

**June 19,
2024**

**Virtual
Event**

**International Conference on
Orthodontics & Dental Medicine**

**Theme “Harmonizing Contemporary Lifestyles with
Dental Trends for Radiant Smiles”**

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Supporting Journal



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Scitechseries offers a platform that is more inclusive and diverse, with researchers from the global North and the emerging South. A vast fraternity of budding researchers, experienced scholars, academicians, and seasonal professionals, join our conferences each year to deliberate on pure and applied Medical, Engineering, Technology, and Life Sciences research. We never deterred from adding emerging fields of research and our conferences spread across the destinations in Europe, Asia, the Middle East, the United States, and Canada.

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Our conferences extend exceptional benefits to emerging, experienced, and emeritus scholars in many ways. Join us for Networking, new project funding options, exploring new fields of scientific research, and unveiling successful formulas and solutions to promote your ideas.

Scope of the International Conference on Orthodontics and Dental Medicine:

Scitechseries is thrilled to extend a warm invitation to all individuals to the forthcoming “International Conference on Orthodontics and Dental Medicine” (Dental 2024), scheduled in June 19-20, 2024 (Webinar). Under the theme “Harmonizing Contemporary Lifestyles with Dental Trends for Radiant Smiles,” Dental 2024 aims to foster knowledge exchange, innovation, and collaboration in orthodontics and dental medicine, welcoming researchers, scientists, educators, healthcare practitioners, dentists, emerging scholars, industry leaders, innovators, developers, and students. The conference provides a platform for esteemed companies and institutions to showcase services, products, breakthroughs, novel concepts, research endeavors, and findings. It focuses on cutting-edge research, recent accomplishments, global developments, and innovative solutions to contemporary challenges in dental practices and patient care. Attendees will have the opportunity to network with peers, industry leaders, and experts, participate in skill-development workshops, and engage in interactive sessions, including webinars, Q&A sessions, and panel discussions. With distinguished speakers and a collaborative environment, Dental 2024 aims to drive global dental health forward. Join us to connect, learn, and contribute to the future of dental health, ensuring radiant smiles for all.

A close-up photograph of a dental professional's hands using a dental mirror and a probe to examine a dental model. The model shows a set of white teeth on a red gum base. The dental mirror is held in the left hand, reflecting the teeth, while the probe is held in the right hand, touching the teeth. The scene is framed by a large, curved blue and purple graphic element.

**KEYNOTE
PRESENTATIONS**



SEN LE
Eyes of AI
Australia

AI-Powered pathology detection: the future of medical diagnostics

Abstract:

Accurate pathology detection is crucial in dentistry, enabling disease identification and guiding treatment. However, conventional methods present limitations such as time-consuming processes, human error, and specialised training requirements. In this lecture, we explore the transformative potential of AI-powered pathology detection, showcasing groundbreaking solutions that enhance diagnostic accuracy and efficiency. A recent study by Schwendicke F et al. (2022) highlights the superiority of AI detection over human dentists. Leveraging machine learning algorithms, AI swiftly analyses X-rays to identify abnormalities that may go unnoticed. This empowers dentists to catch early signs of tooth decay or oral diseases. AI technology can also uncover unexpected yet significant issues, known as incidental findings. Untreated dental infections can lead to severe health problems, including jaw bone infections, brain abscesses, and systemic infections affecting vital organs. Delayed caries detection can result in pain, root canal treatment, or even tooth loss. According to the U.S. Centres for Disease Control and Prevention, nearly half of U.S. adults over the age of 30 show signs of gum disease. Research also shows that people with untreated tooth infections are 2.7 times more likely to have cardiovascular problems, such as coronary artery disease. Coronary artery disease is one of the leading causes of death globally (Oral Health Foundation). This is where AI plays a powerful part - Through a comprehensive 3D mapping of the entire mouth, early pathology and abnormality detection becomes possible. With AI technology, the evaluation process, which traditionally takes around 20 minutes, can now be accomplished within seconds. This allows clinicians to explore what lies beyond the capabilities of the human eye and to also save valuable time when analysing X-ray. To summarise, AI technology has the potential to revolutionise dentistry, providing reliable tools that save time, enhance imaging analysis, and improve patient outcomes.

Biography

Sen Le earned his Bachelor of Pharmacy and Bachelor of Dentistry degrees at the University of Sydney in 2003 and 2011. He received the Academic Excellence Scholarship Award and holds world-class certifications in implants and orthodontics. With over a decade of experience as a successful dental practitioner, Sen owns two thriving dental surgeries in Sydney, serving nearly 5000 patients annually. He specialises in oral pathology, passionately focusing on diagnosing and treating mouth diseases and abnormalities. As Chief Clinical Officer at Eyes of AI, Sen leads an international team of researchers and clinicians. He combines his experience and passion to push dental solutions beyond limits. Partnering with CSIRO's Data61, he develops groundbreaking and award-winning AI technology, revolutionising dental imaging



PREETINDER SINGH

Wagro University
Greece

Role of blood & its products in dentistry

Abstract:

Bone regeneration in dentistry involves the use of cells, biological or artificial scaffolds, and biofactors that promote cell growth and differentiation. Growth factors have a major role in this process since they influence chemotaxis, differentiation, proliferation and synthetic activity of various bone cells, thereby regulating physiological remodeling and process of bone healing. That makes the use of the autologous and recombinant growth factors (GF) a very rapidly upcoming field of regenerative dentistry & oral implantology. Most of the growth factors derived from autologous blood is released upon platelet activation, and their clinical applications has been popularized with Platelet-rich plasma (PRP), Platelet rich fibrin (PRF) & its advancements namely A-PRF& i-PRF, Concentrated Growth Factors (CGF), Sticky Bone Concept etc. It is time to use this 'BLOOD' in different ways to achieve regenerative potentials in the field of dentistry & ORAL Implantology

Biography

Preetinder Singh (MDS) is working as a Senior Professor in Department of Periodontology & Oral Implantology in SDD Hospital & Dental College, India and as a Senior Consultant in various dental offices around the country. He is the Editor in Chief of Journal of Periodontal Medicine & Clinical Practice and Associate Editor of various other famous journals. He was awarded the Best Graduate Award and Gold Medal by Kurukshetra University, Haryana, India during his BDS, based on his outstanding academic record. He has a keen interest in academics, research and clinical practice. He has around 55 research publications in various national and international journals of repute. Dr. Singh is an invited senior reviewer for 5 leading international journals indexed in PUBMED. He also has three textbooks published internationally, attached to his career till date. Dr. Singh has a great interest in periodontal & implant research field and is an invited speaker for corporate lectures on his expertise in dentistry at a national & international level. He also holds a place of doing the first study in INDIA on use of recombinant PDGF in treatment of gingival recession defects. He is presently working on microsurgery, advanced Implantology, PRF, LANAP etc. Under his guidance and work, his department was awarded as the centre of excellence in dental implants in his state.



