.



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ORAL SESSIONS





Dr. Anu Jose, MDS
University Hospital of West Indies, Jamaica

Fujimori gate flap versus Abbe Estlander flap for lip reconstruction in patients with squamous cell carcinoma

Oral and Maxillofacial Surgeon | Oncological Specialist

Background: Lip carcinomas account for 23.6% to 30% of tumors affecting the oral cavity. Lip reconstruction aims to achieve a competent oral sphincter with a good cosmetic appearance while avoiding microstomia. There are various techniques for lip reconstruction like Fujimori gate flap, Abbe-Estlander Flap, Gillies fan flap, Nasolabial flap, Karapandzic flap, bilateral advancement flap, perialar crescentic advancement flap, Bernard-Burow flap, and free flap.

Aims and objectives: To compare the Fujimori gate flap and Abbe-Estlander flap in terms of functional and esthetic outcomes when used for reconstruction of the lip.

Materials and method: Ten patients diagnosed with oral squamous cell carcinoma requiring resection and reconstruction of lip were included in the study. Functionally, maximal interincisal opening, lip competence, speech intelligibility and esthetically, scar, symmetry of lip during mouth opening, and symmetry of lip at rest were evaluated at the end of 1 week and 1 month.

Results: On evaluation of functional and esthetic parameters, the Fujimori gate flap provides superior results in terms of mouth opening, speech intelligibility, and symmetry of lip at rest. However, results were comparable in both groups in terms of lip competence, scar, and symmetry of lip during mouth opening.

Conclusion: The results of this study suggest that the Fujimori gate flap provides superior results with respect to function and esthetics when used for the reconstruction of lower lip defects with minimal or less complications.

Biography

Dr. Anu Jose stands at the forefront of oral and maxillofacial surgery, bringing exceptional expertise in oncological reconstruction to her dual roles at two prestigious institutions. Currently serving as a Facio-Maxillary Surgeon at The University Hospital of the West Indies in Kingston, Jamaica, and as an Oral and Maxillofacial Oncologist at FOSA Surgical Associates, Dr. Jose exemplifies clinical excellence and academic distinction in her specialized field.

Clinical Expertise & Specialization

Dr. Jose's clinical prowess is anchored by her Fellowship in Oral Oncology from the renowned SGM Cancer Center, where she honed her expertise in the complex management of head and neck carcinomas. Her surgical repertoire encompasses advanced oncological procedures including comprehensive neck dissections and sophisticated reconstruction techniques utilizing free flaps—procedures that demand the highest level of surgical precision and anatomical understanding.

Her particular passion lies in oncological surgery and reconstructive procedures, where she seamlessly merges oncological principles with aesthetic and functional restoration, ensuring optimal patient outcomes in some of the most challenging cases in oral and maxillofacial surgery.

Academic Foundation & Training

Dr. Jose completed her post-graduate training in Oral and Maxillofacial Surgery at PMNM Dental College and Hospital in 2021, establishing a solid foundation for her subsequent subspecialization in oncological surgery. This comprehensive training provided her with the broad

surgical skills essential for managing the full spectrum of oral and maxillofacial pathology.

Scholarly Contributions & Research Impact

A prolific researcher and academician, Dr. Jose has contributed significantly to the scientific literature with over 28 publications in nationally recognized journals

indexed in PubMed and Scopus databases. Her research contributions reflect her commitment to advancing the field through evidence-based practice and innovative approaches to complex surgical challenges.

Her scholarly work demonstrates a deep understanding of contemporary issues in oral and maxillofacial surgery, with particular emphasis on oncological management and reconstructive techniques that directly inform and enhance patient care.

International Recognition & Professional Engagement

Dr. Jose's expertise extends beyond the operating room to international academic platforms, where she has served as a distinguished speaker at numerous national and international conferences worldwide. Her presentations showcase cutting-edge techniques and research findings, contributing to the global advancement of oral and maxillofacial surgery practices.

Through her active participation in the international surgical community, Dr. Jose continues to stay at the forefront of evolving techniques and technologies in her field, ensuring that her patients benefit from the most current and effective treatment modalities available.

Professional Vision

Dr. Jose's dual institutional affiliations reflect her commitment to both academic excellence and clinical innovation. Her work bridges the gap between advanced surgical technique and compassionate patient care, while her ongoing research initiatives continue to push the boundaries of what is achievable in oncological reconstruction.

Dr. Anu Jose represents the next generation of oral and maxillofacial surgeons—combining technical mastery, research acumen, and international perspective to deliver exceptional patient care while advancing the scientific foundation of the specialty.



Bharat Joshi
MMCDSR India

Current treatment modalities for gingival recession- a barrier for esthetic maintenance- a short clinical review

Oral health forms the basis of individual human health since mouth is the gateway to all microorganisms and eatable/non-eatable items in our body. For maintenance of oral health, oral tissues like teeth and mucosa should remain in disease-free state. Certain predisposing factors like dental plaque or caries can result in inflammation of these tissues. This inflammation if not arrested , can result in bone loss, tooth mobility and gingival recession. Among these effects of inflammation, gingival recession is a frequent periodontal pathology in present day life, which is often associated with dentinal hypersensitivity and unpleasant looks. It is regarded as a major barrier in preserving the gingival health. As society has become increasingly focused on individual beauty and preservation of oral hygiene, gingival recession has become a major treatment option for esthetic dentistry. Although, there are a variety of treatment options available for gingival recession ranging from the free gingival grafts to guided tissue regeneration, every technique has its own merits and demerits. Hence, a clinical review comprising of each surgical techniques is presented so that every clinician, whether general practitioner or Periodontist, selects the best technique for preserving the esthetics and harmony of periodontal tissues

Biography

Dr. Bharat Joshi holds Master's degree in Periodontology & Oral Implantology and has been recently working as Reader in MMCDSR, Haryana, India.He has experience of 4.8 years teaching to BDS, MDS and Dental hygienist Students. Dr. Bharat has published his articles in various National & International Journal Publications (16 Publications). Currently , He is a reviewer in Clinical and Medical research journal (ATHENA PUBLICATIONS),JOURNAL OF COMMUNICATION AND HEALTH (JCIH) and editorial board member with Archives of dental research & Journal of Dental health & Oral research .He is former assistant editor with Indian journal of case reports (100 articles contributed as both reviewer and assistant editor) and Assistant editor in ActaScientifica Dental Science-(2 articles edited & 4 short opinions published) &Ecoronica dental sciences UK (2 short opinions published) . In addition to it, he has 6 publications of patient interest in iclinic.com. He has attended several national and international scientific conferences, presented his research work & has been awarded with best paper.

Industry experienceDr.Bharat Joshi has industrial experience also as a pharmacovigilance scientist (DSA-1) in Parexel. Int.pvt India ltd. For more than 2 years.

B K Sujatha
Vydehi Institute Of Dental Sciences And Resarch Centre, India

Relationship between spiritual intelligence and oral health related quality of life among patients attending dental institutions in bangalore city- A cross sectional study

Introduction: Spiritual intelligence (SQ) refers to the capacity to understand and apply spiritual concepts and values to enhance one's life and well-being same way oral health impact profile helps people to know the importance of oral health and its impact. People who know the purpose of life are also aware of importance of oral health.

Aim: To assess the relationship between spiritual intelligence and oral health related quality of life among patients visiting dental institution.

Materials and Method: A cross sectional study was conducted among the patients attending dental institutions at Bangalore city. Four dental institutions were randomly selected by table of random numbers, after scientific calculation of sample, 172 patients were approached in four dental colleges by including 43 from each institution after taking permissions from the concerned authorities. Patients who gave consent were included in the study by distributing questionnaires of spiritual intelligence and oral health impact profile after briefing the research objectives. Each participant took 38 minutes to complete the questionnaire, and the questionnaire was made available in Kannada, English and Hindi language. Face validity was checked with the help of experts and reliability by Cronbach's alpha which was found to be

0.08. All the collected data was compiled in SPSS version 21, IBM, Chicago, Illinois and subjected to statistical analysis by using descriptive statistics e for categorical data and Chisquare for dichotomous data derived after taking median for spiritual intelligence and oral health related quality of life scores.

Results: Among 172 study subjects, 34% felt questions related to spiritual intelligence very truly defined them, 26% agreed its completely true, 42% felt that any problem in the teeth will impact their day to day life, 27% felt it often, and the relationship between spiritual intelligence and oral health related quality of life among study participants was found to be highly significant at $p < 0.01$.

Conclusion: In the present study there was a significant relationship between spiritual intelligence and oral health related quality of life.



Christie-Michele Hogue

DDS, AGSF, Mouth Mirrors LLC, United States

Addressing anti aging bias and the impact of oral health in healthy aging

Oral health is an integral component of overall health and well-being, and its impact becomes increasingly significant with aging. As the global population continues to age, with the number of individuals over 60 expected to more than double by 2050, the burden of oral health issues in older adults is a growing concern. Oral health is not merely impacted by chronological age but moreover impacted by functional age. Oral diseases, such as dental caries, periodontal disease, and oral cancer, are prevalent among the elderly and can have a profoundimpact on their physical, emotional, and social well-being. Poor oral health in aging populations has been linked to several systemic conditions, including cardiovascular disease, diabetes, and even cognitive decline. Moreover, the consequences of oral diseases in older adults extend beyond physical health, often leading to difficulties in communication, reduced ability to eat and enjoy food, and diminished self-esteem, which can contribute to isolation and depression due to ageism.

The global impact of aging on oral health is shaped by several factors, including socioeconomic status, barriers to accessing healthcare, and disparities in comprehensive dental care. In low- and middle-income countries, where dental care resources are limited and affordability is a significant barrier, untreated oral health issues are more common, exacerbating the risks associated with aging. Even in high-income countries, access to timely and affordable dental care can be hindered by cost, particularly for seniors on fixed incomes or those with complex medical conditions. Additionally, age-related physiological changes, such as decreased saliva production and changes in oral mucosa, contribute to the higher susceptibility of older adults to oral diseases, further complicating their care.

Addressing the oral health needs of aging populations requires a multi-faceted approach that combines prevention, oral health literacy, and access to quality care. Public health initiatives must focus on raising awareness about the importance of oral health in aging, promoting regular dental check-ups, and integrating oral health into broader health systems to ensure comprehensive care. Innovations in dental technology, such as tele-dentistry and the development of age-friendly dental treatments, hold promises for improving access to care, especially for older adults in underserved areas. Additionally, the integration of oral health into the management of chronic diseases and the emphasis on preventive care—such as proper oral hygiene practices, nutrition, and smoking cessation—are crucial for reducing the burden of oral diseases and enhancing the quality of life for older adults.

In conclusion, the global impact of oral health on aging extends far beyond the mouth, influencing bothone's physical and mental well-being. As populations age, it is essential that healthcare systems and policymakers prioritize oral health as a key component of healthy aging strategies to ensure that older adults can enjoy a better quality of life, improved longevity, and better health outcomes.

The audience take away from presentation:

- Identify Oral Health Disparities in Geriatric Patients
- Identify the Importance of Cultural Competence and Inclusive Language in Treating the Geriatric Patient
- Identify the Importance of Interprofessional Communication on behalf of the Geriatric Patient

Biography:

Dr. Christie-Michele Hogue, is a geriatric-trained dental practitioner dedicated to providing dental pearls for general dentists, primary care physicians, geriatricians, nurses, dieticians, and all healthcare providers concerned with the oral care needs of geriatric patients. She is the CEO and Founder of Mouth Mirrors LLC, an online education company, established to help bridge the gap through knowledge and education with an interdisciplinary approach to learning. The overall goal is to encourage health professionals to render compassionate, competent, comprehensive care for the oral health of our most vulnerable older populations.



Lauriane Maurice MSC[1], Antonin Puget MSC[1], Daniel Bacqueville PhD[1]*, Sylvain Levet DDM[2] and Maud Moisan PharmD[1]

[1] R&D Department, Pierre Fabre Dermo-Cosmetique and Personal Care, Toulouse, France
[2]MedicalDepartment, Pierre Fabre Oral Care, Lavaur, France

Tolerance and clinical efficacy of a new sensitive teeth toothpaste combining Fluorinol protect+ ™with potassium citrate

Introduction: Dentine hypersensitivity (DH) is a short and intense pain occurring when the exposed dentine of the affected tooth receives external stimulation. DH is a frequent clinical oral health problem with a prevalence up to 57% worldwide and effective treatment of DH is an important issue for dentists. Thus, this clinical trial aimed to assess the odontological tolerance and desensitizing benefits of a new toothpaste (TP) containing Fluorinol Protect+ complex ™ (nicomethanolhydrofluoride + chitosan-mandelic acid) and potassium citrate to remineralize dentine and reduce nerve sensitivity, respectively.

