

# 4<sup>TH</sup> EDITION OF INTERNATIONAL CONFERENCE ON DENTISTRY AND ORAL HEALTH

Sept 27-28, 2021

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4<sup>TH</sup> EDITION OF INTERNATIONAL CONFERENCE ON  
**DENTISTRY AND  
ORAL HEALTH**

SEPT 27-28, 2021

**Theme:**

A journey to untangle the challenges of Dental Profession

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# *About* **MAGNUS GROUP**

**Magnus Group (MG)** is initiated to meet a need and to pursue collective goals of the scientific community specifically focusing in the field of Sciences, Engineering and technology to endorse exchanging of the ideas & knowledge which facilitate the collaboration between the scientists, academicians and researchers of same field or interdisciplinary research. Magnus group is proficient in organizing conferences, meetings, seminars and workshops with the ingenious and peerless speakers throughout the world providing you and your organization with broad range of networking opportunities to globalize your research and create your own identity. Our conference and workshops can be well titled as 'ocean of knowledge' where you can sail your boat and pick the pearls, leading the way for innovative research and strategies empowering the strength by overwhelming the complications associated with in the respective fields.

Participation from 90 different countries and 1090 different Universities have contributed to the success of our conferences. Our first International Conference was organized on Oncology and Radiology (ICOR) in Dubai, UAE. Our conferences usually run for 2-3 days completely covering Keynote & Oral sessions along with workshops and poster presentations. Our organization runs promptly with dedicated and proficient employees' managing different conferences throughout the world, without compromising service and quality.

# *About* **ICDO 2021**

to 4<sup>th</sup> Edition of International Conference on Dentistry and Oral Health (ICDO 2021) will be held from September 27-29, 2021 as Online Event which allows you to participate

Virtually from your work/home place which is presented by Magnus Group. ICDO 2021 exemplifies how dental professionals can get inspired by industry-leading speaker and claim opportunities for clinical development to energize their passions and fuel advances in the field of dentistry and oral health regardless of experience or sector. The main motto is to foster exchange and develop a common vision to advance the science and practice of dentistry and oral health.

The meeting's innovation isn't limited which includes classroom speakers, exhibitors and several posters which explains to learn detailed section and the role of dentists and oral hygienists in day to day life. ICDO 2021 strives to get together all likeminded people and industry peers together from different geographical areas to strengthen those skills that each individual needs to improve by achieving success in their academic environment by putting the learned skills into practice.

# KEYNOTE FORUM

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SEP 27-28, 2021

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**David G Gillam**

Queen Mary University of London, UK

## Practical guidelines for managing dentine hypersensitivity in clinical practice

Dentine Hypersensitivity (DH) is a relatively common, yet troublesome clinical condition that may have an impact on the quality of life (QoL) of individuals who suffer from it. The pain associated with the condition has been described as rapid onset, sharp in character and transient in its duration. Several surveys have indicated that clinicians may struggle to identify patients with DH which may in turn lead to the underestimation of the true prevalence of the condition. Furthermore, there is some evidence that would suggest that clinicians lack of confidence in both the diagnosis and management of the condition. The clinical diagnosis of orofacial pain in general can be both time consuming and difficult for several reasons: 1) the difficulty in identifying areas of the mouth that may be causing the problem and 2) the highly subjective nature of pain and its variability between patients. It is therefore important for clinicians to correctly identify patients with DH by excluding any confounding factors from other orofacial pain conditions prior to the successful management of the condition. The clinician must therefore assess whether the problem that has been diagnosed is 1) mild/moderate generalised sensitivity or 2) moderate/severe localised sensitivity. The severity of the problem will determine whether the treatment is more invasive in nature. For example, for mild/moderate generalised sensitivity over-the-counter (OTC) products such as desensitising toothpastes and mouthrinses can be recommended to the patient for use at home and, for moderate/severe localized sensitivity more invasive in-office (professionally applied) products such as restorations etc., can be suggested. It is important, however, to provide preventive advice such as modifying the toothbrushing technique or changes in the diet to reduce the intake of acidic foods and drink as well as eliminating any predisposing factors rather than simply recommending a particular treatment or technique. The aim of this presentation is to provide practical guidelines for clinicians on the management of DH and to enable them to successfully diagnose and treat the condition.