ESI SHARON

Hebrew University of Jerusalem
Israel

A personalized treatment flow for congenitally missing teeth

Abstract:

The congenital edentulous patient presents many challenges. Starting from the initial diagnostic stage at the young age, followed by the need for a multi-staged long-term treatment planning towards the permanent restoration. This presentation will focus on one category, Oligodontia, showing the prosthetic challenge. The personalized treatment flow of these patients, their diagnosis, prognosis and treatment; with an emphasis on the basic prosthetic principles will be discussed. Parallel to the prosthetic part, the treatment flow involves multidisciplinary surgical and orthodontist complex treatment, including various steps of provisional restorations, surgical and orthodontic pre-rehabilitation preparation up to the point of the permanent restoration delivery

Biography

Esi Sharon completed her postgraduate program in prosthodontics at the Hebrew University Hadassah School of Dental Medicine in Jerusalem in 2004 and earned her certificate in Maxillofacial rehabilitation in 2017. She earned her DMD degree in 2000 and graduated top of her class in prosthodontics. Dr. Sharon holds various leadership positions. She is the Chair of the Scientific Committee of Israeli Society of Oral Rehabilitation, and the Director of the Dental Israeli National Forensic Unit. Dr. Sharon is a member of the Department of Prosthodontics at the Hebrew University Hadassah School of Dental Medicine since 2000. Since then, she served as an instructor and lecturer and course director in various courses for dental undergraduate students. Currently she is the acting director of the postgraduate specialization program in prosthodontics. She has published articles in peer reviewed journals and chapters in books in the fields of prosthodontics. She is a member of the Israeli Society of Oral Rehabilitation and the International Association for Dental Research. Her private practice specializes in complex multidisciplinary rehabilitation cases.



EDUARDO D. RUBIO

Pontificia Universidad Católica
Argentina

Combined orthodontic and orthognathic surgery treatment. Its impact on the quality of life of patients

Abstract:

How to conduct the initial consultation, what data should be communicated at this stage. What types of records are essential at that moment? Taking photographs (the patient with us when he is not present). Surgery first versus conventional surgery. At the time of surgery, fears and postoperative care are crucial considerations for both patients and healthcare providers. Results and pre- and post-surgical comparisons are essential aspects of orthognathic surgery

Biography

Eduardo Rubio is graduated in the Facultad de Odontología. University of Buenos Aires in 1980. He obtained the Ph D at the same University on 1983 Completed the residency on Oral and maxillofacial Surgery at the French Hospital in Buenos Aires, he devoted exclusively to the spatiality. Dr Rubio is Chair of Oral and Maxillofacial Surgery post graduated program at the Universidad Católica Argentina, as well as Professor of Oral and Maxillofacial in the Undergraduated program in the Dentistry School at the same University. Dr Eduardo Rubio and Dr. Mariano Momburu have a private practice dedicated to Orthognathic and reconstructive Surgery in Buenos Aires, Argentina.



ORAL PRESENTATIONS

AFRAA TALAL ALI BARZANJI

Taibah University

Saudi Arabia

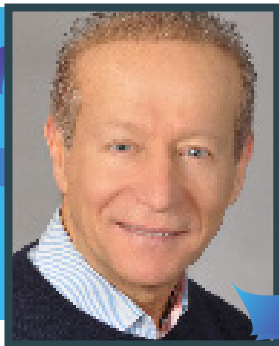
Use of anesthesia in pediatric dentistry: pros and cons

Abstract:

The use of anesthesia is well known in medical field to alleviate the pain during interventions. There are many types of that includes but not limited to: local and general anesthesia. Local anesthesia if used in an injection form, can cause pain during the injection. General anesthesia is not preferred for minimal procedures. Can topical anesthesia be used before injection of the anesthetic agent? And if the answer is yes, why it is not commonly used in Dentistry of children? Furthermore, is the local anesthetic injection really needed in pediatric dental procedures, or are there limited teeth interventions that indicate that. What is the efficacy of nitrous oxide in pain reduction, and can it be used alone, or should other approaches be added as topical or injectable anesthetics? Are the advantages of general anesthesia outweigh the risk or vice versa, and when exactly it is recommended? This presentation aims to help in clarifying those points, and providing what is known in science and literature in this regard.

Biography

Afraa is a community medicine consultant . She is a holder of bachelor degree of medicine and surgery from Taibah University. Then she had her specialization through Saudi Board in community medicine and she was recognized as the best resident among her batch. In 2016, she became a certified professional in healthcare quality which is earned from the National association for Healthcare quality in United States. Many researches and reviews were done by her; she is concentrating on is prevention and risk factors. She is also a certified peer reviewer, by Publons academy



BASHAR MUSELMANI

Practice for Orthodontics
Germany

Orthodontic treatment with Damon Ultima System, is it a new treatment method?

Abstract:

Aim: Objectives to investigate the skeletal and dental alveolar changes of patients with different malocclusion treated with Damon Ultima Brackets. Material and methods: This retrospective cephalometric and clinical study was performed on a sample of 8 patients with aged 12-16 years with different malocclusion. 4 patients would be treated with the Damon Ultima, and 4 with the Damon Q.

Results: The groups of patients treated with Damon Ultima showed significantly better results compared to the other groups treated with Damon Q Brackets. especially it was the angulation, rotation in / out, and the vertical torque

Conclusions: Achieve high quality finishes with 1st, 2nd, and 3rd order tooth control with proper functional occlusion and archform (4th order) without bending archwires.

2. Dramatically simplifies treatment mechanics that are so easy to use for clinicians and staff.

3. Utilizing low treatment forces in all phases including Finishing with CuNiTi & TMA Archwires that are more biologic and comfortable for patients

Biography

After graduating in dentistry, I trained as a specialist in orthodontics in Jena (FSU). In Latakia I worked as a professor in the university clinic there. This was later followed by work in orthodontic care both in independent practices in Germany and for members of the US Army in Ramstein. Since April 2016 I have been working as an orthodontist registered with statutory health insurance companies. Your
Dr. Bashar Muselmani



CHRISTINA RADICS

Christina Radics Coaching
Spain

How to boost your happiness with the formula 3+5, awaken the genius inside you and prevent burnout

Abstract:

In my keynote presentation, I delve into the fascinating journey of boosting happiness through the innovative concept of Formula 3+5. Drawing from extensive research in articles, studies, and happiness literature, I offer practical insights on achieving greater fulfillment in life. Furthermore, I explore the intriguing phenomenon of why 98% of 4-5-year-old children possess genius scores, contrasting sharply with the mere 2% of adults who retain this innate creativity. I illuminate pathways to reawaken our dormant genius and reclaim our natural brilliance. Amidst a world rife with stressors, burnout emerges as a pressing health concern, yet preventive measures often fall short. I equip attendees with actionable tools to combat burnout and cultivate resilience. With a blend of facts, knowledge, personal anecdotes—including my own journey through burnout—and humor, I deliver an engaging and entertaining presentation. By challenging the repetitive nature of our thoughts, I aim to catalyze positive change and empower individuals to embrace a happier, more fulfilling life.