MaterialsandMethods: The clinical study was conducted as a monocentric, randomized open trial from 44 healthy subjects (54.55% females/45.45% males, 59.1% adults/40.9% teenagers, 12-61 years) presenting 2 sensitive teeth (1<SCAI<2). TP was used thrice daily with a 3 min brushing after each meal. Odontological evaluation was conducted by a dentist on D1, before and immediately after TP application, and at the final visit after 28 days by using a 5-points intensity scale evaluating physical/functional signs reported by the subjects and global tolerance assessment. TP efficacy was evaluated on DH by using the Schiff Cold Air Index (SCAI, scale 0 to 3, 1-2 sec air blast perpendicular to the exposed dentin) before and after first application (D1T0 and D1T5min), on D2, D15 and D29 of product use. Self-assessment questionnaire of the intensity of DH was also determined according to a Visual Analogue Scale (VAS, scale 0 to 10) at the same timepoints. Statistical analyses were performed by using Wilcoxon and student's tests. Quantitative and randomized blind home use test was finally performed to assess both the appreciation and the perceived TP efficacy by consumers for 14 days (n=70, 68% women/32% men, 18-65 years).

Results: Dentist evaluation revealed an excellent odontological tolerance of the TP with no relevant reaction. Before TP application, basal SCAI was 1.95 ± 0.02. A significant reduction in DH was observed from the first TP use (1.64 ± 0.05, -16%, p<0.0001) and TP efficacy progressively increased up to 28 days of use (0.19 ± 0.04, -90%, p<0.0001) with an improvement observed in 99% of the subjects. VAS score confirmed DH reduction after TP treatment. Baseline value was 7.65 ± 0.18 and dropped significantly as soon as the first TP use (6.59 ± 0.27, -14%, p<0001) and up to 28 days of use (1.34 ± 0.22, -82%, p<0.0001) with 100% improvement of the population. Finally, TP was appreciated by consumers (> 7/10) and its efficacy on teeth sensitivity was well perceived during the 14 days of testing with a 45% reduction sensitivity to cold food or drinks and 2-fold less sensitivity while brushing.

Conclusions: Altogether, these clinical data demonstrated that a TP formulated with Fluorinol Protect+ complex ™ and potassium citrate is well tolerated by healthy patients and helps to reduce tooth sensitivity from the first use and after 28 days of thrice daily use.

AudienceTakeaways:

- Understand how to perform and evaluate both tolerance and effectiveness of a sensitive teeth toothpaste in healthy patients with dentist and consumers
- Discover the SCAI and VAS tests to assess tooth sensitivity in clinical trials
- Evaluate the benefits of using Fluorinol Protect+ complex ™ and potassium citrate to reduce dentin hypersensitivity.

Biography

Dr. Daniel Bacqueville is a senior researcher in the Pharmacology, Dermocosmetics, and Personal Care Department at Pierre Fabre Laboratories, where he has contributed over 20 years of expertise in pharmacological research. Holding a Doctorate in Sciences, an MSc in Molecular Pharmacology and Toxicology, and a PhD in Cellular Biology and Biochemistry, he began his career with a decade of academic research at INSERM and CNRS before joining Pierre Fabre. His work spans oral care and skin/hair physiology from the cellular level to human applications, including the evaluation of active ingredients and dermo-cosmetic formulations, development of tissue models, biological target screening, and imaging technologies. He has led pharmaco-clinical trials in volunteers and product testing, ensuring scientific rigor and consumer safety. In addition to his laboratory expertise, Dr. Bacqueville has managed CRO collaborations and coordinated French and international partnerships, strengthening Pierre Fabre's global research network. Author of more than 30 peer-reviewed papers and congress presentations, and co-inventor of patents filed by Pierre Fabre Dermocosmetics (PFDC), he has consistently combined scientific rigor with practical application, advancing dermo-cosmetic research and innovation.



Ekta Pandya

New York University College Of Dentistry, United States

Minimal invasive care: Current trends in dentistry

Minimal Invasive Care (MIC) emphasizes prevention, early detection, and healing of dental caries with minimal or no removal of tooth structure. This presentation incorporates evidence-based preventive strategies, early diagnostic techniques, and noninvasive caries management.

Presentation will discuss traditional caries-prevention methods including dietary counseling, oral hygiene instruction, water fluoridation, and topical fluoride. Newer adjunctive approaches, such as xylitol gum and povidone-iodine protocols are increasingly incorporated into preventive regimens.

This presentation reviews established early caries-detection techniques while highlighting emerging innovations, including AI-assisted radiographic caries detection, salivary diagnostic testing, and advanced detection tools. It concludes with a discussion with some commonly used minimally invasive treatment options and introduces promising developments such as self-assembling peptide P11-4 for early enamel lesion repair.

Biography

Dr. EktaPandya, received her dental degree from New York University College of Dentistry with Honors in Aesthetic Dentistry. and she received her Master of Public Health degree from the University of North Texas. She has maintained active memberships in the American Academy of Cosmetic Dentistry since 2017 and the Spear Study Club since 2019. After four years of practicing general dentistry in Dallas, Dr. Pandya moved to New York and practiced in Poughkeepsie for two years prior to joining Ariel Dental Care. Dr. Pandya specializes in veneers, Invisalign, full mouth rehabilitation, and sleep apnea. In both her professional and personal lives, she's known for her positive energy, honesty, and dependability. Dr. Pandya prioritizes her patients' comfort during treatments as well as their satisfaction with the end results. The trust and loyalty of her patients is evidence of her wonderful chairside manner and her dedication to providing excellent dental care. Dr. Pandya was born in India and moved to the United States in 2013. She and her husband reside in Peekskill. She enjoys hiking in the Hudson Valley, traveling, cooking and painting.



Eloise Turner[1*], Karanveer Matharu[2], Alexandra Perks[3], Andrea Richards[3], Jon Higham[3], Ana Poveda-Gallego[3*]

[1] DCT2, [2] Registrar in Oral Surgery, [3] Consultant in Oral Medicine
Birmingham Dental Hospital, United Kingdom

Trigeminal neuropathy associated with sickle cell disease: A three case series

Background: Neurological complications of sickle cell disease (SCD) typically affect the central nervous system, whilst peripheral neuropathies are rare. Involvement of the trigeminal nerve is particularly uncommon and may mimic odontogenic pathology. Awareness of this presentation is important for dental practitioners to ensure appropriate investigation and avoid unnecessary intervention.

Case Series:

Case 1: A 45-year-old male with SCD presented with sudden-onset numbness of the left chin and lower face (V2/V3 distribution) coinciding with pain in the LL7. Clinical and radiographic assessment revealed no dental pathology and bloods were consistent with SCD. Symptoms resolved completely within six weeks, consistent with transient trigeminal neuropathy.

Case 2: A 42-year-old male with SCD developed acute paraesthesia of the right lower lip and chin (mental nerve distribution) following a mild sickle cell crisis. Quantitative sensory testing confirmed reduced sharp, thermal and light-touch perception. Gradual recovery was noted over six weeks, with near-complete return of sensation at follow-up.

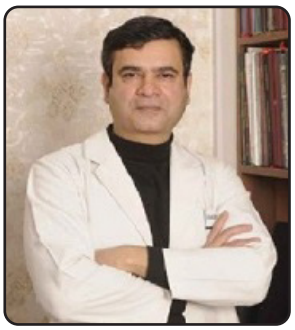
Case 3: A 36-year-old male with SCD reported a two-week history of left mandibular and maxillary pain, followed by numbness of the left lower lip after a sickle cell crisis. Examination confirmed reduced thermal perception in the left V3 distribution. OPG demonstrated a focal radiopacity with radiolucent margin around LL8 and generalised mandibular osteopenia consistent with SCD. All adjacent teeth were vital. Radiological impression suggested cemento-osseous dysplasia unrelated to the neuropathy. Further imaging (CBCT/MRI) was requested to exclude other pathology.

Discussion: In all three cases, no odontogenic or structural cause for the neuropathy was identified. Findings were consistent with ischaemic or vaso-occlusive microinfarction of the inferior alveolar or mental nerve secondary to sickle cell pathology.

Conclusion: Collectively, these cases highlight the need for heightened clinical vigilance amongst oral medicine and dental practitioners, who may be the first clinicians to evaluate focal facial numbness in individuals with SCD. Early identification of neuropathic symptoms, particularly during or shortly after a vaso-occlusive crisis, can prevent unnecessary dental interventions, prompt appropriate medical liaison and ensure timely monitoring.

Biography

Dr Eloise Turner is a Dental Core Trainee (DCT2) currently working in Oral Surgery and Oral Medicine at Birmingham Dental Hospital, UK. She has previously worked in primary care within a dental practice in Bradford, alongside her role as a DCT1 in Oral and Maxillofacial Surgery (OMFS). Furthermore, she has gained experience working within the Paediatric Dentistry department at Leeds Dental Hospital. These roles have provided her with broad exposure across primary, secondary, and tertiary care settings. Her professional interests lie in oral surgery and oral medicine, with a strong enthusiasm for both clinical practice and research. She has a particular interest in the management of anxious patients and is committed to delivering patient-centred care, with a focus on clear communication and supportive treatment approaches. Through training across multiple departments and centres, she has developed a well-rounded perspective on the assessment and management of complex oral conditions, alongside a growing interest in academic and evidence-based aspects of oral healthcare.



Farrukh Faraz

Maulana Azad Institute of Dental sciences, India

Effect of nanotubular titanium surface on dental implant osseointegration A randomized clinical study

Aim: There is a need to develop novel technologies to enhance and support the dental implant osseointegration process. Creating nanotubular surface over Titanium alloy has shown to increase the bone-implant contact ratio and reduce the time required for loading in animal studies. The present parallel-arm, non-inferiority, randomized clinical study aims to compare the stability (ISQ) of Nanotubular and SLA dental implants over a period of 12 weeks.

Materials and Methods: Nanotubules were created over SLA Titanium surface through anodization and standardized through annealing process. Implant surface was tested for shear forces during frictional placement. Animal testing was done successfully. DCGI clearance was obtained to conduct Pilot study in human participants. Partially edentulous participants were screened according to the inclusion and exclusion criteria and selected for each Test (nanotubular implant, NT) and Control (commercially available sandblasted acid etched implants, SB) group. Implants were placed surgically with healing abutments. Follow-up was done at 4, 8, and 12 weeks and ISQ values were measured and recorded. Osseointegrated implants were labelled as successful.

Conclusion: Nanotubular implant surface is a novel, viable, and promising surface for Titanium dental implants, and their application should be tested further in clinical situations with compromised bone density and immediate placement and loading. Further avenues may be developed in the form of Drug eluting NT implants.

Biography

1. Educational Background

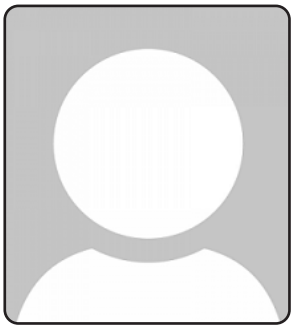
- BDS 1999 MAHE
- MDS 2002 MAHE

2. Research Interest Areas

- socket preservation
- ridge augmentation
- indigenous preparation of allografts and xenografts
- sinus lift and implants

3. Research Grants Received

- Evaluation of dimensional changes in the alveolar ridge following tooth extraction with and without using indigenously prepared decalcified freeze dried bone allograft Funded by: Human resource Development for Health Research, DHR, GOI
- Development of Dental Implants for Advanced & Critical Applications Funded by: Council of scientific and industrial research



Ghaith Mansour
Alfaisal University, Saudi Arabia

Artificial intelligence in healthcare education: Evaluating the accuracy of chatgpt, google geminimicrosoftcopilot and deepseek in dental pharmacology

Background: Large language models (LLMs) are increasingly integrated into healthcare education as tools for information retrieval, assessment support, and self-directed learning. Despite their expanding use, evidence evaluating their accuracy within specialized dental disciplines, particularly dental pharmacology, remains limited, especially across non-English languages. Given the central role of pharmacological knowledge in safe dental prescribing and clinical decision-making, systematic evaluation of these tools is warranted.

Objective: This study aimed to evaluate and compare the accuracy of four widely used artificial intelligence–based LLMs—ChatGPT, Google Gemini, Microsoft Copilot, and DeepSeek—in answering standardized dental pharmacology multiple-choice questions (MCQs) presented in both English and Arabic. Methods: A cross-sectional analytical study design was employed. Dental pharmacology MCQs were extracted from Australian Dental Council (ADC) and Integrated National Board Dental Examination (INBDE) practice materials using predefined inclusion criteria. All questions were translated into Arabic by bilingual experts and validated to ensure semantic and clinical equivalence. Free-access versions of the four AI tools were evaluated using standardized prompts. Accuracy was calculated as the proportion of correct responses relative to official answer keys. Comparative analyses were conducted using chi-square testing, with statistical significance set at $P < 0.05$.