### Audience Take Away:

- Provide an overview on Dentine Hypersensitivity
- Provide practical guidelines on the management of Dentine Hypersensitivity
- Enable clinicians to effectively advise and manage patients with Dentine Hypersensitivity

### Biography:

David G Gillam graduated from Edinburgh Dental School in 1977 and have been involved in Dentistry over the last 40 years. I have worked in both clinical practice and in University Dental Hospitals as well as in Industry (1998-2001) initially with SmithKline Beecham and subsequently with Block Drug Company. From 2003 to 2008 I worked with a Clinical Research Organization and currently I am a Clinical Reader in Translational Research in Relation to Dentistry at the Bart's and the London School of Medicine and Dentistry QMUL in London (2009-). My main research interest is in the Management of Dentine Hypersensitivity and I have published over 100 papers on numerous dental topics as well as contributing to several books as Editor and several book chapters as a contributor.



**Laurindo Moacir Sassi**

Federal University of Sao Paulo, Brazil

## What are the variables responsible for the drop in the estimate of oral cancer in the State of Parana - Brazil in the period from 2020 to 2022?"

Our experience of 30 years of research in the area of oral cancer in the State of Paraná-Brazil(SP-B) teaches us that prevention and information are the only ways to reduce oral cancer. We observed a high rate of lip lesions of solar etiology and lesions of the oral mucosa (mainly in patients who drink alcohol and use tobacco). The patients in a study in the SP-B from 1989 to 1997 were referred to a questionnaire with 105 sections to profile them. Only those including the patients above 30 years old. The clinical examination of the mouth was realized searching for lesions (SASSI et al 1997). Another study (SASSI et al 1997) shows 3.134 clinical oral examinations, being found 443 lesions (14.1%); traumatic 47.6%, inflammatory II, 21.2%, inflammatory 20.8%, malignant aspects 5.6%, leukoplakia 4.33, cysts 0.4%. We performed biopsies in 25 lesions (5.6%), finding 3 cases of neoplasms (12.0%). In the year 2000, a pre-screening center for oral injuries was created in Curitiba where, in 31 months, 1.316 patients were enrolled, with 37 confirmed tumors (MIYACHI; SASSI; et al, 2002). In order to stimulate prevention, professionals from all over the State of Paraná received training to assist patients in a single day of 2002 on oral cancer prevention. RESULTS: Of 7.638 clinical exams, with 1.522 injuries (22.6%). (SASSI et al 2008, July). The health actions received a sequence in which the authors (SASSI et al 2008, August) appoint 8,668 oral examinations performed in 20 municipalities in Paraná from 1989 to 2007. 18.0% have never heard about oral cancer prevention. The 1.410 (16.27%) injuries: 1.280 were oral and other skin injuries. 65 cases of lesions suggestive of cancer (5.1%). 42 biopsied and 5 (12.5%) diagnosed with cancer. Continuing the study, authors (SASSI, et al; 2014), in an analysis of harmful habits to health, showed that 843 (22.59%) were smokers and 578 (15.49%) used alcohol, among the 22.300 patients evaluated in 25 years of oral cancer prevention campaigns in the State of Paraná. The National Cancer Institute (INCA), in 2006, estimated 820 new cases of oral cancer in Paraná for men and 260 for women. The Brazilian estimate: 10.380 for men and 3.780 women. INCA announces the 2012 estimate of 14.170 new cases, 9.990 for men and 4.180 for women. In our country, the data continues to grow, as shown by the estimate for 2016/2017, with 15.490 cases of oral cancer, 11.140 in men and 4.350 in women. These values correspond to an estimated risk of 11.27 new cases for every 100 thousand men and 4.21 for every 100 thousand women. In Paraná: Men-930 cases and Women-190 cases. The years go by and new INCA estimates appear in 2018/2019, with the presence of 11.200 new cases for men and women with 3.500. In the SP-B, the estimate is 910 for men and 220 women. INCA 2020: we observed an estimated regression of oral cancer, an example for men in Brazil: 11.180 (11.200) and women 4.010 (3.500). In the SP-B for 680 men (910) and 230 (220) women new cases. Preventive actions for oral cancer are the key to success.

### Biography:

Prof. Dr. Laurindo Moacir Sassi-PhD; MSc; DDS Oral & Maxillofacial Surgery; PhD; MSc; DDS; Department's Chief Oral and Maxillofacial Surgery (Chief in Chair Oral and Maxillofacial Surgery). Erasto Gaertner Cancer Center - Curitiba - PR-Brazil; Residence Coordinator of (CTBMF) - Erasto Gaertner Cancer Center; Hospital Universitario Evangelico Mackenzie; Member of the Brazilian College of Oral and Maxillofacial Surgery and Traumatology; Member of the Brazilian Society of Stomatology and Oral Pathology - SOBEP; Member International Journal of Oral & Maxillofacial Surgery; Book Author: "Manual Prático para Desenvolvimento de Projetos de Pesquisa e Teses". Publishing company: Santos. 2011; Book Author: "25 anos de prevenção de câncer bucal no Paraná: Hospital Erasto Gaertner (1989 a 2013)" Publishing company: Appris. 2013.