Biography

Christina Radics is a passionate motivational speaker, dentist, coach and researcher dedicated to igniting human potential and fostering happiness. With a background from Malmo Dental University and a former clinic owner in Spain, Christina Radics blends insights from extensive research and personal experience to deliver engaging presentations that inspire positive change. Through practical tools and relatable anecdotes, Christina Radics empowers audiences to overcome challenges, cultivate resilience, and embrace a happier, more fulfilling life.



YEGANEH ARIAN

Kerman Medical University
Iran

Pleomorphic adenoma in palatal region of a young patient, a case report

Abstract:

Aim: Pleomorphic adenoma is the most common benign tumor of the salivary glands. Its gender tendency is in females and mostly in the age of 20-45 years. mixed tumor has a firm consistency and no bone involvement. The mucosal membrane on it is healthy and has a normal color. It grows slowly and expands slowly. The parotid region, as the major salivary gland and the minor salivary gland, especially the palatal is the main site of this lesion. Cases of malignant changes have been found in it and it can turn into carcinoma.

Case presentation: The patient is an 11-year-old girl without any underlying disease who referred to the outpatient clinic of Maxillofacial Surgery in Bahonar Kerman Hospital in Iran. The patient complained of a swelling in the left palatal region, which she said had started about three months ago and was getting bigger. In examining the consistency of the lesion, it was firm and its color was pink like the mucosa of the normal palate. The uniformity of the mucosa was preserved on it. The dimensions of the lesion were about 3 x 2.5 square centimeters. The patient did not express pain or discomfort. First, a panoramic radiograph (OPG) was prepared. And then CBCT images were prepared with one millimeter slices. In the examination of the lesion, expansion is seen along with specific limits of the borders. The lesion did not destroy the palatine bone and did not invade the maxillary sinus. No pus drainage, inflammation, or redness was evident in the examination, and tenderness was not reported by the patient. Then she referred to the endodontics part for examination of vitality tests. All of the teeth were vital. After performing diagnostic work, the patient was prepared for biopsy and enucleation and curettage of the lesion. After explaining to the patient and his parents and obtaining informed consent for the treatment and surgery. At first aspiration was done and the result was negative, then a sulcular incision was made from the area of the 4th upper right tooth to the 7th upper left mesial. After dissection, the mass was completely removed and enucleated. The mucosa of the floor of the nose remained healthy, and the area was completely curettage with a curet while maintaining the health of the nasal mucosa. Soft tissue sutured with 0-4 vicryl. Then, she underwent periodical follow-ups and the sample was sent for pathology examination. And the answer was diagnosed by seeing epithelial and myoepithelial cells in a chondromyxoid field with a capsule with well defined border, Pleomorphic Adenoma.

Discussion & Conclusion: Minor salivary glands are scattered throughout the upper respiratory-digestive system and their number is between 450-1000 and more in the oral cavity. (13) In a study conducted by Tselcos and his colleagues in 2022, the most common pleomorphic site of oral adenoma was diagnosed in the palatal region. (14) There is a difference of opinion in the treatment of pleomorphic adenoma of the palate. Some believe that enucleation with preservation of the upper mucosa and some suggest extensive excision. Due to the nature of the capsule, which of course is thick in some patients and thin in some patients and attached to the palatal mucosa or absent (1), wide excision with a safe margin of 1 cm is suggested by most surgeons. excision and shaving of the palatal bone in the form of an osteotomy was not needed to reduce the recurrence of the lesion, because the nature of the tumor is not an osteoblast stimulator for bone formation.

Introduction: Pleomorphic adenoma is the most common salivary gland tumor. which affects minor and major glands. Its most common location is in the major salivary glands, parotid, and in the minor salivary glands, the

palate. This benign mixed tumor has a gender tendency towards females and occurs mostly in the age group of 20-75 years. (1,2) In 1972, the World Health Organization (WHO) reported pleomorphic adenoma as a benign tumor with well-defined boundaries and including various epithelial, mucoid, myxoid and chondroid compositions (3) found in routine physical examinations. (4,5) Clinically, it is a painless submucosal mass with a firm consistency. It grows slowly and increases in size over the years. The mucosa on the lesion is healthy and intact, and if a wound is observed, it can indicate trauma or previous sampling. (6) The risk of malignancy in minor salivary glands is high and this doubt is strengthened when a mass is in these areas. (7-9) Imaging plays a vital role in diagnosis. Preparation of initial panoramic radiography and then preparation of facial spiral CT scan images with fine cuts of 1.5 mm can determine the extent of bone involvement and the extent of tumor invasion to the surrounding structures. (10) Sampling and histological examination is a powerful tool in accurate diagnosis of the lesion. Pleomorphic adenoma is composed of epithelial and myoepithelial cells. Which sometimes is surrounded by a fibrous tissue called pseudocapsule. This pseudocapsule is complete in major salivary glands but sometimes incomplete in minor salivary glands. (11,12)