Results: In the English-language assessment, significant differences in accuracy were observed among the models ($P = 0.023$). ChatGPT achieved the highest accuracy (86.7%), followed by Google Gemini and Microsoft Copilot (66.7% each), while DeepSeek demonstrated the lowest accuracy (57.8%). In contrast, Arabic-language assessments showed high accuracy across all four models (80.0%–91.1%), with no statistically significant differences detected ($P = 0.28$).

Conclusions: LLMs demonstrate promising accuracy in dental pharmacology, with performance varying by model and language. While ChatGPT outperformed comparator tools in English, all models showed comparable accuracy in Arabic. These findings support the cautious integration of LLMs as supplementary educational tools in dental pharmacology while emphasizing the need for critical appraisal, domain-specific benchmarking, and responsible educational implementation.



S.M. Shuvalov, *H.I. Krynychnykh, A.O.Kushta

National Pirogov Memorial Medical University, Vinnytsia

Evolutionary and morphological rationale for the detection of glandular tissue in histopathological specimens of jaw cysts and tumors

Glandular lesions of the jaws are rare pathologies of unclear etiology (Senthilmurugan M., 2021). These lesions are characterized by an aggressive clinical course in both benign and malignant processes. In the international histological classification of tumors, malignant gland-containing neoplasms are classified as adenocarcinomas. In 1992, the World Health Organization adopted the term glandular odontogenic cyst. However, reports describing the presence of glandular cells in cystic tissues remain sporadic (M. Shear, 2008). Objective. To provide a possible rationale for the detection of glandular cells in the human jaws. Materials and Methods. We analyzed 3 cases of jaw adenocarcinoma and 1 case of follicular cyst showing features of glandular epithelium. In addition, a histological examination of jaw tissues was performed in 38 specimens obtained from the embryonic, pre-fetal, and fetal periods of human intrauterine development. Results and Discussion. In 4 specimens (10.5%) from the pre-fetal period of development (7-12 weeks), salivary gland cells were identified beneath the epithelial plate of the oral cavity between the developing tooth germs. These glandular structures may represent possible precursors of glandular odontogenic cysts and adenocarcinomas. In histological specimens of fetal jaws at later stages of development, glandular cells were virtually absent, suggesting their probable regression during further development. In some animal species, including amphibians, reptiles, and mammals, glandular epithelium is retained and contributes to the formation of venomous teeth and cutaneous glands. Conclusions. Thus, in tumors and cysts of adult patients, glandular epithelium may be present as residual tissue that has not undergone regression. Such residual glandular tissue may serve as a possible substrate for the development of malignant neoplasms.

The audience take away from your presentation:

- Recognition of a possible embryological basis for the presence of glandular tissue in jaw cysts and tumors.
- Improved understanding of the diagnostic and pathogenetic significance of residual glandular epithelium in glandular odontogenic cysts and jaw adenocarcinomas.

Biography:

Shuvalov Sergiy Mikhailovich - Prof. Head of chair of dental and maxillofacial surgery, Doctor of Medical Sciences. National Pirogov Memorial Medical University, Vinnytsia, Ukraine. From 1992 worked in the Communal nonprofit enterprise «Vinnytsya regional Clinical Hospital named after. N.I. Pirogov Vinnytsia Regional Council» as head of maxillofacial department. At the initiative of SM Shuvalov at the regional children's hospital set up a regional center to provide care for children with disorders of the maxillofacial area. Shuvalov SM - Freelance Regional Maxillofacial Surgeons Health Care Administration, actively participates in regional scientific conferences, a member of Vinnitsa regional office Dental Association Ukraine. Always leaves in parts of the region for scheduled and emergency surgeries. Shuvalov SM participated and presented papers at international conferences in Italy (city. Ferrara), Latvia (Riga), Serbia and Montenegro (m. Novi Sad), Austria (m. Salzburg), Russia (Moscow) what is the appropriate certificates. In 2004 and 2006 participated in the international seminar on "Congenital person" and the European Conference on maxillofacial surgery "East - West - Plastic Reconstructive and Aesthetic Surgery" at the Latvian State University. Stradina (m. Riga). Under the guidance of prof. Shuvalov reserved 7 PhD theses, dissertations performed 2. By 16 medical residents, 10 of whom are citizens of foreign countries, 22 interns and 6 masters degree in dental surgery. In 2005, at the II Congress of dentists Ukraine awarded Dental Association Ukraine. He was a member of the European Association of Cranio-maxillo-facial surgery since 2003.

Hanna IgorivnaKrynychnykh – PhD, the assistant of the department of dental and maxillofacial surgery, National Pirogov Memorial Medical University, Vinnytsia, Ukraine. Passed certification in the specialty “Surgical stomatology”. Conducts practical classes for students of 3, 4, 5 courses (including English-speaking students) in disciplines: Surgical stomatology, Practice in surgical stomatology, Oncology. Takes part in the preparation of lecture materials. In 2024 defended the thesis for the degree of PhD on the theme: “Optimization of treatment for patients with cysts of the frontal regions of the jaws, taking into account their clinical manifestations and ontogenetic characteristics”. Is the author of 17 articles, including publications cited in Scopus and WoS. Reported at conferences in Kyiv, Vinnytsia, Poltava (Ukraine), Dortmund (Germany), Philadelphia (USA). Has completed education courses in Medical Korea Academy (“Oral and Maxillofacial Surgery”, “Trauma and Surgical critical care skills”, “Prosthodontics”). Has 1 patent of Ukraine for a utility model, 4 copyright certificates. Annually prepare students for participation in medical conferences.

Anna Olexandrivna Kushta– Professor of chair of dental and maxillofacial surgery, Doctor of Medical Sciences National Pirogov Memorial Medical University, Vinnytsia, Ukraine. More than 12 years experience in both surgery and teaching.Extensive knowledge of principles, methods and procedures for diagnosis, treatment and operating. Dissertation on the topic "Improving the methods of regional and combined analgesia in operations in patients with odontogenic inflammatory processes in the lower third of the face and neck". Continue active scientific work on the development in this sphere, including personalized medicine and regeneration. She is the author of more than 144 published works, including articles in publications cited in Scopus and WoS. has 6 patents of Ukraine for a utility model, 3 innovations, 1 information sheet and 3 research proposals, 4 copyright certificates. 2005 - 2014 - worked at the maxillofacial department of Vinnytsia Regional Clinical Hospital. Since 2015 - work in the department of head and neck tumors of the Podilsky Regional Oncology Center. March , 2018; July, 2019 – obtained training in the Institute of Cancer Department of head and neck tumors and intensive care and resuscitation department (Kyiv).



Karpinets (Prots) Halyna

Maxillofacial Surgeon, Professor of Ivano-Frankivsk National Medical University, Department of Surgical Dentistry Regional Clinical Hospital, Ivano-Frankivsk, Ukraine

Challenges of modern orthodontics - from braces to orthognathicsurgery

Modern orthodontics is facing new challenges due to both the complexity of clinical cases and the high expectations of patients. For high-quality orthodontic treatment, it is necessary to take into account the challenges of modern orthodontics - the duration of treatment, the adjacency with orthognathic surgery, psychological and aesthetic expectations, relapses after treatment, accessibility and cost. The main challenge is to combine efficiency, safety, aesthetics and comfort, while maintaining an individual approach to each patient. Not all orthodontists have time to adapt to this challenge and often choose “quick methods” (braces, aligners) when interdisciplinary cooperation or orthognathic surgery is actually needed. I will analyze the main key mistakes of orthodontists - underestimation of skeletal pathology, lack of complete diagnosis, camouflage the problem instead of solving it, moving teeth into the wrong position, ignoring the patient's age, and the psychological aspect.I will demonstrate my own cases of surgical intervention to correct skeletal anomalies.

Audience Take Away

The audience will be able to recognize skeletal discrepancies early and avoide camouflage approaches.It will give clinicians practical diagnostic checklists to avoid misdiagnosis and treatment errors in complex orthodontic cases.Faculty and researchers can use the presented cases as a foundation for further study on skeletal anomalies, treatment stability, and relapse prevention.It will provide a clearer framework for interdisciplinary decision-making, making everyday treatment planning more efficient and evidence-based.· The discussion of common mistakes and interdisciplinary solutions can be incorporated into orthodontic teaching curricula as real-world examples.The lecture highlights areas where future research is needed (e.g., long-term outcomes of surgery vs. camouflage, patient psychology in treatment acceptance), which can inspire new academic projects and collaborations.

Biography:

Prof.Karpinets is a highly accomplished maxillofacial surgeon and academic with over 39 years of clinical and teaching experience. She currently serves as Professor in the Department of Surgical Dentistry and practices at the Regional Clinical Hospital. Her expertise spans orthognathic surgery, periodontal surgery, and dental implantology, with her doctoral thesis focusing on dental implantation in patients with generalized periodontitis. A prolific contributor to the field, she has authored more than 150 national publications, 10 papers indexed in Scopus, and numerous conference abstracts. She is also the holder of 15 patents and has delivered lectures and reports at multiple international scientific congresses, underscoring her significant impact on maxillofacial surgery and dental science.



Lei Jin[1], Yi Shuai[2], Xinyao He[3], Xuesong Wang[4], Yingnan Tian[5]

[1]Zhejiang University, China
[2]Nanjing University, China
[3]Nanjing Medical University, China
[4]Nanjing University, China
[5]MM Nanjing Medical University China

Stem cell and extracellular vesicle based strategies for jaw bone regeneration

The collapse of endogenous bone-regenerative capacity originates from a hostile niche, cellular dysfunction and an insufficient energy supply. To tackle these problems systematically, we have developed a hierarchically organized, mutually reinforcing engineering platform that centers on mesenchymal stem cells (MSCs) and their extracellular vesicles (EVs). First, we rebuilt the stem-cell niche to optimize functional output. A 3-D nano-zirconia scaffold that mimics cancellous bone was seeded with dental-pulp MSCs, faithfully recapitulating the physiological microenvironment. EVs harvested from this 3-D culture (3D-EVs) far outperformed conventional 2D-EVs in resolving inflammatory milieus and driving osteogenic differentiation, confirming that "niche determines vesicle function." Armed with these function-enhanced EVs, we next sought the fundamental energy driver of regeneration. We therefore encapsulated plant chloroplasts inside MSC membranes, creating "thylakoid-like" particles that could be internalized by MSCs. Acting as intracellular "bio-generators," these particles raise local ATP levels upon light exposure, directly "charging" the energy-intensive process of osteogenesis and thereby amplifying MSC potency from a metabolic perspective. Inspired by traditional Chinese medicine and our intracellular thylakoids, we next turned to plant-derived exosomes to reprogram the host immune environment. A composite gel loaded with Calendula officinalis exosomes was found to steer macrophage polarization, creating a pro-regenerative milieu for MSC-based bone formation in vivo—marking the transition of our strategy from in-vitro engineering to in-vivo niche reprogramming. Finally,

by dissecting the recalcitrant disease model of bisphosphonate-related osteonecrosis of the jaw (BRONJ), we validated and extended the core logic of the above pipeline. We showed that BRONJ pathology is intimately linked to MSC failure and identified miR-145 as a serum biomarker. We therefore engineered exosomes enriched in miR-145; these vesicles suppress MSC ferroptosis, enhance osteogenic differentiation and precisely intervene in the disease process. Most importantly, the treatment systemically restored MSC regenerative capacity, reversed osteoporosis and healed critical-size calvarial defects. This not only offers a therapy for BRONJ, but also proves that targeting key molecular circuits in MSCs can shift the endpoint from local necrosis repair to a systemic resurrection of bone-regenerative ability. Collectively, by moving from biomimetic niche construction and metabolic empowerment to immune modulation and, ultimately, disease-model-guided validation, our MSC/EV platform achieves strategic control over systemic bone regeneration, providing a comprehensive bench-to-bedside solution for regenerative medicine.

Audience Take Away

- Adopt 3D Biomimetic Scaffolds: You can use three-dimensional, nano-structured zirconia scaffolds to culture MSCs, which generates EVs with superior therapeutic potency compared to those from conventional 2D cultures.
- Utilize Plant-Derived Exosomes for Immunomodulation: The composite gel loaded with Calendula officinalis exosomes provides a practical strategy to steer macrophage polarization, enabling the design of biomaterials that create a pro-regenerative immune environment.
- Apply Engineered Exosomes for Targeted Therapy: The methodology for developing exosomes enriched with specific molecules (e.g., miR-145) offers a precise tool to suppress pathological processes like ferroptosis and enhance tissue regeneration, providing a blueprint for molecular interventions in complex diseases.
- Implement a Holistic Regenerative Strategy: The research provides a validated, step-by-step platform that moves from niche construction and metabolic boosting to immune reprogramming, offering a comprehensive framework for developing systemic solutions beyond simple scaffold design.

- Leverage a Bench-to-Bedside Pipeline: The successful application of this strategy to treat a recalcitrant disease model (BRONJ) demonstrates a direct translational pathway, helping you transition from fundamental research to a clinically relevant therapy that restores the body's innate regenerative capacity.