**Robert L. Kaspers**

University of Detroit-Mercy orthodontic program Detroit, Michigan, USA

## How to diagnose and treat the fulcrum effect

For years, orthodontists have utilized two-dimensional radiographs to treatment plan their orthodontic treatment. Fortunately, the advent of cone-beam computed tomography (CBCT) allows an orthodontist to take a “functional” radiograph, so the condylar position can be evaluated, and an accurate orthodontic diagnosis can be achieved. Okeson and Dawson defined both centric relation and a seated condylar position to help clinicians in their attempts to treat patients with TMD. Ikeda and Kawamura used MRI and LCBT to establish the optimal spatial relationships between the condyle and fossa in healthy joints. Their studies concluded that in healthy joints, the joint spaces (anterior space [AS], superior space [SS], and posterior space [PS]) showed consistent mean values of 1.3 mm (AS), 2.5 mm (SS), and 2.1 mm (PS), thereby verifying a concentric position of the condyle.

In June 2012, I developed the Five Condylar Positions© to help orthodontists diagnose their orthodontic cases more accurately. The seated condylar position and the protruded and retruded condylar positions have been thoroughly documented over the years in the literature. However, two new condylar positions have been established to help diagnose the “fulcrum effect.” The retruded condyle, which is down in the fossa, is a condylar position created when the patient fulcrums around a posterior contact (usually a molar) to achieve maximum intercuspation. Both the anterior joint space (AS) and the superior joint space (SS) have increased in size, while the posterior joint space (PS) has decreased in size. This condylar position is achieved when the patient activates the lateral pterygoid muscles to move the mandible forward and then activates the masseter and medial pterygoid muscles to close the bite into maximum intercuspation.

The centered condyle, which is down in the fossa, is the fifth condylar position. This condylar position is similar to the retruded-and-down condylar position in that the patient fulcrums around a premature posterior contact. The difference between this position and the retruded-and-down condylar position is that this position possesses a significantly larger skeletal Class II component and a larger vertical component (a larger anterior open bite). Both condylar positions are created by the “fulcrum effect,” which is a combination of the patient’s orofacial musculature forcing maximum intercuspation around posterior interferences. Roth defined the fulcrum as a condition in which the condyle distracts away from the eminence when the mandible closes into maximum intercuspation. My presentation will show the practitioner how to diagnose dental, orthodontic, and TMD cases accurately and the techniques utilized to treat the patient to a seated condylar position.

### **Audience Take Away:**

- My presentation will educate the audience in how to discern the differences in the Five Condylar Positions
- It will explain to the viewer exactly how these condylar positions are developed and their significance in helping the practitioner diagnose the anterior-posterior, transverse, and vertical dimensions in a patient’s occlusion
- When the patient is properly diagnosed, I will show the audience the different techniques utilized to treat the patient to a seated condylar position
- The presentation will educate the audience on how to diagnose and treat the fulcrum effect



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## **Biography:**

Dr. Kaspers received his DDS at University of Michigan Dental School. He received his orthodontic training at Northwestern University Orthodontic program. He received a Master of Science in Radiology at Northwestern University Dental School. He has lectured to hundreds of dentists and orthodontists on diagnosis and treatment planning for orthodontic and TMD patients. He is an adjunct associate professor at University of Detroit-Mercy Orthodontic program where he works with residents on research projects pertaining to condylar position. He is the founder of the Five Condylar Positions©. He maintains an orthodontic and TMD practice in Northbrook, Illinois.