Case Presentation: The patient is an 11-year-old girl without any underlying disease who referred to the outpatient clinic of Maxillofacial Surgery in Bahonar Kerman Hospital in Iran. The patient complained of a swelling in the left plat region, which she said had started about three months ago and was getting bigger. In examining the consistency of the lesion, it was firm and its color was pink like the mucosa of the rest of the palate. The uniformity of the mucus was preserved on it. The dimensions of the lesion were about 3 x 2.5 square centimeters. The patient did not express pain or discomfort. First, a panoramic radiograph (OPG) was prepared. And then CBCT images were prepared with one millimeter slices. In the examination of the lesion, expansion is seen along with specific limits of the borders. The lesion did not destroy the palatine bone and did not invade the maxillary sinus. No pus drainage, inflammation, or redness was evident in the examination, and tenderness was not reported by the patient. then she referred to the endodontics part for examination of vitality tests. All of the teeth were vital. After performing diagnostic work, the patient was prepared for sampling and enucleation and curettage of the lesion. After explaining to the patient and his parents and obtaining informed consent for the treatment and surgery, the patient was taken to the operating room. Then she underwent nasal intubation from the right nostril. After preparation and drape and injection of lidocaine anesthesia containing epinephrine, first aspiration was done with a 10 cc syringe and the result was negative, then a sulcular incision was made from the area of the 4th upper right tooth to the 7th upper left mesial. Dissection was performed and minor nasopalatine artery bleeding was controlled. And the greater palatine artery remained undamaged. After exposing the mass with a clear thick capsule, it was decided to completely dissect the mass from the palatal mucosa. After dissection, the mass was completely removed and enucleated. The mucosa of the floor of the nose remained healthy, and the sharp bones in the empty space were punched with a rongeur to prevent perforation of the mucosa, and the area was completely curettage with a medium-sized curet while maintaining the health of the nasal mucosa. Then the area was completely washed with normal saline. And after checking the position and making sure that there is no remaining lesion and placing gel foam to control hemostasis and prevent possible hematoma, the soft tissue and the papillae were sutured with 0-4 vicryl. Then a sterile gauze with tetracyclin ointment 1% was placed in the area as a compress dressing. The patient was extubated and transferred to recovery. And after partial recovery, she was transferred to the ward and under the antibiotic regimen of cefazolin 500 mg every 6 hours and dexamethasone 4 mg every 8 hours for two days and 0.2% chlorhexidine mouthwash twice a day and using ice pack and head elevation 45 degree. She discharged after three days. Then, she underwent periodical follow-ups and the sample was sent for pathology examination. And the answer was diagnosed by seeing epithelial and myoepithelial cells in a chondromyxoid field with a capsule with well defined border, pleomorphic adenoma.

Biography

I am Dr. **Yeganeh Arian**. I am 31 years old and I come from Iran. I am Oromaxillofacial surgeon. I wrote some papers about robotic surgery, Artificial intelligence in surgery, case reports about Congenital Syngenathia, Mucormycosis in palatal region of a patient of COVID and my presentation about Pleomorphic adenoma in palatal region of a young patient.



YUNJIA CHEN

University of Montpellier
France

Harmonizing modern lifestyles with orthodontic trends: crafting radiant smiles through humanistic approaches

Abstract:

In contemporary society, the dynamics of modern lifestyles exert a profound influence on individual oral health and aesthetic expectations, presenting nuanced challenges and opportunities within dental practice. This study pivots on the integration of humanistic principles within orthodontic interventions, aimed at aligning with modern lifestyle exigencies and facilitating the attainment of optimal dental aesthetics for patients. Utilizing case-study methodology, this paper elucidates the efficacy of humanistic communication strategies in orthodontics, with a particular focus on management of patients with elevated expectations. An in-depth analysis of a case involving a 57-year-old female patient is presented, her requirements and aspirations mirroring the impact of contemporary lifestyle paradigms on oral health and aesthetic preferences. The research underscores the criticality of assimilating patients' life contexts and needs in devising bespoke treatment trajectories. Findings indicate that the adoption of a humanistic approach substantially augments patient satisfaction and fosters enhanced treatment efficacies, thereby cultivating symbiotic clinician-patient dynamics. This investigation corroborates the indispensable role of humanistic principles and patient-centric communicative modalities in the modern dental milieu, particularly in sculpting healthful and aesthetically appealing dentitions.

Biography

Yunjia Chen, a proficient orthodontist and educator, boasts 14 years of clinical experience and a robust academic background. Holding a Doctorate in Health Management from the University of Montpellier, France, she's renowned for her contributions to invisible orthodontics. Yunjia has published extensively, mentored countless medical professionals, and excelled as a lecturer. She's committed to disseminating accurate medical knowledge, evident in her work as a We Media blogger. Chen is fluent in English and Mandarin, enriching her professional reach

How does dental treatment affect the oral health of patients received radiotherapy and bone-modifying agent: systematic review

Abstract:

Background: Radiotherapy and bone-modifying agents are widely used to treat malignancies and metastases. Bone-modifying agents and radiation-related adverse effects on oral health detrimentally affect dental treatment outcomes. Two common complications occur during and after radiotherapy: bone-modifying medications, osteoradionecrosis, and osteonecrosis of the bones. Dental professionals play an important role in evaluating procedures that can potentially cause these complications.

Objective: This systematic review aimed to evaluate the effects of dental treatment on oral health in patients who had received radiotherapy and bone-modifying agents.

Methods: A comprehensive search was conducted using PubMed, Scopus, Web of Science, Embase, Medline, Proquest, and Cochrane Library from 2015-2023 following PRISMA guidelines.

Results: Eighteen articles, published between 2015 and 2023, were reviewed. Dental implants have been the main focus of attention in most studies, as radiation therapy can reduce the microhardness of enamel and dentin and increase the risk of osteoradionecrosis (ORN) and tooth failure. However, dental implants can still be successful with proper bone quality and implant techniques, and bisphosphonate therapy does not significantly affect implant failure.

Conclusion: The risk of developing osteonecrosis was not significant, but was increased by parenteral administration compared with oral administration. Bisphosphate is associated with deep pockets, higher bleeding index, and pulp obliteration

Biography

Lujain studied Dentistry at the King Khalid University, Saudi Arabia, and graduated with a bachelor's degree with excellence in 2020. Qualified as an employee in the Ministry of health. She then joined the Doctor of Science in Dentistry (DScD) in Oral Medicine & diagnostic science at King Saud University, Riyadh. She received her Diploma of Primary Care Dentistry (Dip PCD RCSI) degree in 2021 at the Royal College of Surgeons in Ireland. She has published more than 7 research articles in (E) journals



CHRISTINE HONG

University of California San Francisco
USA

Efficacy of maxillary skeletal expansion for sleep disordered breathing

Abstract:

Patients with narrow palate and sleep disordered breathing (SDB) undergo nasomaxillary expansion which has been shown to improve the severity of SDB through multiple mechanisms. This study investigated the effectiveness of the Maxillary Skeletal Expansion (MSE) in altering the dimensions of the nasal cavity, zygomatic bone, and first molar width, as well as improving nasal inhalation in patients aged 18 years and younger with narrow maxillary width. The participants were also asked to complete both a binary questionnaire and a rating scale assessment to evaluate the quality of their sleep and breathing, both before and after the treatment. Significant improvements were noted in nasal width, maxillary first molar width, and nasal inhalation capacity. A positive correlation was observed between the increase in nasal width and maxillary first molar width. Notably, nasal inhalation showed continued improvement during the 1-year maintenance period. Moreover, a significant decrease ($P < .01$) in reports of morning mouth dryness was observed by questionnaire results, suggesting improved nocturnal nasal breathing post treatment. MSE is effective in enhancing maxillary dimensions and reducing nasal airway resistance in young patients. Its application is recommended for treating lateral maxillary deficits and improving physiological treatment outcomes in patients with narrow nasal airways. The study also highlights that the Peak Nasal Inspiratory Flow (PNIF) device can be effectively used to assess the skeletal expansion of the nasal cavity. In addition, the study demonstrates that Maxillary Skeletal Expansion (MSE) positively impacts nocturnal nasal breathing, as indicated by a reduction in morning mouth dryness among young patients