Biography

Lei Jin, Administrative Director and Chief Physician of the Dental Center at The Second Affiliated Hospital, Zhejiang University School of Medicine, is a renowned professor and doctoral supervisor. Her research focuses on radiation protection of the stomatognathic system and hard tissue repair/regeneration. With 5 NSFC grants and over 70 publications, she has received honors including the Frechette Award and Jiangsu Youth Science Award.



Leslie Flowers

NBC-HWC, PhD in Functional Medicine Candidate (2026), President, Leslie Flowers Coaching and Mindfulness, United States

Preventing dental provider burnout

Dental provider burnout is a significant issue characterized by emotional exhaustion, cynicism, and a reduced sense of accomplishment, stemming from a combination of professional stressors and personal factors. High levels of stress are linked to factors like student debt, insurance reimbursement challenges, professional isolation, and long hours, while the COVID-19 pandemic exacerbated issues like staff shortages and childcare difficulties. This presentation will explore the causes of dental provider burnout, and provide concrete, evidence-based strategies, including establishing boundaries, self-care, seeking peer support, and practice management strategies, to reduce mental load.

Audience Take Away

- Causes of dental provider burnout
- Most recent published research on burnout in dentistry
- 10+ evidence-based strategies for providers to implement now to care for themselves and their practice members.
- Strategies that will enhance career enjoyment, income generation, work-life balance, and career longevity.

Biography

Leslie Flowers is a national board-certified health and wellness coach and instructor of mindfulness-based stress reduction. Her vision is to help oral healthcare providers be healthy themselves. Leslie was the first director of student wellness at Indiana University School of Dentistry, where she also was director of communications for 10 years. Fascinated by the intersection of physiological health and mental health, Leslie is pursuing a PhD in Functional Medicine. Known as the "Calm Coach," Leslie partners with individuals and groups to master relaxation and resiliency tools to live with peace, passion, and purpose.



Reham M. H. Belal[1], Mahmoud Helmy Belal[2*]

[1]Post-graduate student, acting as a Dentist at the Health Administration of Kafr El-Zayat, Ministry of Health & Population, Egypt;
[2*]Professor, Department of Periodontology, Oral Medicine & Oral Diagnosis, Faculty of Oral & Dental Medicine, Damanhour University, Egypt

Delayed referral pattern to periodontists: unpredictable therapeutic effects.

Periodontal management procedures has evolved with use of growth factors, regenerative techniques, various flap design modifications and dental implants with ridge augmentation that make speciality has new heights.

Knowledge of periodontal diagnosis and treatment is usually limited to undergraduate level and mostly private practices deal only with chief complaints. General dental practitioners usually treat periodontal patients for years on their own clinics, perform repetitive sessions of soft tissue management, instead of referring them to a periodontal specialist. Also, most of periodontal disease symptoms are noticed at the later stages, at which periods the general dentists refer them to periodontists. Such patients may not get benefit, since their periodontium become compromised & deteriorated.

In addition, most of signs of advanced periodontal disease destructions (such as evident probing pocket depths without notable overlaying gingival tissue inflammation, some teeth migrations and some radiographic signs) need careful examination, education and training in order to be discovered and to refer patients in suitable times without delay.

Thus, need of hour from general dental practitioners is to become able to recognize periodontal disease early, examine periodontium routinely and basically as mandatory to all teeth and refer cases to specialist in suitable times for different diseased stages, so that services rendered by periodontist will be more effective and beneficial to patients.

Therefore, more continuing education programs on periodontal disease progression, its consequences and treatment outcomes at various stages of disease should be conducted, so as to positively change referral patterns done by general dentists.

In conclusion, referrals to periodontists may not be based on uniform standards. Some general dentists may not aware when to refer certain cases and considerable variations existed among them. They should be aware of importance of periodontal treatment without delay and should be encouraged to receive some arranged protocols for periodontal therapy that integrate important nonsurgical periodontal techniques.

Audience Take Away

- In case of the audience as GDP ---- will be able to use certain continuing education programs to increase their knowledge to recognize periodontal disease early, examine periodontiumroutinely and basicallyto all teeth and refer cases to specialist in suitable times.
- In case of the audience as periodontal specialist ---- This accurate referral in specific times will help specialists to make delicate periodontal interventions and maintenance care in perfect manners for the sake of their patients.
- Emerging concept of speciality, the patient will appreciate general dentist diagnosisof periodontal condition at an early stage and will be more pleased to be under specialist care. Moreover, services rendered by periodontist will be more effective, thus getting more benefits, better service and more confidence to the patient.

- other faculty could use this research to expand their knowledge of teaching general dental practitioners by planning certain specific programs & meetings. This can provide a practical solution to the problem of delayed referral & missing benefits to patients. This will also provide new information, assisting in solving the problem and improving the accuracy of the intended treatment to reach efficiency.

Biography

Prof. Belal MH, BDS, MSc (Egypt), PhD (Japan) is clinical professor, Periodontology, Oral Medicine & Oral Diagnosis, Faculty of Dentistry; Damanhour University; Egypt. His Ph.D. degree from Tanta University, Egypt; & Tokyo Medical & Dental University, Tokyo, Japan (2003~2005).He works as Editorial Board Member, Reviewer in International Journals; & reviewer for supreme council of Egyptian universities. He worked as general supervisor for post graduate students, Faculty of Dentistry, Kafr-Elsheikh University, Egypt (2023); & head of Medical committee, Damanhour University, Egypt (2020-2023). He is member of Egyptian Dental Association. He published many research articles in several international & local Journals.



Natsuko Uchino, Ph.D.

Natsuko Uchino, orthodontist, the University of Tokyo hospital, Japan

Cleft lip and palate treatment in Japan

The incidence rate of cleft lip and palate in Japan is approximately one in 500 people. In this presentation, I would like to explain the comprehensive team-based medical care for cleft lip and palate treatment at the University of Tokyo Hospital, where I am affiliated. Our department includes oral surgeons, orthodontists, prosthodontists, speech-language pathologists, dental technicians, dental hygienists, and nurses. We work in close collaboration with these diverse professionals to provide comprehensive care for patients with cleft lip and palate. I will now explain the specific treatment procedures.First, prenatal diagnosis may be performed. After birth, lip repair surgery is performed at 3 months of age, and palate repair surgery is performed around 1.5 years of age. Mandibular bone grafting is typically performed before school age or during the eruption of the canine teeth. If necessary, orthodontic Phase I treatment is performed during elementary school. Specifically, if the maxillary canine teeth are likely to resorb the incisors, a windowing and traction procedure is performed on the canine teeth. However, at our hospital, we strive to perform only the minimum necessary treatment. Therefore, the proportion of patients undergoing orthodontic Phase I treatment may be lower than at other hospitals. Orthodontic treatment phase II is performed after the age of 14. In cases of significant jaw disharmony, orthognathic surgery may be employed. Final lip and nose correction surgery is performed after completion of orthodontic treatment. We conduct surveys to gather patient feedback on treatment outcomes and strive to continuously improve patient satisfaction. We collaborate with other facilities in Japan that perform cleft lip and palate treatment through joint studies and seminars to enhance the quality of care provided.

Audience take away from your presentation:

- Learn about team-based medical care for cleft lip and palate in Japan.
- You will learn about the minimal, efficient treatment process for cleft lip and palate. In addition, patient questionnaires enable us to obtain feedback on an ongoing basis.

Biography

Education:2002 Graduated from the Department of Dentistry, Tokyo University of Science (formerly Tokyo Medical and Dental University)

2020: ned a Ph.D. in Plastic Surgery from Saitama Medical University

Work Experience: 2002 Joined the Department of Oral and Maxillofacial Surgery and Orthodontics at the University of Tokyo

Current Position: Assistant Professor

Qualifications:

- Certified Orthodontist by the Japanese Society of Adult Orthodontics
- Certified Instructor by Japanese Cleft Palate Association

Research interests: Orthodontics

designer's job more efficient? Will it improve the accuracy of a design, or provide new information to assist

in a design problem? List all other benefits.

You will learn about the minimal, efficient treatment process for cleft lip and palate. In addition, patient questionnaires enable us to obtain feedback on an ongoing basis.

Biography:

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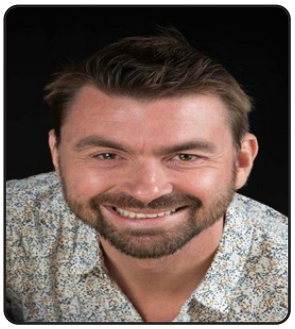
No. of published articles and Journals information 4

Uchino, Natsuko, Hoshi, Kazuto, Takato, Tsuyoshi, Okayasu, Mari, Saijo, Hideto, Nakatsuka, Takashi, Ohkubo, Kazumi. Follow-up study of nasal deformity in cleft lip and palate patients: morphological changes and image analysis with growth. Oral Sci Int. 2020 Aug; 18(1): 62-72



Philippe Boitelle

Lille University, France

Posterior cantilever ceramic bridges: What about today?

In Europe, the loss of a single molar or premolaris one of the mostcommonclinical situations in adults. Traditionally, implant-supported crowns have been the gold standard fixed solution, but theyremaincostly, invasive, and prone to long-term complications such as peri-implantitis, boneresorption, and, more rarely, implant fractures. These challenges are particularlysignificant in elderly, dependent, or polymedicated patients.

PosteriorCantilevered Single-Retainer All-CeramicResin-BondedFixed Dental Prostheses (PC-RBFDPs) have recentlyemerged as a minimally invasive, more affordable, and reversible alternative. By requiringonly minimal enamelpreparation, theypreservebothbone and periodontal tissues, avoidsurgical intervention, and alignwith a philosophy of responsible, minimally invasive dentistry. Clinicalseries over the pastdecade report survival rates above 90% at five years, but the literaturestill shows discrepanciesregardingwing design, choice of materials (translucentzirconia, disilicate, hybrid composites), and adhesiveprotocols. Large-scalerandomizedmulticenter trials and cost-effectiveness analyses are stilllacking.

Our collaborative research program, led by Inserm UMR 1333 – Oral Health, Université de Paris, and the FixedProsthodonticsResearch Group, Université de Genève, focuses on three main challenges: biomechanical design of retentivewings, pre-clinical and clinical validation of protocols, and educationaltransfer to practitioners. This lecture willpresentourprogress in mapping the relationshipbetween design, biomechanicalconstraints, and clinical performance of PC-RBFDPs. The aimis to providedecision-making matrices (winggeometry, materials, adhesionprotocols), reducecurrentvariability in practice, and developfiniteelementmodelscorrelatedwithmulticenterclinical observations—setting a reference for otherminimally invasive adhesiveprostheses.

Biography

Philippe Boitelleis Professor of Prosthodontics and HospitalPractitioner at the Faculty of Dentistry, University of Lille, and Lille UniversityHospital. He holds a PhD in Dentistry (Université Paris 13) and an HDR (Université de Lille). Hisresearchfocuses on biomaterials and oral health technologies within INSERM–UMR 1333, with collaborations at the University of Geneva. Prof. Boitelle has extensive experience in academic leadership, researchdissemination, and international scientific collaboration. Prof. Boitellewasawarded the 2006 Pierre Fauchard AcademyFoundationAnnualScholarship (New York, USA). He has ledbothhospital and academicdepartments, managing a major teaching unit at the Faculty of Dentistry of Lille (650 students, 25 staff). He has chairedscientific associations, contributed to national scientificcommittees, and organizedacademic and professionalevents. Hisnumerous national and international communications, both oral and poster, highlighthiscommitment to advancingprosthodonticresearch, knowledgedissemination, and academic networking.



Sohum Pandya

Birmingham Dental Hospital, United Kingdom

Immunobullous crossroads: Navigating serological overlap between pemphigus and pemphigoid without paraneoplastic autoimmune multiorgan syndrome

We present a rare case of an autoimmune blistering disease with serological features of both pemphigus vulgaris (PV) and mucous membrane pemphigoid (MMP), in the absence of paraneoplastic autoimmune multiorgan syndrome (PAMS). A XX aged patient presented with painful oral erosions (desquamative gingivitis, and cutaneous erosions). Clinically, the distribution and morphology of lesions were consistent with PV.

Histopathology of a lesional biopsy showed (suprabasal acantholysis with acantholytic keratinocytes, while direct immunofluorescence (DIF) demonstrated intercellular IgG deposition throughout the epithelium, confirming a diagnosis of pemphigus). However, serological testing via ELISA revealed high titres of anti-desmoglein-3 (Dsg3) antibodies, along with positive anti-BP180 antibodies, raising the possibility of a concurrent pemphigoid process. No linear IgG or C3 deposition was observed along the basement membrane zone on DIF, and there was no subepithelialclefting histologically, suggesting against MMP.

Given the dual serological profile, PAMS was considered. Indirect immunofluorescence on rat bladder epithelium and immunoblotting for envoplakin and periplakin were performed, but all results were negative. Comprehensive malignancy screening clinically was also unremarkable. Hence a fully body CT scan was necessary.