SPEAKERS | DAY  
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**Jinfeng Peng<sup>1,2,3\*</sup>, Jiwei Sun<sup>1,2,3</sup>, Lili Chen<sup>1,2,3</sup>**

<sup>1</sup>Department of Stomatology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430022, China

<sup>2</sup>School of Stomatology, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China

<sup>3</sup>Hubei Province Key Laboratory of Oral and Maxillofacial Development and Regeneration, Wuhan 430022, China

## An exploration of SARS-COV-2 susceptibility in oral epithelial cells

**Background** Since the end of 2019, the burst of SARS-COV-2 has brought great negative influence to the whole world. It is reported that SARS-COV-2, like the SARS virus, invades cells by using S protein to bind to angiotensin- converting enzyme II (ACE2) receptors on the surface of human cells. A recent article has pointed out that transmembrane protease serine 2 (TMPRSS2) which treats the S protein from the new coronavirus is the key protease that helps SARS-COV -2 enter the target cell. As one of the largest microbial reservoirs in human body, oral microecosystem is closely related to the development of various oral and systemic diseases. In our previous study, we have demonstrated that SARS-COV-2 could be detected in saliva by collecting saliva from COVID-19 patients. Moreover, the questionnaire survey carried out on COVID-19 patients showed that dry mouth and amblygeusia could be considered as initial symptoms of COVID-19 infection. At present, a large number of studies have focused on exploring the connection between oral epithelial cells and SARS-COV-2 to evaluate the development of COVID-19 through microbial technology of oral saliva. However, less study have focused on figuring out the susceptibility of COVID-19 in oral epithelial cells by analyzing the expression of ACE2 and TMPRSS2, which are two COVID-19 infection related human proteins.

**Methods** Based on the current studies, to further explore the COVID-19 susceptibility in oral epithelial cells and its mechanisms, transcriptomic sequencing data of several datasets from TCGA and GEO were analyzed to figure out the relationship between expression of ACE2, TMPRSS2 and clinical features of patients. Through collecting oral epithelial tissues from patients with different ages and genders, PCR, WB, IF and IHC staining were finished subsequently to explore the relationship between the expression levels and the age as well as the gender of the patients, thus providing evidence for possible routes of entry for SARS-COV-2 and the influencing factors of SARS- COV-2 susceptibility in oral epithelial cells.

**Findings** By the analysis of several transcriptomic sequencing data from several oral epithelial tissues sequencing datasets, expression levels of ACE2 and TMPRSS2 are higher in oral epithelial cells from males at higher age. By analyzing the results of PCR, WB and IHC staining, the results show that ACE2 and TMPRSS2 are indeed expressed in human oral mucosal tissues, and their expression levels will increase with the growth of age. Meanwhile, the expression of TMPRSS2 in male oral mucosal tissues is higher than that in female with similar age.

**Interpretation** Our findings comprehensively confirm the existence of ACE2 and TMPRSS2 in oral mucosal tissues from multiple levels and clarify the relationship between expression levels of ACE2 and TMPRSS2 and patients' age as well as gender for the first time. The oral mucosa might be at potential risk of infection by SARS-COV-2, especially in male or elderly patients. COVID-19 patients, especially elderly male patients may have relatively serious oral damage, so doctors should pay more attention to oral health care in treatment, which bring a new insight into future explorations of the COVID-19 susceptibility in oral epithelial cells and its mechanisms

### **Audience Take Away:**

- Our findings comprehensively confirm the existence of ACE2 and TMPRSS2 in oral mucosal tissues from multiple levels

and clarify the relationship between expression level of ACE2 and TMPRSS2 and patient age as well as gender for the first time. Results showed that expression levels of ACE2 and TMPRSS2 increased along with the growth of age. In addition, male oral epithelial cells exhibited higher level of TMPRSS2

- These data show an essential molecule for possible routes of entry for SARS-COV-2 and the influencing factors of SARS-COV-2 susceptibility in oral epithelial cells
- Hence, the oral mucosa might be at potential risk of infection by SARS-COV-2, providing theoretical evidence for the occurrence of oral symptoms in COVID-19 patients, especially in male or elderly patients, which bring a new insight into future explorations of the COVID-19 susceptibility in oral epithelial cells and its mechanisms
- The clinical significances are as follows: 1. Using saliva samples to detect SARS-COV-2 has certain applicable group, the accuracy of which is likely to be higher in male or elderly patients; 2. COVID- 19 patients, especially elderly male patients may carry the virus in saliva. His family and medical staff, especially dental doctors, need to pay more attention to protective measures; 3. COVID-19 patients, especially elderly male patients may have relatively serious oral damage, so doctors should pay more attention to oral health care in treatment

### **Biography:**

Jinfeng Peng received the B. D. S. degree at the Huazhong University of Science and Technology, China in 2018, where she is currently pursuing the Ph.D. degree with the research group of Prof. Chen at the School of Stomatology, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China. She is also working with the Hubei Province Key Laboratory of Oral and Maxillofacial Development and Regeneration, Wuhan, China. Her research interests include dental biomaterials, circadian clock, and oral health.