Biography

Hong has completed her dental training at Harvard University and postgraduate studies in orthodontics from UCLA. She is a Professor in the Division of Orthodontics at the UCSF School of Dentistry. She currently serves as the Chairman and Program Director of UCSF Orthodontics. Dr. Hong is extensively involved in basic, translational, and clinical research and has received numerous awards from the AAOE, Cleft Palate Foundation, and NIH. She currently serves as an editor for PCxSO and is a Diplomate of the American Board of Orthodontics



BALAMURUGAN. R

RYA Cosmo Foundation Hospital
India

Utility and applications of chitosan in oral surgery

Abstract:

The motive of this study was to analyze the postoperative effect of chitosan when loaded with Ibuprofen after third molar removal. This study was performed both in vivo and in vitro methodologies. In vivo, the morphological characteristics of Ibuprofen loaded with Chitosan was spherical and smooth in surface with 11 μ m in size. The drug entrapment efficiency was 99% and the drug release potency was evaluated at two different pH gradients. At pH 5.8, there was a sustained release of drug from chitosan and at pH 7.4, the drug release was higher. In vitro, the chitosan incorporated with Ibuprofen was locally delivered into the extracted socket after removal of mandibular third molar. The postoperative parameters of pain, swelling was less and the amount of mouth opening was increased when compared to participants who consumed Ibuprofen tablet alone. This clearly signifies that, chitosan with Ibuprofen is a promising biocompatible material in the reduction of postoperative effects after any oral surgical procedure.

Biography

Balamurugan. R is an Oral and Maxillofacial Surgeon and Oral Implantologist, initiated his professional career in the field of dentistry and continued his specialisation in the path of Oral and Maxillofacial Surgery (India) and Fellowship in Oral Implantology (International Congress of Oral Implantologists ICOI, USA). His field of expertise in basic dental treatments, dento-alveolar surgeries, maxillofacial trauma, dental implants, medical emergencies, pathologies associated with maxillofacial region, TMJ related disorders. He also encourages and motivates the authors to explore with new innovative ideas in the field of research. He holds various International and National peer reviewed paper publications that adds credit to his career. He is associated with International and National journals as editor and reviewer board member. He has been awarded as “Best Editor 2021” in the Research Awards 2022 by Innovative Publication for International Dental Journal of Student’s Research (IDJSR). He was presented with the “Best Achievers Award” titled “Excellence Award As An Oral Surgeon and Oral Implantologist” by Magic Book of Record in 2022. He has been awarded as the “Best Editor” and “Best Peer Reviewer” for the year 2023 in the Research Awards 2024 conducted by the Innovative Publications for International Dental Journal of Student’s Research (IDJSR). Currently, he is a researcher and walks in the right path of motivation by providing a heart of service for the patients as an Oral and Maxillofacial Surgeon and Oral Implantologist in RYA Cosmo Foundation Hospital, Chennai, India.



AMARJEET GAMBHIR

Lady Hardinge Medical College & Hospital
India

Modifications of the free-fibula flap for reconstruction

Abstract:

Reconstruction of the maxillofacial region has always been a challenge owing to the complexity of function & aesthetics. Since its introduction by Hidalgo in 1989, the free vascularized fibula flap has become the mainstay for mandibular reconstruction. The fibula flap presents many distinct advantages, such as consistent shape, ample length & volume of bone, segmental blood supply, long vascular pedicle, distant location, low donor site morbidity and compatibility with implant placement. The only limitation is that its height may be insufficient to restore the alveolar arch when reconstruction involves a dentate mandible, resulting in subsequent difficulty in optimal prosthetic rehabilitation with conventional dentures or osseointegrated implants. A variety of modifications have been used to overcome the height discrepancy between the native mandible and the grafted fibula. These include vertical distraction of the fibular segment as well as use of double-barrel, one and a half barrel or partial double-barrel vascularised free fibular flap. All these techniques result in enhanced aesthetic & functional results. Recently, three-dimensional (3D) approaches involving virtual surgical planning (VSP) and computer-aided design and manufacturing (CAD-CAM) have been used in combination with prefabricated surgical plate templates and cutting guides to make fibula flap moulding & placement easier. This application of computer-assisted mandibular reconstruction (CAMR) has increased accuracy of preoperative planning, resulting in greater surgical precision and reduction of surgical duration & postoperative complications. Additionally, virtual surgical planning during mandibular reconstruction allows implant prosthetic rehabilitation to be successfully integrated in the primary reconstructive program in order to place fibular segments in the optimum position both for improved masticatory function & aesthetic facial appearance.

To conclude, the free fibula flap along with its modifications provides a versatile & predictable treatment option for primary or secondary reconstruction of composite oral cavity defects.

Keywords: mandibular reconstruction, free-fibula flap, prosthetic rehabilitation

Biography

AMARJEET GAMBHIR graduated in dentistry from GDC, Indore in 2002 & completed his post-graduation in Oral & Maxillofacial Surgery from NHDC, Mumbai in 2006. He completed his 3 year Senior Residency from Lady Hardinge Medical College & Hospital, New Delhi in 2009. He then worked as a faculty at different dental colleges and was promoted to Professor, Oral & Maxillofacial Surgery in 2016. He again joined Lady Hardinge Medical College as a Faculty in 2016. He has worked as a co-investigator in pilot project on school-based sealant programme, 2017 under Ministry of Health & Family Welfare, Government of India. He is a reviewer of various international journals & has published more than 15 national & international papers in indexed journals. He has attended a number of conferences & workshops and presented more than 15 papers & key-note lectures in national & international conferences/webinars. He has also authored 3 books for dental postgraduate entrance examinations. His areas of interest include oral cancer, TMJ disorders, maxillofacial pathology & reconstruction, maxillofacial trauma & dental implants.



YETHINDRA VITYALA

International Higher School of Medicine
India

Association between periodontal disease and preterm Birth: A cross-sectional study

Abstract:

Introduction: Recently, periodontal disease (PD) has been linked to several chronic diseases such as osteoporosis, diabetes, and cardiorespiratory illnesses, as well as preterm delivery. The prevalence of PD tends to increase with age, due to factors such as poor oral hygiene, smoking, and hormonal changes associated with puberty and pregnancy. The aim of this study was to investigate the association between PD and preterm birth (PB).