The presence of autoantibodies targeting both desmosomal and hemidesmosomal antigens in the absence of clinical or histologic features of pemphigoid or PAMS may suggests epitope spreading as a likely underlying mechanism. Chronic mucosal inflammation may have led to exposure of normally sequestered basement membrane zone antigens, resulting in a broadened autoimmune response.

The patient responded well to systemic immunosuppressive therapy, with no progression to a pemphigoid phenotype over time. This case highlights the diagnostic complexity of autoimmune blistering diseases and emphasises the need for integrated clinical, histological, and immunological assessment and multidisciplinary approach. Further research is needed to understand the significance and long-term implications of overlapping autoantibody profiles in these disorders and biomechanisms underpinning cases like this.

Biography

Dr Sohum Pandya is a Dental Core Trainee (DCT3) in Oral Surgery, Oral Medicine, and Sedation at Birmingham Dental Hospital, UK. He has previously worked in Oral and Maxillofacial Surgery (OMFS) and has gained broad clinical experience across the UK, including posts in Manchester, London, and Birmingham. His professional interests include oral surgery and oral medicine, with a particular focus on developing strong clinical foundations alongside involvement in research. Through training across multiple centres, he has developed a wide-ranging perspective on patient care within both primary secondary care settings.



SurenaVahabi*, Zahra Yadegari, SamanehPournaghi
Departments of Periodontics, School of Dentistry, Shahid Beheshti University of Medical Sciences, Tehran, Iran

The comparison of the salivary concentration of interleukin 17 and interleukin 18 in patients with chronic periodontitis and healthy individuals

Background: Regarding the prevalence and importance of periodontal disease and the potential of salivary biomarkers for the early diagnosis of these diseases, this study was conducted to compare salivary concentrations of Interleukin-17 (IL-17) and Interleukin-18 (IL-18) in patients with chronic periodontitis and healthy individuals.

Materials and Methods: The present research was a descriptive–analytical and also a cross-sectional study. Unstimulated saliva with full-mouth clinical periodontal recordings were obtained from 20 healthy individuals and 20 individuals with chronic periodontitis. The concentrations of salivary IL-17 and IL-18 were determined using the enzyme-linked immunosorbent assays. The nonparametric Mann–Whitney U-test was used for statistical analysis of the findings Alpha level was set at 0.05.

Results: The mean salivary concentration of IL-18 in patients with chronic periodontitis was 143.10 pg/mL, which was higher than the same concentration in healthy controls (78.33 pg/mL), (P = 0.035). The mean salivary concentration of IL-17 in patients with chronic periodontitis and healthy controls was 3.51 and 4.57 pg/mL, respectively, and there was no difference between the two groups (P = 0.283)

Conclusion: Within the limitations of the present study, it may be suggested that an elevated salivaryIL-18 level in chronic periodontitis patients has the potential to be a biomarker for periodontal tissue destruction.



SurenaVahabi*, Zahra Yadegari, SamanehPournaghi
SBMU, Iran, Islamic Republic of

Adhesion of osteoblastlike cells and human gingival fibroblasts to GBR membranes with and without activated PRF

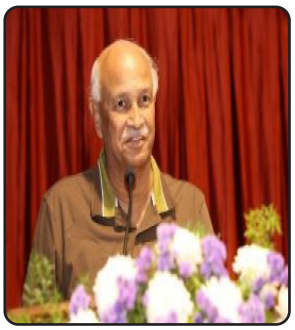
Background: Regeneration of periodontal tissues is affected by the biological and morphological characteristics of the membrane surface.

Objective: The current study evaluated the adhesion of human gingival fibroblasts (HGF) and MG-63 osteoblast-like cells to Membranes, with and without activated PRP.

Materials and Methods: the line of human gingival fibroblast cells and MG-63 osteoblast-like cells were first prepared and cultured on three types of membranes, including Jason, CenoMembrane and TXT-200 in three groups (FBS 10%, FBS 0.5% and activated PRP). Cell viability was investigated by MTT assay and electron microscopy (SEM) was used to evaluate the cell morphology and adhesion on these membranes after 24 and 72 hours. Two-way ANOVA was carried out at the significance level of 0.05.

Results: The highest adhesion in the 10% FBS group for HGF and The MG-63 osteoblast-like cells was observed to the Jason membrane during 24h and 72h ($P<0.05$). However, there were no significant differences among the three membranes in PRP and FBS groups for HGF during 24h and for MG-63 cells during 72h. ($P> 0.05$).

Conclusions: Activated PRP had a positive effect on the viability and adhesion of both human gingival fibroblasts and osteoblast-like cells as compared to the FBS 0.5% group, but these effects were not as 10% FBS group. The results also showed that Jason membrane had the highest amount of cell viability and adhesion.



T.R.Gururaja Rao

Retd Dean Bangalore University, India

Oral cancer - Indian perspective 2026

Oral cancer in India in 2025 remains a critical health crisis, accounting for roughly one-third of global cases with around 60,000–77,000 new cases annually. Driven primarily by tobacco (smoking/smokeless) and gutka, this cancer affects a younger population in India, with high mortality rates (over 5 deaths/hour) and frequent late-stage presentation.

Key Findings on Oral Cancer in India (2025):

- High Burden & Risk Factors: India has the highest incidence of oral cancer globally. Key risk factors include smokeless tobacco (gutka), smoking, betel quid chewing, and alcohol.
- Rising Incidence & Younger Patients: Oral cancer accounts for roughly 40% of all cancers in India. Notably, Indian patients are diagnosed at a much younger age compared to Western populations.
- Genetic Susceptibility: A major 2025 study (TMC, Mumbai) discovered that specific genetic markers explain why some tobacco users in India develop oral cancer nearly a decade earlier than others.
- Regional Variations & Gender: The disease is more prevalent in men (11.6 per 100,000) compared to women (5.4 per 100,000 in TN, 2025). High-burden areas include Uttar Pradesh, Bihar, and Northeastern states.
- Advanced Stage Presentation: Many cases are detected late, resulting in poor outcomes.

Prevention & Control: Experts highlight the need for stronger enforcement.

Biography

Dr. T. R. Gururaja Rao had an exemplary academic career, having done his BDS from Government Dental College and Hospital, Nagpur, in 1972, as a first-batch student. He was awarded the prestigious Commonwealth Senior Medical Scholarship tenable at the Department of Oral Pathology, Dental School, London Hospital Medical College, London, in 1984. He was awarded the Master of Science in oral pathology in 1984 from the University of London under Prof Newell Johnson and Prof D. W. Williams. In fact, he was offered to continue his research in porphyromonas for PhD. Dr. Gururaja Rao was the president of Indian Association of Oral and Maxillofacial Pathologists, Indian Society of Periodontology, International Association of Dental Research and Vice President of the Head Office, Indian Dental Association. He has authored three books "The Comprehensive Textbook of Periodontology", "The Textbook of Community Dentistry" & "A Chapter for General and Oral Pathology for Dental Hygienists".



Vanishree B K, MDS
Pediatric and Preventive Dentistry at M A Rangoonawala College of Dental Sciences, Pune, Maharashtra, India

Comparative evaluation of micro hardness and compressive strength and EDAX of bio flex crown, zirconia crown and stainless steel crown- An invitro study

In vitro study was carried out at the Private Dental Materials Research Centre in Pune. Total 60 preformed crowns of second primary mandibular molar different commercial brands (a total of 180 crowns) are 3M Stainless Steel (SSCs) Primary Molar Crowns (ESPE,St.Paul,USA);Nusmile zirconia (Inc.,Houston,TX,USA);and Bioflex Kid-e-dental crowns (India) were evaluated in this study. Teeth were washed and stored insaline water. Then these extracted molars were mounted in an acrylic resinblock,followedbytoothpreparationaccordingtocrownmanufacturerguidelines, and crowns were filled with Plus Resin Modified Glass IonomerCement(3M EspeRelyxLuting 2) andcementedon the tooth. To perform microhardness tests, the specimens were mounted horizontally with the mesial surface upward to give the indenter the best possible smooth level.For compressive strength, the epoxy resin dye used to make specimens and were installedintheuniversaltestingmachine(ACMEEngineers,India.,Model). EDAX is an analytical method used for the analysis of the chemical characteristics ofa specimen. Crowns from each group (SSCs, ZCs, and BFC) were used to determinethe weight and percent of elements in the crowns. The investigation was performed byanalyzing energy dispersive X-ray spectroscopy and scanning electron microscopy(SEM), and the images were taken. All analyses were made at the central area of theocclusal surfaceof thecrowns. Zirconia possess the highest and most consistent microhardness, followed by SSCs, with Bioflex being significantly softer and more variable in hardness.Stainless Steel crowns exhibit the highest mean compressive strength, followed by Bio flex crowns and then Zirconia crowns. The only common element is aluminum, with Zirconia containing 0.22%, SSCs containing 2.31%, and Bioflex containing 0.23% by EDAX analytical method.

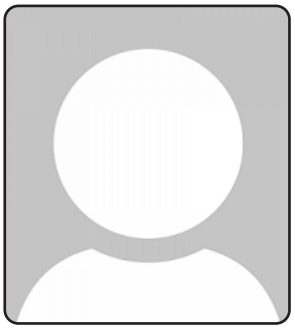
Audience Take Away

- The study provides valuable insights into the performance characteristics of SSCs, zirconia, and Bioflex crowns, helping clinicians make informed decisions based on the specific needs and conditions of their pediatric patients.
- Understanding the hardness and compressive strength of different crown materials helps in choosing the right crown based on the anticipated functional load and patient-specific factors, ensuring long-term success and durability.
- Based on the study results, if aesthetic concerns are a priority, Bioflex is a better choice as it requires moderate preparation, whereas zirconia requires more aggressive preparation. Zirconia crowns exhibited the highest microhardness, suggesting superior resistance to wear and deformation. This makes zirconia an excellent choice for patients with high masticatory forces or those who requiredurable restorations.
- The study's findings pave the way for further research into the development ofnew dental crown materials and techniques, aiming to improve clinicaloutcomes and patient satisfaction in pediatric dentistry.

Biography

DrVanishree B K, Professor and Research guide in Pediatric and Preventive Dentistry at M. A. Rangoonawala College of Dental Sciences and Research Centre, Pune, Maharashtra, India. She has a teaching experience of 10 years to BDS and MDS students. She has Publication in various reputed indexed National and International Journals (25 Publication) and also has 4 patents and copyrights under name reflecting her innovative approach and commitment to advancing Dental Science (Formulation of mouthwash with ethanol extract of menthe arvensis- The patent office journal No. 13/2021, Smart Pain Relief Mouthguard- Patient Design no: 421641-001, Copyright Reg No: L-153061/2024, Advanced Fluoride Application Device for Pediatric Dentistry. Design no:425556-001and Implant Surface Modification Apparatus for Enhancing Osseointegration- Patient Design no: 426290-001). she is a certified reviewer in various journals and books (South Asian Journal of Research in Microbiology, International Journal of TROPICAL DISEASE & Health, International journal of research and reports in dentistry, Asian Journal of Medicine, Journal of Oral Biology and Craniofacial Research, International Journal of Pathogen Research,

Asian Journal of Biotechnology and Bioresource Technology and Health and B. P International Book).She is a Reviewer Board Member of Medicon Dental Sciences Journal from Medicon Open Access International Library and Editorial Board Member of American Journal of Health Research (AJHR) ISSN Online: 2330-8796; ISSN Print: 2330-8788, Member for scrutiny of research from MUHS, Member of the Research Expert Committee for Continuous Evaluation of Research Project from MUHS and also awarded as International excellence award in research and development for research-based writing, Outstanding Pediatric and Preventive Dentistry researchers – Global Outreach dental award and Certified Excellence reviewer of South Asian Journal of Microbiology and International Journal of TROPICAL DISEASE & Health. She has attended several national and international scientific conferences, presented her research work and has been awarded with best poster.