**Bashar Muselmani**

Tishreen University, Germany

### **Alveolar bone modeling observed in response to treatment with SLB (Damon System) and early light elastic of patients with skeletal open bite malocclusion**

**T**his retrospective cephalometric study was performed on a sample of 20 patients with a skeletal Open bite malocclusion. 11 males, 9 females, age 12.5 +/- 1.7 years) treated with early light elastic protocol and Damon system. The cephalometric analysis was performed at the beginning (T1) and the end of the orthodontic therapy (T2). Angular and linear cephalometric variables were blindly measured by one investigator and repeated after 6 weeks. An error measurement (Dahlberg's formula) study was performed to evaluate the intra-examiner reliability. A paired-sample t test ( $p < 0.05$ ) was used to compare each variable from T1 to T2.



**Jun Hua**

Neurosection, Division of MRI Research, Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins University School of Medicine, Baltimore, Maryland, United States. Address: 707 N Broadway, Baltimore, MD, 21205

**Performing MRI scans in human subjects wearing metallic orthodontic braces**

MR images are very sensitive to susceptibility artifacts in the presence of metallic objects such as dental braces. This impedes the application of MRI for studies involving participants wearing metallic dental braces. It also presents a significant barrier for presurgical MRI in epilepsy and tumor patients with metallic head implants, hemorrhages, and other lesions with strong susceptibility effects. In this talk, we introduce two alternative MRI approaches in healthy human subjects wearing metallic orthodontic braces to demonstrate their ability to minimize susceptibility artifacts in the presence of metallic objects. Removable dental braces with bonding trays were used so that MR images could be acquired with and without the braces in the same subjects. Results were compared in regions with strong or minimal susceptibility effects between the current standard MRI sequences and the proposed alternatives using t-tests. The new methods showed preserved signal-to-noise ratio (SNR) in brain regions with strong or minimal susceptibility effects from the metallic braces, whereas the conventional MRI methods showed significantly impaired sensitivity in regions with strong susceptibility effects. Geometric distortion was substantially reduced throughout the brain with the proposed methods.

**Audience Take Away:**

- The new MRI methods can acquire functional and diffusion MR images, respectively, in healthy human subjects wearing metallic dental braces without the susceptibility artifacts commonly seen in conventional MR images, which impedes the application of MRI especially for studies involving teenage participants, and also presents a significant barrier for presurgical MRI in epilepsy and tumor patients with metal head implants, hemorrhages, and other lesions with strong susceptibility effects
- The new MRI methods showed preserved signal-to-noise ratio in brain regions with strong or minimal susceptibility artifacts caused by the metallic braces, whereas the conventional MRI methods showed significantly impaired sensitivity in regions with strong susceptibility effects
- Geometric distortion was substantially reduced throughout the brain with the new MRI methods

**Biography:**

Dr. Hua's research has centered on the development of novel MRI technologies for in vivo functional and physiological imaging in the brain, and the application of such methods for studies in healthy and diseased brains. These include the development of human and animal MRI methods to measure functional brain activities, cerebral perfusion and oxygen metabolism at high (3 Tesla) and ultra-high (7 Tesla and above) magnetic fields. He is particularly interested in novel MRI approaches to image small blood and lymphatic vessels in the brain. Collaborating with clinical investigators, these techniques have been applied 1) to detect functional, vascular and metabolic abnormalities in the brain in neurodegenerative diseases such as Huntingdon's disease (HD), Parkinson's disease (PD), Alzheimer's disease (AD) and mental disorders such as schizophrenia; and 2) to map brain functions and cerebrovascular reactivity for presurgical planning in patients with vascular malformations, brain tumors and epilepsy.



**Shima Chundoo<sup>1\*</sup>, Kevin McMillan<sup>2</sup>, Rhodri Williams<sup>3</sup>**

<sup>1</sup>Paediatric Dentistry and Maxillofacial surgery, Birmingham Children's Hospital, Birmingham, West Midlands, United Kingdom,

<sup>2</sup>Maxillofacial Surgery, Birmingham Children's Hospital, Birmingham, West Midlands, United Kingdom

<sup>3</sup>Maxillofacial Surgery, Birmingham Children's Hospital, Birmingham, West Midlands, United Kingdom

## **A retrospective study examining the presentation of paediatric dental trauma injuries and immediate management over 4-year period at a regional Children's Hospital.**

**Introduction:** Over the past four years, children have sustained massive changes to their lifestyle, schooling, intergenerational and generational interactions. Trends in dental trauma are evolving and management has changed. The aim of this study is to assess trends in the presentation of paediatric dental trauma and subsequent immediate management within a regional paediatric hospital.