Methods: This cross-sectional study investigated the association between PD and PB among postpartum patients aged 17-35 years admitted to a hospital between 2021 and 2023. The Community Periodontal Index of Treatment Needs was used to assess periodontal health, with codes 3 and 4 indicating the presence of PD.

Results: Among the 134 women included, 58% had PD, and 20% of those with PD experienced PB, compared to only 8% of those with minor codes ($p < 0.01$). A positive correlation was found between PD and age, with 31% of Level 4 patients being over 30 years old ($p < 0.05$). No significant correlation was observed between smoking and PD. The odds ratio for the association between PD and PB was 4.5 (95% CI: 2.6-9.1), and the adjusted odds ratio for included factors was 4.1 (95% CI: 2.2-8.8), indicating a significant association. The model accounted for 5% of the variability in PBs.

Conclusion: The study suggests that hormonal changes during pregnancy and adolescence contribute to PD development, which may lead to infections and hormonal imbalances, potentially resulting in PB.

Key words: Periodontal disease, Preterm birth, Community Periodontal Index of Treatment Needs, Gingival sulcus depth

Biography

Yethindra Vityala is a distinguished doctor and young scientist affiliated with the International Higher School of Medicine. Known for his exceptional contributions to medical research and practice, Dr. Vityala has made significant strides in the healthcare field at an impressively young age. His dedication to advancing medical knowledge and improving patient care has earned him recognition in the international medical community. Through his work, Dr. Vityala continues to inspire aspiring medical professionals and scientists around the world.



**ACCEPTED
ABSTRACTS**

ANIKO BALL

Optimum Dental Posture
Australia

Reducing the risk of occupational chronic pain in dentistry

Abstract:

Worldwide research shows an alarming incidence of occupational chronic pain in the dental profession, resulting in early retirement or reduced work hours for many, and a career change for some. Ergonomic research and design have focused on dentists' work environment, the Outer Ergonomics, overlooking the importance of their efficiency in posture and movement, the Inner Ergonomics. How a dentist sits on a stool and bends over the dental chair is as important as the stool and chair design. The way instruments are held is as important as the shape and the weight of the instrument. Dental school don't teach that spinal joints below C2 are not designed for prolonged bending, or the muscles of the shoulder and arm are movement muscles, which are not designed for prolonged contraction. Dentists need to know how to bend over patients and what to do with their shoulders and arms to ensure career longevity. Reducing the risk of occupational chronic pain in dentistry begins with the understanding of cumulative trauma, the recognition of harmful, habitual work postures and learning about biomechanical design. This talk will orient dentists towards career longevity and improved life quality.

Biography

Aniko Ball completed her Bachelor of Dental Science at Melbourne University in 1976. After suffering occupational chronic pain for decades, Anikó trained to recognize and change harmful work postures. She founded Optimum Dental Posture in 2015 to reduce suffering in the profession. Trained in mind-body calming techniques and Inner Ergonomics, Anikó conducts 'Ergonomics & Wellness in Dentistry' workshops and courses, 'In-house Ergonomic Training' as well as 'Stress Management in the Clinic' for the whole dental team around Australia and New Zealand. Aniko has been a presenter at multiple Congress/Conference events and CPD courses.

Titanium toxicity & sensitivity in relation to oral Implantology: A point to ponder!

Abstract:

In spite of recent pioneering advances and remarkable evolution in the design and development of surgical and dental implant materials, failures do occur. One of the reasons for these failures can be corrosion of dental implants. The most favorable implant is the one which is capable of resisting the most extreme conditions that could possibly be encountered in the mouth. The choice of the materials used for the implant as well as implant borne suprastructures become vital, and can be made by way of evaluating their galvanic corrosion behaviors. When the mechanisms that ensure implant bioacceptance and structural stabilization are fully understood, implant failures will become a rare occurrence, provided that they are used properly and placed in sites for which they are indicated. Titanium dental implants can cause corrosion and wear. Particles and ions of titanium and titanium alloy components due to corrosion and wear can be deposited in surrounding tissues, and inflammation can occur. The buildup of titanium ions and particles can occur systemically as well as in the neighboring tissues, which can lead to toxic reactions in other tissues including yellow nail syndrome. Additionally, there are cases where the metal material is hypersensitive. Currently, zirconia/ceramic implants are considered to be an alternative; however, there are still limitations due to a lack of long-term clinical data. Within the limitation of this lecture, it suggests that we should be aware of the rare problems of titanium toxicity, allergy & hypersensitivity

Biography

Preetinder Singh (MDS) is working as a Senior Professor in Department of Periodontology & Oral Implantology in SDD Hospital & Dental College, India and as a Senior Consultant in various dental offices around the country. He is the Editor in Chief of Journal of Periodontal Medicine & Clinical Practice and Associate Editor of various other famous journals. He was awarded the Best Graduate Award and Gold Medal by Kurukshetra University, Haryana, India during his BDS, based on his outstanding academic record. He has a keen interest in academics, research and clinical practice. He has around 55 research publications in various national and international journals of repute. Dr. Singh is an invited senior reviewer for 5 leading international journals indexed in PUBMED. He also has three textbooks published internationally, attached to his career till date. Dr. Singh has a great interest in periodontal & implant research field and is an invited speaker for corporate lectures on his expertise in dentistry at a national & international level. He also holds a place of doing the first study in INDIA on use of recombinant PDGF in treatment of gingival recession defects. He is presently working on microsurgery, advanced Implantology, PRF, LANAP etc. Under his guidance and work, his department was awarded as the centre of excellence in dental implants in his state.

Opioid requirement and pain intensity after mandibular surgeries with dexmedetomidine administration in two ways: Intraoperative infusion versus bolus injection

Abstract:

Purpose The purpose of this study is to compare the opioid requirement and pain intensity after surgeries of mandibular fractures with administration of dexmedetomidine by two approaches of infusion and single bolus.

Methods: In this double-blind clinical trial, the participants were randomized and matched in terms of age and gender in two groups (infusion and bolus). In both groups, the amount of narcotic used, hemodynamic indices, oxygen saturation, and pain intensity were collected based on the ten-point Visual Analogue Scale (VAS) at 7 time points for 24 h. SPSS version 24 software was used for data analysis. A significance level of less than 5% was considered.

Results: A total of 40 patients were included in the study. There was no significant difference between the two groups in terms of gender, age, ASA class, and duration of surgery ($P>0.05$). There was no significant difference between the two groups in terms of nausea and vomiting and subsequently receiving anti-nausea medication ($P>0.05$). The need for opioid consumption after surgery was not different in two groups ($P>0.05$). Infusion of dexmedetomidine reduced postoperative pain more rapidly than its single bolus dose ($P<0.05$). However, over time, there was no significant difference between the two groups in terms of changes in oxygen saturation variables ($P>0.05$). Hemodynamic indices including heart rate, systolic blood pressure, and diastolic blood pressure in the bolus group were significantly lower than the infusion group ($P<0.05$).