Vanessa Mordi, Charles Goodmaker, Harriet Thorpe, Narbeh Moridians, Mr Rishi Bhandari
Clinical Oral Surgery and Oral and Maxillofacial Surgery Fellow
Speciality Registrar in Oral and Maxillofacial Surgery
Dental Core Trainee in Oral and Maxillofacial Surgery
Consultant in Oral and Maxillofacial Surgery

Evaluating the outcomes of oral biopsies in royal london hospital; A service evaluation project

ROral biopsy procedures are the gold standard for diagnosing oral mucosal pathologies and the efficiency of oral biopsies has a direct impact on treatment outcomes. The oral biopsy service at the Royal London Hospital is delivered across multiple departments by clinicians with varying levels of experience. The Oral Medicine (OM), Oral Surgery (OS), and Oral and Maxillofacial Surgery (OMFS) departments collectively manage both internal and external referrals across East London.
The purpose of this service evaluation project is to evaluate the quality and efficiency of this oral biopsy service provision with a focus on concordance between provisional and definitive histological diagnoses, as well as the frequency of inconclusive biopsy results and the underlying etiology contributing to these outcomes.
Materials and Methods:
A retrospective analysis was conducted from a dataset of 111 biopsy cases performed between January and June 2025 across the OM, OS, and OMFS departments at the Royal London Hospital. Cases were independently reviewed by three clinicians. Data collected was recorded in a standardized Excel spreadsheet and analyzed descriptively. It included provisional and differential diagnoses, final histological diagnosis, outcome (conclusive vs inconclusive), reasons for inconclusive results, requirement for repeat biopsy, biopsy technique, patient demographics, referral pathway (including two-week wait status), operator grade, department, and quality of clinical documentation in the histology request form and inclusion of clinical photographs to clarify the biopsy site.
Concordance was defined as the histological diagnosis falling within the recorded clinical differential, assessed by semantic comparison of diagnostic terms. A biopsy was considered conclusive if a definitive diagnosis was achieved from the specimen.
Results:
Regarding the distribution of biopsies, 54% were performed by OM, 27% by OMFS, and 19% by OS. Approximately one-quarter of cases were referred via the two-week wait pathway.The most frequent biopsy technique undertaken was the incisional punch biopsy (38.7%), followed by the incisional scalpel biopsy (36%) and the excisional scalpel biopsy (19.8%). In 5% of cases, the biopsy technique utilized was not explicitly documented. The most common anatomical sites were the buccal mucosa and tongue.Overall, 97.3% of biopsies were conclusive with 2.7% yielding inconclusive outcomes due to inadequate tissue sampling. One sample was found to be 'devoid of surface mucosal epithelium', another had 'superficial tissue only' in addition to another sample showing high-risk features of squamous cell carcinoma being inconclusive due to insufficient depth to confirm stromal invasion. All these cases required a repeat biopsy. Roughly two-thirds of cases demonstrated concordance between the provisional or differential diagnosis and the definitive diagnosis. Approximately two-thirds of cases demonstrated concordance between provisional or differential diagnoses and definitive histological outcomes.In terms of documentation quality, 64.9% of cases included complete clinical details on the histology request form, 29.6% included partial details, and 5.6% contained no clinical information. Clinical photographs of the biopsy site were available in 33.6% of cases.
Conclusions:

This service evaluation highlights some strengths and areas for improvement in the oral biopsy service. The principle finding of a low inconclusive rate (less than 3%) is reassuring but a recurring pattern of biopsied specimens of insufficient depth suggest further training on biopsy technique may be required to achieve deeperrobust specimens. The concordance rate of 60.9% should also be interpreted with caution because it did not account for related entities that causes no changes in management – i.e lichen planus listed clinically but lichenoid or verrucous reaction reported histologically. This service evaluation has driven a quality improvement project targeting deficiencies in clinician training and documentation associated with biopsy procedures, including the routine inclusion of clinical photographs.

The audience take from this talk (Main Takeaways):

- Clear identification of factors affecting biopsy accuracy
- The audience will recognize that inadequate tissue depth is a key, preventable cause of inconclusive results, reinforcing the importance of precise biopsy technique to improve diagnostic yield.
- Emphasizing the importance of good clinical documentation quality and inclusion of clinical photographs in biopsy procedures
- The audience will understand that incomplete clinical information and lack of clinical photography can compromise histopathological interpretation, lead to medicolegal implications, and perpetuate poor record keeping practices, highlighting the need for consistently high-quality documentation.
- Reinforcement of the limitations of clinical diagnosis alone
- The moderate concordance observed underscores the critical role of histopathology in establishing definitive diagnosis.
- Actionable, low-burden improvements to clinical practice
- The presentation outlines practical, immediately implementable changes—optimizing biopsy technique and standardizing documentation and clinical photography—that can enhance diagnostic accuracy and service efficiency.
- A transferable model for quality improvement and service evaluation
- This work provides a reproducible framework that can be adopted by other clinicians and departments to identify areas requiring improvement by means of a service evaluation project, interpret findings and implement a quality improvement project.

Biography

Vanessa Mordi graduated from Trinity College Dublin in Ireland in 2022 with a first classhonours degree. Following her graduation, she gained valuable experience working in private general practice for two years during which she completed her professional postgraduate examinations. In 2024, she made the bold move to relocate to the United Kingdom to specialty training- completing her first dental core training year in St. Richard's Hospital. Following this, she assumed a clinical fellow position in Royal London Hospital with the Oral Surgery and Oral and Maxillofacial departments where she initiated this service evaluation project with guidance from academic specialty registrar Dr. Charles Goodmaker.



Yuxin Qian[1]*, Lei Jin[2]
[1]Nanjing Medical University
[2]The Second Affiliated Hospital Zhejiang University School of Medicine, China

Engineered exosome liposome nanovesicles enable car macrophage therapy for radiotherapy induced oral mucositis

Radiotherapy-induced oral mucositis (RTOM) remains one of the most debilitating complications in patients receiving head and neck radiotherapy. Nearly all patients develop painful oral ulcers, leading to impaired nutrition, increased infection risk, and interruption of cancer treatment. Current therapies, including rinses, analgesics, and epithelial repair agents, are largely palliative and fail to address the underlying mechanism of persistent inflammation.

Our study identifies extracellular calreticulin (CRT), exposed during radiation-induced immunogenic cell death, as a key driver of unresolved inflammation. Inefficient clearance of CRT-positive dying cells leads to chronic immune activation and impaired mucosal repair. We hypothesized that engineering macrophages with a CRT-targeting chimeric antigen receptor (CAR) could enhance efferocytosis, resolve inflammation, and promote mucosal healing.

We first established in vitro and in vivo RTOM models to confirm CRT exposure and its association with inflammatory imbalance. We then fabricated hybrid liposome–exosome nanovesicles (HLENs-CAR) that efficiently delivered a CRT-targeting CAR plasmid into macrophages. These artificial exosomes retained the transfection efficiency of cationic liposomes while providing improved biocompatibility. Functionally, CAR-macrophages displayed enhanced phagocytosis and activation of the IL-4/Gas6/STAT6 pathway, promoting pro-resolving phenotypes.

To achieve localized release, we embedded HLENs-CAR into a ROS-responsive microneedle hydrogel system (PT MN@ HLENs-CAR). This platform degraded rapidly under oxidative stress, releasing the therapeutic vesicles at the injury site. In RTOM mouse models, the microneedle treatment reduced ROS levels, shifted macrophages from M1 to M2, and accelerated mucosal healing.

This work demonstrates a mechanism-driven, localized therapy for RTOM. By targeting CRT with engineered macrophages delivered via ROS-responsive microneedles, we provide a novel therapeutic concept with strong translational potential for managing radiotherapy complications.

Audience Take Away

- Mechanistic insight into extracellular calreticulin (CRT) as a driver of persistent inflammation in radiation-induced oral mucositis.
- A demonstration that hybrid liposome–exosome nanovesicles (HLENs) can efficiently deliver CAR plasmids while maintaining the transfection capacity of cationic liposomes.
- Proof-of-concept that a ROS-responsive microneedle hydrogel system enables localized, inflammation-triggered release of engineered vesicles.
- A translational framework for a mechanism-based, localized therapeutic strategy against RTOM.

Biography

Yuxin Qian is a Ph.D. candidate at Nanjing Medical University under the mentorship of Prof. Lei Jin. Her research focuses on the development of biomaterial-based therapies for radiation-induced tissue injuries, particularly oral mucositis. She has published in peer-reviewed journals on biomaterials for oral tissue repair, and immunomodulation strategies. Her current work integrates engineered exosomes, CAR-macrophages, and microneedle delivery systems to provide novel therapeutic approaches for translational medicine.



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POSTER SESSIONS





Aviv Shachi[1], Patrick G. Corr, Ed.D., MPH, M.Ed., AFAMEE[2]

[1]The George Washington University Milken Institute School of Public Health, United States

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College stress & oral health: Gender differences in undergraduate dental habits

College students face persistent academic and personal stressors that influence health behaviors and help-seeking practices. While much research exists exploring the relationship between stress and physical and mental health outcomes, little research specifically examines its effect on oral health. This study examined oral health behaviors, stress, and changes in habits between men and women aged 18-25 on American college campuses.

Using an anonymous online survey, we collected data from 81 college students (26 men, 55 women) on perceived stress levels, oral health behaviors (brushing, flossing, self-rated oral health), and behavior changes during periods of high stress, such as midterms and final examinations. Descriptive statistics and comparative analyses were conducted in SPSS to identify trends and examine differences by gender, major, and year of study.

Participants reported moderate to high levels of stress, with 67.6% indicating that they often or always felt overwhelmed, and 78.8% reporting that their stress increased after entering college. Although most women reported brushing twice a day, 40% of all respondents reported never flossing, and only 27.5% reported flossing regularly. More than half of participants (56.3%) reported skipping brushing or flossing at least sometimes during periods of high stress, particularly during midterms (27.5%) and finals (33.8%), when academic pressure was highest. Despite these behaviors, 63.7% of respondents still rated their oral hygiene as "good," indicating a disconnect between perceived and actual oral health practices. Interestingly, men reported worse oral health habits during periods of high stress and correspondingly lower health outcomes than their female counterparts. There were no statistically significant differences based on major or year of study. Notably, 88.8% of students reported not using campus health resources, and 3.8% were unaware they even existed, despite reporting high stress and disrupted oral hygiene.

The results of this survey study highlight an important disconnect between young adults' awareness of proper oral hygiene and present opportunities for dentists and other health practitioners to support and foster better oral health habits. Universities and health providers should take a more proactive role in supporting students' oral health during high-stress periods. Integrating oral health education into campus wellness programming, stress-management workshops, and student health services could help students recognize the link between stress and oral hygiene. Dentists and campus clinicians may also consider screening for stress-related oral symptoms during routine visits and offering prevention strategies. Simple interventions such as reminder-based hygiene tools, access to affordable dental supplies, and targeted messaging during midterms and finals could help mitigate lapses in oral care and reduce long-term oral health risks among college students.

Audience Take Away

- Understand the prevalence of stress among college students studying in the United States
- Discuss how oral hygiene habits are impacted by academic, personal, and workplace stress
- Differentiate between gender-based oral health practices
- Identify common early signs of deteriorating hygiene practices among young adults
- The results of this research may help dentists, educators, and public health practitioners to design health promotion strategies to address both positive, preventative oral hygiene and stress management amongst young adults.

- The results of this research can help practitioners identify individuals at heightened risk of poor dental outcomes associated with college enrollment (i.e., dentists providing care to young adults entering college can use the results of this study to recommend practical recommendations to their patients). Additionally, this research may encourage a further exploration of the role that stress and mental well-being have on the oral health outcomes of young adults, and encourage further and more comprehensive research into how stress can affect oral hygiene. Finally, the recommendations associated with this study represent low-cost, potentially high-impact targeted interventions to support college students and encourage positive oral care.

Biography

Aviv Shachi is an undergraduate student at the George Washington University's Milken Institute School of Public Health, where he studies public health on a pre-dental track. His academic interests center on the intersection of oral health, health equity, and population-level prevention. Through coursework, research, and clinical shadowing, he has explored how social, economic, and behavioral factors shape access to dental care and long-term health outcomes. His work aims to identify disparities and inform more targeted, preventive oral health strategies for young adults. Aviv plans to apply to dental school in the 2026 application cycle.



Eloise Turner*, Karan Patel, Aaron Chai, VlasiosOksteloglou

Bradford Royal Infirmary, United Kingdom.

Socioeconomic status and post operative outcomes in head and neck cancer surgery: A retrospective cohort study

Background: Socioeconomic deprivation is a well-established determinant of cancer incidence, stage at presentation, and long-term survival. However, its influence on short-term surgical outcomes in head and neck oncology remains unclear. As major resections with microvascular reconstruction carry significant peri-operative risk, understanding whether socioeconomic status affects early postoperative outcomes is essential for designing equitable surgical pathways. This study explores whether deprivation impacts complication rates, return to theatre, and length of stay within a publicly funded healthcare system where care is delivered independent of socioeconomic position.

Methods:A retrospective cohort study was conducted over 3.5 years at a single UK head and neck cancer centre. Demographic, clinical, behavioural, and peri-operative variables were collected alongside area-level socioeconomic indicators derived from the Index of Multiple Deprivation (IMD) and its subdomains. Postoperative complications were coded using predefined clinical criteria. Appropriate non-parametric and categorical statistical tests were used to assess associations between socioeconomic measures and postoperative outcomes.

Results: Across all major IMD domains, including income, employment, education, health and disability, and crime, socioeconomic deprivation was not associated with increased postoperative complications, flap failure, or return to theatre. Only the living environment domain showed a marginal association ($p = 0.049$), suggesting a possible but small effect of environmental conditions on early recovery. As expected, patients with complications experienced significantly longer hospital stays (median 20 vs 12 days, $p < 0.001$). No other socioeconomic domain demonstrated a significant relationship with adverse outcomes.

Conclusion: In this cohort, socioeconomic deprivation did not significantly influence short-term postoperative outcomes following major head and neck cancer surgery. These findings highlight the strength of equitable, standardised pathways within healthcare systems, where universal access and multidisciplinary peri-operative care appear to mitigate the socioeconomic gradients. The results suggest that when a system is genuinely built for equality, it is possible to achieve fair surgical outcomes across all socioeconomic groups. Subtle effects related to environmental deprivation warrant further study, as do potential long-term socioeconomic influences on recovery, rehabilitation, and quality of life.

Implications: This study reinforces the importance of incorporating socioeconomic context into surgical research while demonstrating the capacity of universal healthcare systems to deliver equitable early outcomes. Future multicentre work with larger cohorts and long-term follow-up is needed to better understand how socioeconomic disadvantage may shape recovery beyond the immediate postoperative period.

Biography

Dr Eloise Turner is a Dental Core Trainee (DCT2) currently working in Oral Surgery and Oral Medicine at Birmingham Dental Hospital, UK. She has previously worked in primary care within a dental practice in Bradford, alongside her role as a DCT1 in Oral and Maxillofacial Surgery (OMFS). Furthermore, she has gained experience working within the Paediatric Dentistry department at Leeds Dental Hospital. These roles have provided her with broad exposure across primary, secondary, and tertiary care settings. Her professional interests lie in oral surgery and oral medicine, with a strong enthusiasm for both clinical practice and research. She has a particular interest in the management of anxious patients and is committed to delivering patient-centred care, with a focus on clear communication and supportive treatment approaches. Through training across multiple departments and centres, she has developed a well-rounded perspective on the assessment and management of complex oral conditions, alongside a growing interest in academic and evidence-based aspects of oral healthcare.



Huang Nannan[1], Xiao Qian[2], Luo Jie[2], Jiang Jun[2], Kang Junliang [2], Fu Xiaoming[1*]

1.College of Stomatology, Chongqing Medical University 2.ChongqingJingmei Medical Technology Co., Ltd.

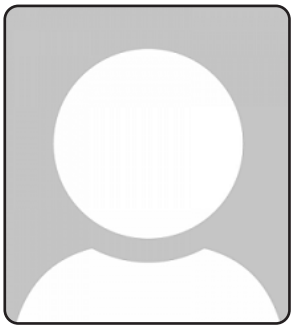
Application of digital simulation tooth extraction in design of full denture

Objective: To explore the feasibility of using technician-end simulated tooth extraction technology to achieve the design and fabrication of digital complete denture in advance. Methods: The technician collected the patients oral scan data, used CAD design software to simulate the patients intraoral condition after tooth extraction, and designed the complete denture according to the simulated model after tooth extraction.

Case: The patient retained only teeth 13,23,26, and 27 in the maxilla and teeth 33 and 43 in the mandible with poor condition of the abutment teeth. The plan was to perform extraction followed by full-mouth prosthodontic treatment. The patient requested that teeth remain in the mouth throughout the treatment. Therefore, the technician first collected digital intraoral information of the patient before extraction imported it into CAD design software to simulate extraction, and designed the treatment denture on the model after simulated extraction adjusting the patients occlusion. The design data were printed using 3D printing technology, and the treatment denture was completed after polishing. During the second visit after extractionthe patient wore the denture with tissue conditioner applied to the baseplate based on the actual intraoral condition, completing the treatment denture fitting.

Results: In this case, digital technology was employed to simulate the intraoral condition after tooth extraction. The design and fabrication of the prosthetic denture were completed prior to the extraction procedure. This approach enabled the patient to wear the denture post-extraction and undergo occlusal adjustment. Tissue adjusters were utilized to modify the contour of the retainer margins, protect the wound at the extraction site, and promote wound healing, thereby enhancing patient comfort.

Conclusion: Digital technology demonstrates significant efficacy in denture restoration therapy. The simulated tooth extraction technique accurately reconstructs intraoral conditions, streamlines procedural steps, and eliminates redundant scanning by technicians and repeated clinical mold-taking. Data from retained teeth also provides reference for subsequent tooth placement. This digital simulation enables immediate denture fitting post-extraction, promptly addressing patients aesthetic demands while substantially shortening treatment duration. It enhances patient comfort and satisfaction, minimizes occlusal impact on daily life, reduces repeat visits, alleviates physicians workload, and achieves efficient utilization of medical resources.



Gregory M. Boiczyk, Ph.D., MohammadmehdiNiroobakhsh, Ph.D., Jie Chen, Ph.D.

Purdue University, United States

Comparison of micro-CT derived bone mineral density values using longitudinal versus split-mouth controls

Introduction Micro-computed tomography (μCT) imaging is a critical tool in evaluating bone changes in accelerated tooth movement; however, the accuracy of measured bone mineral density (BMD) values is highly dependent on the imaging protocols used to track remodeling. Longitudinal study designs capture temporal changes within a specific region but are often limited by the reduced resolution and image quality inherent to repeated *in vivo* scanning. Split-mouth models offer a high-resolution *ex vivo* alternative by utilizing measurements from both an experimental tooth and a contralateral control tooth, yet the validity of using μCT-derived BMD measurements in a split-mouth model compared to a longitudinal baseline remains under-evaluated.

Methods In this work, orthodontic force was applied via a 20 cN coil spring attached between the left incisor and left maxillary first molar of four Wistar rats for 28 days. μCT scans were acquired at 35 μm/voxel resolution using a Bruker SkyScan 1176 immediately prior to insertion and after removal. BMD values were measured in the alveolar bone immediately anterior, posterior, lingual, and buccal to the anterior root from both pre-treatment (baseline) and post-treatment (experimental) scans, as well as from the anterior root of the contralateral molar in post-treatment scans (control). Methodological equivalence was assessed by comparing the BMD difference calculated via a longitudinal baseline (baseline minus experimental) against a split-mouth baseline (control minus experimental). Statistically significant differences between groups were evaluated using pairwise t-tests comparing the baseline and control, the baseline and experimental, and the control and experimental measurements.

Results The experimental group exhibited significant ($p < 0.05$) bone loss in all directions compared to pre-treatment baselines ($p < 0.0001$) and post-treatment controls ($p < 0.0001$). No statistically significant differences were observed between the baseline and the control (presented as Baseline vs. Control mean ± SD; p-value) in the anterior (1161.72 ± 134.26 vs. 1166.97 ± 117.40 HU; $p = 0.87$), posterior (1264.52 ± 186.88 vs. 1329.95 ± 114.61 HU; $p = 0.09$), or buccal (1185.98 ± 112.94 vs. 1128.45 ± 243.54 HU; $p = 0.24$) regions. In contrast, the lingual region exhibited a statistically significant difference between the baseline and control (1169.75 ± 161.46 vs. 1078.16 ± 80.56 HU; $p = 0.003$). Despite this, the calculated bone loss remained comparable; the split-mouth differences tracked the longitudinal differences (presented as Split-Mouth vs. Longitudinal mean ± SD) in the anterior (286.39 ± 248.10 vs. 281.14 ± 218.77 HU), posterior (586.21 ± 165.71 vs. 520.77 ± 218.10 HU), buccal (253.25 ± 283.48 vs. 344.85 ± 352.26 HU), and lingual (274.66 ± 307.94 vs. 332.19 ± 164.67 HU) regions.

Conclusion Our results demonstrate that μCT-derived baseline bone densities are comparable to contralateral control densities, suggesting that split-mouth models of orthodontic tooth movement yield results equivalent to longitudinal comparisons. Given this equivalence, investigators may utilize either split-mouth or longitudinal models depending on experimental constraints, with confidence that results remain comparable across study designs.

Audience Take Away

- The audience will learn about methods to quantify bone density changes in orthodontic tooth movement.
- The audience will learn that bone mineral density changes can be reliably quantified using split-mouth or longitudinal studies. This will help researchers develop studies of bone mineral density changes in orthodontic tooth movement as well as provide information which will help clinicians and researchers interpret and compare research using both split-mouth and longitudinal comparisons of bone density.

Biography:

Dr. Gregory Boiczyk is a Postdoctoral Researcher in the Dental Biomechanics Lab at Purdue University. His work is focused on accelerating orthodontic tooth movement, specifically through the application of vibrational forces. By integrating micro-CT imaging and finite element analysis, he evaluates alveolar bone remodeling and periodontal tissue response to mechanical stimuli. Dr. Boiczyk earned his Ph.D. in Biomedical Engineering from the University of Utah, where he characterized brain tissue mechanics for use in injury modeling. Ultimately, his research seeks to establish evidence-based protocols that effectively accelerate orthodontic tooth movement and reduce treatment duration.



Gustavo Feser Od. Ph.D. Esp

Periodontics Division, Faculty of Dentistry. National University of Rosario. Argentina.

Efficacy of apical microsurgery in persistent and recurrent lesions of anterior andposterior teeth. Reports of 30 cases in the medium and long term

Globally, dental caries has been identified as the most prevalent disease in permanent teeth. Periodontal diseases have also been a major contributing factor to this global prevalence. Pulp and apical diseases are now also considered highly recurrent in permanent teeth. Recent systematic reviews of meta-analyses from numerous studies revealed that 39% of teeth have undergone root canal treatment. These findings support the understanding that half of the world's adult population has at least one tooth with root canal treatment. Furthermore, the lack of timely treatment of dental caries leads to pulpitis and its progression to apical lesions. Apical lesions require root canal treatment if the tooth has not already undergone root canal treatment, or retreatment or surgical access if the tooth has undergone root canal treatment. The cases followed in this case report consisted of an adult population with teeth that had undergone successful endodontic treatment but presented with recurrent, unresolved apical lesions where endodontic retreatment was not possible due to the lack of coronal access. Apical microsurgery was performed with magnification and micro-access using manual and piezoelectric microsurgical instrumentation in anterior and posterior teeth. Retrograde obturation was used in all cases, and bone graft material was used in cases of significant lesion size. Clinical and radiographic follow-up was performed every 6 months for up to 5 years. The success rate of apical microsurgery was approximately 92% at both 2 and 5 years in the reported case series. Success was defined by the following criteria: clinical signs of apical health, radiographic signs of apical healing, absence of pain, and normal tooth function.

The audience take away from presentation:

Current therapeutic modalities for the treatment of periapical lesions

Biography:

Dentist graduated from the Faculty of Dentistry of the National University of Rosario in 1993.
Doctor in Dentistry from the National University of Rosario.
Professor of the Periodontics Chair of the Faculty of Dentistry of the National University of Rosario.
Researcher categorized III in the Secretary of Science and Technology of the National University of Rosario.
Member of the Examining Board of the Undergraduate Course of the Periodontics division. UNR.
Member of the Scientific Committee of the Periodontics Specialist Career of the Faculty of Dentistry. UNR.
Member and teacher of postgraduate courses in the Orthodontic Specialist career of the Faculty of Dentistry. UNR.
Former Director of the Department of Periodontics and Implants of the British Sanatorium. Rosario. Santa Fe.
Former president of the Periodontics and Implants Group of the Argentine Society of Dental Research.
External evaluator of SIGEVA CONICET University of Buenos Aires for Science and Technology Research projects.
Teacher and lecturer of courses in the Periodontics Residency of the Faculty of Dentistry. UNR.
Member of the steering committee of the Periodontology and Implants Group of the Argentine Society of Dental Research, Argentine division of the International Association of Dental Research.
Referee and evaluator of research papers presented at the Argentine Society of Dental Research.
Active member of the Argentine Society of Periodontology.



Maya Fahy
The Royal Victoria, United Kingdom

Early detection of bulimia nervosa in primary dental care

Background: Bulimia nervosa is a common psychiatric disorder, mainly affecting young women, which can cause serious medical complications. This includes adverse effects on oral health. Early diagnosis can lead to treatment referral and increased likelihood of recovery, improving overall mental and physical health and quality of life. Dental erosion is a common manifestation, amongst other extra-oral manifestations visible during a dental examination. If correctly identified, this could facilitate early diagnosis and signposting for appropriate treatment.

Objectives: To understand the relationship between bulimia nervosa and dental erosion. What is the evidence that bulimia nervosa increases the risk of dental erosion?

Method: Two databases were used to search for relevant scientific literature. Eleven studies were identified that compared the prevalence and severity of dental erosion in participants with bulimia nervosa who self-induced vomiting with control groups.

Results: Dental erosion was significantly more common and more severe in participants with bulimia nervosa than control. Distinct patterns of erosions were found, with the palatal surface of the maxillary central incisors most affected. No pattern of erosion was noted in the control group.

Conclusions: Bulimia nervosa with self-induced vomiting is a significant risk factor for dental erosion. Long history of vomiting is associated with more severe erosion. Preventative measures can reduce tooth surface loss following bouts of vomiting.