Conclusion: Administration of dexmedetomidine in the form of infusion can reduce postoperative pain better than bolus injection, with less probability of hypotension and bradycardia.

Biography

Loghman Ebrahimi is a renowned figure in the field of oral and maxillofacial surgery. Hailing from Tabriz, Iran, Ebrahimi has made significant contributions to the field through his work at the Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Tabriz University of Medical Sciences. His expertise and dedication have earned him recognition both locally and internationally, making him a respected figure in his field.

Three-dimensional assessment of the favorability of maxillary posterior teeth intrusion in different skeletal classes limited by the vertical relationship with the maxillary sinus floor

Abstract:

Background: Understanding the anatomical relationship between the maxillary sinus floor (MSF) and the posterior maxillary teeth (PMT) is important when planning the orthodontic intrusion of the posterior teeth. This study aimed to determine the vertical relationship between posterior maxillary teeth and maxillary sinus floor in different skeletal classes in the Chinese adult population.

Methods: This is a retrospective cross-sectional study involved cone beam computed tomography images of 298 adult patients (145 males and 153 females) between 20 and 45 years old. The sample was categorized according to A point, Nasion, B point (ANB) angle into 102 Class I, 102 Class II, and 94 Class III malocclusion. Non-parametric Wilcoxon Mann–Whitney U and Kruskal–Wallis tests were used to compare the studied groups. The Intra-class Correlation Coefficient (ICC) was used to assess the intra- and inter-observer reliability analysis.

Results: Overall, there was a statistically significant difference in the mean distance between both genders ($P < 0.001$). The measured distance increased with age in all posterior tooth roots ($P < 0.001$). The root apex in the sagittal view appeared to be closer to the maxillary sinus than in the coronal view; 2.2 ± 4.3 and 3.1 ± 5.5 mm, respectively. The most frequent root scores were Type 1 and Type 2P. In both sagittal and coronal views, Class I demonstrated a higher Type 2P prevalence, whereas Class III showed a lower prevalence. The second molars' mesiobuccal root had the largest number of penetration in the three examined skeletal classes.

Conclusions: Maxillary molars of Class I malocclusion with the majority of Type 2P root-sinus relationship have the highest possible risk of root resorption during molar intrusion due to cortical bone encroachment, while Class III malocclusion showed the least possible risk.

Keywords: Cone beam computed tomography (CBCT), Maxillary sinus floor (MSF), Posterior maxillary teeth (PMT), Intrusion, Skeletal classes

Biography

Ehab A. Abdulghani is PhD student at Department of Orthodontics, West China Hospital of Stomatology, Sichuan University, Chengdu, China. I has published more than 12 papers Sci journals

Fracture load of ultrathin occlusal veneers: Effect of thickness and surface conditionin

Abstract:

The gradual loss of tooth enamel is a natural outcome of the aging process. The early depletion of this tissue could be attributed to various factors, such as the consumption of acidic foods and drinks, GERD, bulimia nervosa, drug intake, and the decrease in saliva production. The aforementioned lesions are referred to as dental erosions and exhibit non-carious features. By using biomimetic restorative dentistry, which mimics the overall appearance, biomechanics, and functional properties of the normal tooth, it is possible to restore the dentition that has been damaged. Partial coverage restorations, especially occlusal veneers with decreased thickness, are recognized as a conservative option for restoring the loss of vertical dimension in cases of severe occlusal erosions. Production of stronger and thinner restorations can be fulfilled by using computer-aided design and manufacturing (CAD/CAM) technology, ceramics with high resistance, refined bonding protocols, and durable cementation materials. The utilization of lithium disilicate ceramic restorations has become increasingly prevalent in the field of dentistry, particularly for posterior single crowns and partial coverage restorations. This is due to the exceptional physical properties exhibited by these monolithic ceramic systems. A novel zirconia-reinforced lithium silicate glass ceramic has been developed and made available for use in dental (CAD/CAM) applications. Zirconia powder (10% by weight) has been incorporated into the structure in order to strengthen this new form of glass ceramic through the mechanism of crack interruption. This type of treatment has progressed to the point where normal sound tooth structure could be maintained while adhesion is maximized. Inter-occlusal clearance and biomechanical considerations are the primary drivers for the tooth preparation needed for these extra- coronal restorations. This in-vitro study is planned to analyze the effect of different thicknesses of ceramic occlusal veneers and different surface treatments on fracture resistance

Biography

Mansoura University in Egypt is where Dr. Maged Zahran earned his bachelor's degree in dentistry. In 2012, he graduated from Suez Canal University in Egypt with a diploma in endodontics. Then, in 2019, He get the Master's in restorative Dentistry from Mansoura University (Major operative, Major fixed prosthodontics, Major Endodontics). He has now enrolled as a doctoral student at Mansoura University's Fixed Prosthodontics Division. Ceramics, veneers, adhesives, and biomechanics are the primary areas of study. Eleven years' experience in Ministry of Health hospitals o One year teaching Experience in restorative dentistry department, Mansoura University, Egypt o Eight years' experience in his own dental clinic o Three months as an intern resident at Cairo University hospitals

MARJAN ARIANEZHAD

Shahid Beheshti University of Medical Sciences

Iran

Software management for cone beam computed tomography (cbct) in dental treatments. discover the art of interpreting cutting-edge concepts elevating your approach to dental trends for radiant smile

Abstract:

Radiographic images act like our third eye in dentistry. The advent of CBCT has considerably improved maxillofacial imaging. CBCT provides a highly accurate three-dimensional image, especially from osseous structures. Various CBCT devices are now available, specifically designed for dentistry applications including implant treatment planning, orthodontics, endodontics, oral surgery and pathology, periodontics, and temporomandibular joint (TMJ) assessments. In teeth with complex root canal morphology, providing a three-dimensional vision reduces the possibility of complications and errors. For the initial treatment of teeth with the potential for extra canals or complex canal morphology, such as anterior mandibular teeth or in cases with dental anomaly, CBCT is indicated due to its high resolution and volumetric image, which can be prepared in any sectional direction. CBCT may also help detect and locate calcified root canals, vertical root fractures, and internal or external root resorption. When evaluating the failure of previous endodontic treatment, CBCT can detect possible causes, such as missing canals. In re-treatment cases, CBCT is a handy tool for detecting complications such as overextension of root canal obturation materials, separated instruments in canals, and perforations. CBCT also can localize the apices and assess the adjacent anatomical structures for pre-surgical treatment planning. This lecture will provide a comprehensive explanation of the application of Cone Beam Computed Tomography (CBCT) in dental treatments, along with some examples. Ultimately, the use of software for analysis will be elucidated.

Biography

Marjan Arianezhad, an esteemed academic at Shahid Beheshti University of Medical Sciences, excels in medical research and education. Known for her extensive publications and dedication to mentoring, she advances health sciences through innovative research and community involvement, leaving a lasting impact on medical education and public health initiatives

Quantitative and qualitative condylar changes following stabilization splint therapy in patients with temporomandibular joint disorders

Abstract:

This study aimed to explore the quantitative and qualitative condylar changes following stabilization splint (S.S) therapy, including condylar position, morphology, and bone mineral density (BMD) in subjects with temporomandibular disorders (TMD). **Materials and methods** In this retrospective clinical study, we enrolled 40 TMD subjects (80 joints) aged 18 to 35 years, for whom a S.S was used to treat TMD. The 80 TMD consists of 32 masticatory muscle disorders (myalgia) and 48 TMJ disorders (arthralgia). Cone beam computed tomography (CBCT) was used to scan the TMJs of subjects pre- and post-treatment for three-dimensional analysis (3D). Using Mimics software v.21.0, quantitative (3D condylar and joint spaces dimensions parameters were measured using linear measurements in millimeters, according to the Kamelchuk method and Ikeda method, while the assessment of anteroposterior condyle position within the glenoid fossa was based on the method of Pullinger and Hollender), and qualitative (a round bone tissue with an area of 2 mm² in three representative areas according to the Kamelchuk method to measure condylar BMD) pre- and post-treatment. Intra- and inter-group statistical comparisons were performed using the Wilcoxon signed ranks and the Kruskal–Wallis test, respectively. **Results** The course of treatment was 6–12 months, with an average of 9.1 months. For the pre- and post-treatment quantitative comparisons, there was a statistically significant difference in the anterior joint space (AJS) and coronal medial space, as well as the condyle length in the myalgia group and condylar width in the arthralgia group. For qualitative measurements, a significant difference was observed in the posterior slope of the myalgia group and the arthralgia group's anterior, superior, and posterior slopes. The inter-group comparisons revealed significant differences in AJS, condylar length, and anterior slope density. **Conclusion** In short-term follow-up, the S.S influenced patients with TMD from different origins; it changes anterior and coronal medial joint space, condyle length in myalgia, and width in arthralgia. Furthermore, it improved the condyle bone density more evidently in arthralgia. **Clinical relevance** This study highlights the influence of S.S on symptomatic populations with TMD of different origins from a qualitative and quantitative perspective.

Biography

Mazen Musa has completed his PhD at the age of 32 years from Xi'an Jiao tong University, School of Medicine. He has published more than 13 papers in reputed journals and has been serving as peer reviewer of repute

Bayesian hierarchical models for complex joint analysis of count and binary data

Abstract:

This study aimed to explore the quantitative and qualitative condylar changes following stabilization splint (S.S) therapy, including condylar position, morphology, and bone mineral density (BMD) in subjects with temporomandibular disorders (TMD). **Materials and methods** In this retrospective clinical study, we enrolled 40 TMD subjects (80 joints) aged 18 to 35 years, for whom a S.S was used to treat TMD. The 80 TMD consists of 32 masticatory muscle disorders (myalgia) and 48 TMJ disorders (arthralgia). Cone beam computed tomography (CBCT) was used to scan the TMJs of subjects pre- and post-treatment for three-dimensional analysis (3D). Using Mimics software v.21.0, quantitative (3D condylar and joint spaces dimensions parameters were measured using linear measurements in millimeters, according to the Kamelchuk method and Ikeda method, while the assessment of anteroposterior condyle position within the glenoid fossa was based on the method of Pullinger and Hollender), and qualitative (a round bone tissue with an area of 2 mm² in three representative areas according to the Kamelchuk method to measure condylar BMD) pre- and post-treatment. Intra- and inter-group statistical comparisons were performed using the Wilcoxon signed ranks and the Kruskal–Wallis test, respectively. **Results** The course of treatment was 6–12 months, with an average of 9.1 months. For the pre- and post-treatment quantitative comparisons, there was a statistically significant difference in the anterior joint space (AJS) and coronal medial space, as well as the condyle length in the myalgia group and condylar width in the arthralgia group. For qualitative measurements, a significant difference was observed in the posterior slope of the myalgia group and the arthralgia group's anterior, superior, and posterior slopes. The inter-group comparisons revealed significant differences in AJS, condylar length, and anterior slope density. **Conclusion** In short-term follow-up, the S.S influenced patients with TMD from different origins; it changes anterior and coronal medial joint space, condyle length in myalgia, and width in arthralgia. Furthermore, it improved the condyle bone density more evidently in arthralgia. **Clinical relevance** This study highlights the influence of S.S on symptomatic populations with TMD of different origins from a qualitative and quantitative perspective.

Biography

Mekuanint has doctoral studies from University of science and technology of china. He has published more than 6 papers in reputed journals

ALEX TCHINDA

University of Lorraine
France

Transcriptomic overview of comparative Multi-Scale biocompatibility of zro2 and Y-TZP alloys

Abstract:

The osseointegration of implants is defined as the direct anatomical and functional connection between neo-formed living bone and the surface of a supporting implant. The biological compatibility of implants depends on various parameters, such as the nature of the material, chemical composition, surface topography, chemistry and loading, surface treatment, and physical and mechanical properties. In this context, the objective of this study is to evaluate the biocompatibility of rough ($Ra = 1 \mu m$) and smooth ($Ra = 0 \mu m$) surface Y-TZP discs compared to ZrO₂ discs by combining a classical toxicological test, morphological observations by SEM, and a transcriptomic analysis on an in vitro model of human Saos-2 bone cells. Similar cell proliferation rates were observed between ZrO₂ and Y-TZP discs and control cells, regardless of the surface topography, at up to 96 h of exposure. Dense cell matting was similarly observed on the surfaces of both materials. Relevantly, only 110 transcripts were differentially expressed across the human transcriptome, consistent with the excellent biocompatibility of Y-TZP reported in the literature. These deregulated transcripts are mainly involved in two known metabolic pathways, the first being linked to 'mineral absorption' and the second to 'immune response'. These observations suggest that Y-TZP is an interesting candidate for application in implantology.

Biography

Alex Tchinda, an esteemed academic at the University of Lorraine, excels in research and teaching. Specializing in Dentistry, he inspires students through rigorous methodology and critical thinking. Recognized with numerous awards, Tchinda's work impacts his field significantly, reflecting his dedication to advancing knowledge and fostering academic growth.

Supporting Journal

Journal of Oral Diseases and Treatment

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