Audience Take Away

- To learn how to differentiate between erosion caused by food and drink versus vomiting.
- To identify extra-oral presentations of bulimia nervosa which will be detectable by a general dental practitioner.
- How to treat cases of dental erosion in primary care.
- To utilize screening tools to enable early diagnosis and signposting of patients suffering from bulimia nervosa.

Biography

My name is Maya Fahy, and I am currently a Dental Core Trainee 2 at the Royal Victoria, School of Dentistry in Queens. I have previously worked as a Dental Core Trainee 1 in oral and maxillofacial surgery in the Queen Victoria Hospital in East Grinsted. I am particularly interested in prevention and oral health education in order to not only improve oral health outcomes, but improvements in their general health. I would like to apply for specialty training in oral surgery, which maintaining an educational aspect to my career.



Naohiro Horie*, Kaoru Kusano, Kenji Yokozeki, Hiroki Nagayasu, Tsuyoshi Shimo, Masaru Murata

D.D.S., Ph.D.,Health Sciences University of Hokkaido, Japan

Improvement of quality of life using a splint for palatal perforation caused by self-injury

Among cases of self-injury in the oral and maxillofacial region, only one case with simultaneous nasal defect and palatal perforation was reported in 1978, making it extremely rare. The authors report on the treatment of a 67-year-old female patient who presented with nasal defect and palatal perforation as a result of self-injury.

The patient visited our department in 2006 with the chief complaint of food debris entering the nasal cavity due to a palatal perforation, accompanied by a nurse in a nursing care facility. The patient had a history of mental developmental delay and had been scratching the nasal cavity for over 30 years since the age of 27. Examination, including 3D-CT imaging, revealed nasal defects, crusting around the nasal area, a perforation in the central part of the palate (approximately 3 mm × 4 mm), and a palatal bone defect (approximately 28 mm × 24 mm).

As a treatment strategy, the authors choseto close the palatal perforation using a soft type of palate closure appliance (made of ethylene vinyl acetate resin, thickness: 3.0 mm) rather than surgical closure of the defect. An impression of the mucous membrane of the maxillary alveolar ridge including the perforation site was taken to fabricate the palatal closure plate, which was then fitted to the patient. Several feeding training sessions were conducted to confirm the acceptance of the palatal closure plate. Although, there was a tendency toward the enlargement of the perforation site (approximately 12 mm × 9 mm) in 2018, compared to the data in 2006, the patient's body weight increased by 4.0 kg, and BMI increased by 3.1. The patient and facility staff (caregivers, nurses) were satisfied with the effectiveness of the palatal closure device during meals. In 2024, the patient passed away at the age of 84.

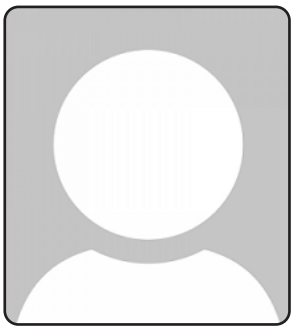
The use of the palatal closure device is considered to have contributed to improved nutritional status and reduced self-injury to the palate and nasal area in the residential facility for over 18 years.

Audience Take Away

- Insights into historically significant cases.
- The usefulness of treatment using a soft type of palate closure appliance.
- Recognition of the importance of multidisciplinary collaboration between medical professionals and care facility staff.

Biography

Dr. Naohiro Horie enrolled his Ph.D. degree in Oral Surgery from the Department of Surgery, Graduate School of Medicine, University of Tokyo, Tokyo, Japan in 2017. He currently works as an assistant professor at the Division of Reconstructive Surgery for Oral and Maxillofacial Region, School of Dentistry, HealthSciences University of Hokkaido. Besides, he is a part-time lecturer at the Graduate School of Dentistry, Tohoku University. From 2012 to 2013, he served as a clinical resident at the Department of Oral-Maxillofacial Surgery, Dentistry and Orthodontics, Faculty of Medicine University Hospital, University of Tokyo. From 2017 to 2021, he worked as a medical staff at the Department of Occlusal Restoration, Tohoku University Hospital, Sendai, Japan.



Naohiro Horie*, Kaoru Kusano, Kenji Yokozeki, Hiroki Nagayasu, Tsuyoshi Shimo, Masaru Murata

D.D.S., Ph.D.,Health Sciences University of Hokkaido, Japan

Impact of 2D versus 3D imaging on pre-implantological diagnostics in the posterior Jaw

Accurate radiological assessment is essential for safe dental implant placement and for the prevention of surgical complications. Reliable evaluation of the available bone volume and precise identification of anatomical structures are important prerequisites for predictable implant planning, particularly in the posterior regions of the jaws where anatomical conditions may be complex.

Panoramic radiography (orthopantomogram, OPG) is widely used as a standard imaging modality in implant dentistry. However, cone beam computed tomography (CBCT) allows three- dimensional visualization of anatomical structures and may therefore improve diagnostic accuracy and treatment planning.

The aim of this study was to evaluate the diagnostic impact of two-dimensional panoramic radiography compared with three-dimensional CBCT imaging in pre-implantological diagnostics of premolars and molars in the maxilla and mandible.

A retrospective analysis was performed including imaging data from 76 patients in whom both OPG and CBCT examinations were available for the same clinical situation. The vertical bone height was measured and compared between both imaging modalities. In addition, the visibility of clinically relevant anatomical structures, including the maxillary sinus, Schneiderian membrane, sinus septa, inferior alveolar nerve, and adjacent teeth, was assessed. Furthermore, treatment planning decisions based on each imaging modality were analyzed in order to determine whether the imaging method influenced the indication for implant placement or the need for additional procedures such as sinus floor elevation or bone augmentation.

The results showed that measurements of the available bone height revealed no relevant differences between OPG and CBCT in the maxilla. In contrast, notable deviations were observed in the mandible, where panoramic radiography tended to underestimate the available bone height compared with CBCT. Moreover, CBCT provided improved visualization of relevant anatomical structures. In particular, the Schneiderian membrane and sinus septa could be reliably assessed only with CBCT, whereas the inferior alveolar nerve was consistently identifiable in CBCT images but not always clearly visible in panoramic radiographs.

Within the limitations of this study, the results indicate that CBCT provides additional diagnostically relevant information for implant planning in the posterior jaw. Three-dimensional imaging improves the visualization of critical anatomical structures and may contribute to improved preoperative risk assessment, particularly in anatomically complex situations.

What will the audience take away from your presentation?

A clearer understanding of the diagnostic differences between panoramic radiography and CBCT in posterior implant planning.

Practical guidance on when two-dimensional imaging may be sufficient and when three- dimensional imaging provides additional clinical value.

Insights into how CBCT improves visualization of critical anatomical structures such as the inferior alveolar nerve and sinus anatomy.

Evidence-based considerations for selecting the appropriate imaging modality in routine implant dentistry. Improved awareness of imaging-related risk assessment in pre-implantological diagnostics.

Biography

Sebastian Galonska is a dentist in private practice in Seligenstadt, Germany. He studied dentistry at the Christian-Albrechts- University of Kiel and received his dental license in 2011. Prior to studying dentistry, he worked as a dental technician, which shaped his interest in prosthetic rehabilitation and implant- supported restorations. After several years as an associate dentist, he founded his own dental practice in 2019. He completed the Curriculum in Implantology of the German Society for Implantology (DGI). His research focuses on radiological diagnostics and evidence-based treatment planning in implant dentistry.



***Sebastian Rafael Galonska**

DDS-Private Dental Practice, Seligenstadt, Germany

Prof. Dr. med. Sebastian Fischer - Head of the Department of Radiology and Neuroradiology, Klinikum Siegen, Germany

Impact of 2D versus 3Dimagingon pre-implanto logical diagnostics in the posterior jaw

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The audience take away from presentation:

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Insights into how CBCT improves visualization of critical anatomical structuressuch astheinferior alveolar nerve and sinus anatomy.

Evidence-based considerations for selecting the appropriate imaging modality in routine implant dentistry. Improved awareness of imaging-related risk assessment in pre-implantological diagnostics.

Biography

Sebastian Galonska is a dentist in private practice in Seligenstadt, Germany. He studied dentistry at the Christian-Albrechts-University of Kiel and received his dental license in 2011. Prior to studying dentistry, he worked as a dental technician, which shaped his interest in prosthetic rehabilitation and implant- supported restorations. After severalyears asan associate dentist, hefounded hisowndental practicein 2019. He completed the Curriculum in Implantology of the German Society for Implantology (DGI). His research focuses on radiological diagnostic sand evidence-based treatment planning in implant dentistry.



Sohum Pandya

Birmingham Dental Hospital, United Kingdom

No block? no problem: Intraligamentary anaesthesia with a conventional syringe

Aim: This research/ audit assessed the efficacy of intraligamentary anaesthesia (ILA) using a conventional syringe for mandibular molar extractions and investigated the incidence of alveolar osteitis (dry socket). The potential impact of smoking on dry socket incidence was also explored.

Methods: A two-cycle retrospective audit was conducted involving 196 patients undergoing mandibular molar extractions under ILA. Anaesthetic was administered at six periodontal sites using articaine, lidocaine, or a combination. The first cycle examined ILA efficacy and dry socket incidence. The second cycle added smoking status (including cigarettes, e-cigarettes, and cannabis) to assess its correlation with dry socket. Efficacy was determined by the need for supplemental anaesthesia, and dry socket was assessed via follow-up calls.

Results: ILA was sufficient in 80-81% of cases across both cycles, with 15–16% requiring supplemental inferior dental blocks. Dry socket occurred in 15% of patients in the first cycle and 4% in the second. Of those with dry socket in the second cycle, 50% were smokers. Smoking prevalence among all patients was 27%.

Discussion: ILA using a conventional syringe demonstrated a comparable success rate (80–81%) to that reported for ILA with specialist syringes, suggesting it is a viable alternative in general dental settings. While the dry socket rate fell within the reported range (3.2–15.7%), findings suggest the association between smoking and increased risk. Limitations include sample size and retrospective design.

Conclusion: ILA with a conventional syringe is an effective anaesthetic technique for mandibular molar extractions and may not necessarily increase the dry socket rate when compare to existing literature. Smoking likely contributes to an increased risk of dry socket. Further research with a larger sample and prospective design is recommended to validate findings.

Biography

Dr Sohum Pandya is a Dental Core Trainee (DCT3) in Oral Surgery, Oral Medicine, and Sedation at Birmingham Dental Hospital, UK.He has previously worked in Oral and Maxillofacial Surgery (OMFS) and has gained broad clinical experience across the UK, includingposts in Manchester, London, and Birmingham. His professional interests include oral surgery and oral medicine, with a particular focuson developing strong clinical foundations alongside involvement in research. Through training across multiple centres, he has developed awide-ranging perspective on patient care within both primary secondary care settings.



Stanislav Vlasyuk

Dental Technician & Pharmacy Student, Ukraine

Application of PRF technologies in surgical dentistry and periodontal regeneration

Platelet-Rich Fibrin (PRF) is an autologous biomaterial derived from the patient's own blood, providing a natural and biologically active scaffold that accelerates tissue regeneration. PRF contains platelets, leukocytes, and growth factors including PDGF, TGF-β, VEGF, IGF, and EGF, which collectively enhance soft and hard tissue healing, reduce postoperative discomfort, and optimize clinical outcomes in oral surgery and periodontal therapy.

This presentation will detail the preparation protocols, handling techniques, and clinical applications of PRF, emphasizing its scientific rationale, procedural steps, and evidence from contemporary studies. Specific uses include tooth extraction, dental implant placement, sinus lift procedures, bone augmentation, and treatment of periodontal defects. Attendees will learn how PRF can improve gingival regeneration, support root coverage, reduce periodontal pockets, and strengthen soft tissue attachment.

By attending, dental professionals will acquire practical insights on integrating PRF into daily practice, optimizing healing, minimizing complications, and implementing biologically based, minimally invasive techniques. This session will provide evidence-based knowledge that researchers and clinicians can immediately apply, fostering innovation and improving patient care in both surgical and periodontal contexts.

The audience take away from presentation:

- Comprehensive understanding of PRF biology and mechanisms of action.
- Step-by-step guidance for PRF preparation and clinical implementation.
- Clear knowledge of indications, contraindications, and best practices.
- Evidence-based benefits for surgical and periodontal outcomes.
- Practical strategies to enhance tissue healing, patient satisfaction, and clinical efficiency.

Biography

Stanislav Vlasyuk is a multi-disciplinary student from Ukraine, studying both Dental Technology and Pharmacy. Passionate about regenerative dentistry and surgical innovations, he has conducted research on the application of autologous platelet-rich fibrin (PRF) to accelerate healing and improve outcomes in oral surgery and periodontal therapy. Stanislav is dedicated to combining scientific evidence with practical clinical solutions, advancing minimally invasive techniques, and promoting biologically based approaches in modern dental practice.

BOOK OF ABSTRACTS

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