**Methodology:** Retrospective study over a 4-year period (from 2018-2021 between months of January and April). Inclusion of all paediatric patients seen on the emergency department by OMFS team.

**Results:** Between 2018 to 2021, there has been a reduction, of nearly 50%, in the number of patients attending hospital. The average age has increased from 6 to 7.9 between 2020 and 2021 respectively. Males were more commonly seen between 2018-2019. Most injuries were attributed to falls with slight increase in road traffic accidents and assaults between 2018 to 2020.

Complicating injuries were present in nearly 60% of patients in 2020 but this has now dropped to 17% in 2021. From 2018 to 2019, there was greater proportion of injuries associated with primary dentition. Avulsion injuries increased by 54% between 2020 and 2021 and accounted for most injuries in 2021. This was followed by enamel fractures at 17%. In 2020, there was 31% increase in conservative management of injuries. Overall, there has been a 50% reduction in operative treatment under GA between 2019 and 2020.

**Discussion:** Mechanism of injuries are evolving with a growing proportion of road traffic collisions and assaults seen on ED. This may be attributable to differences in patient's lifestyle, spending more time outside and with less supervision. Overall, the number of patients attending has reduced which may indicate that dental health seeking behaviours are changing.

The average age has increased from 2018-2021 and this has permitted cooperation for a wider range of treatment modalities. A large proportion of injuries were managed conservatively. This could be due to reduced severity of injuries, less complicated injuries or the impact of COVID-19 on management and clinical time.

**Conclusion:** Paediatric dental trauma is changing, and dentists need to be aware of the current trends in presentation and management. Immediate treatment modalities were limited to extraction, splinting, bandage or a conservative approach.

### **Audience Take Away:**

- Paediatric dental trauma is evolving with changing lifestyle, schooling and environments
- Dental health seeking behaviour is changing and parents may be less likely to bring their children for emergency management
- Dentists need to be aware of current trends in paediatric dental trauma presentation and management
- Highlight the potential long-term implications of managing dental trauma

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## **Biography:**

Shima Chundoo studied Dentistry at the University of Birmingham and graduated as Bachelor of Dental Surgery in 2016. She achieved her MFDS postgraduate qualification from the Royal College of Surgeons of Edinburgh in 2018. Shima completed foundation training within the City Scheme of HEE West Midlands Deanery. After completing Dental Core Training years 1 and 2 at Shrewsbury and Telford Trust, Shima is currently a Dental Core Trainee 3 in Paediatric Dentistry and Oral and Maxillofacial surgery at Birmingham Children's Hospital. Shima is due to start work as an NHS regional clinical fellow in leadership and management from September.





**Shanthi Vanka\* and Amit Vanka**

Department of Preventive Dental Sciences, Ibn Sina National College for Medical Studies, Jeddah, Makkah province, Kingdom of Saudi Arabia

## Curative properties of green tea on oral squamous cell carcinoma: *In-vitro* study

**Introduction:** The Oral Squamous Cell carcinoma (OSCC) is the most prevalent cancer in the oral cavity with the highest mortality rate. Anticancer drugs like Cisplatin are used extensively to treat OSCC but are known to have serious side effects. Hence there exists a pressing need to explore combination therapies. Combination therapies of cisplatin with other drugs can reduce the dose of Cisplatin, and concomitant side effects.

**Aim:** The aim of the current study is to investigate the curative properties of polyphenols available in traditional green tea in combination with cisplatin in treatment of OSCC.

**Materials and Methods:** Human OSCC cell line was established under controlled *in-vitro* micro environment and the cell optical density was recorded following which the cell survival rates were calculated for Cisplatin, *Epigallocatechin gallate* (EGCG) and their combinations.

**Results and Conclusions:** The anti-carcinogenic property of Cisplatin in combination with EGCG has resulted in appreciable reduction in the cell survival. The effective combination is 1µg/ml of Cisplatin with 150µg/ml EGCG over duration of 72 hours results in an optimal reduction of survival. The alternative cancer treatment therapy such as green tea does not replace totally the available conventional treatment strategies. The investigation proves that these alternative treatments can substantially reduce the dosages / period of treatment by conventional chemotherapy treatment, the cancer patients would be benefited to a very large extent. It is also important to note that these alternate methods of treatment have no side effects. Thus, helping the patient to recover fast.

### Audience Take Away:

- The alternative treatments can substantially reduce the dosages / period of treatment by conventional chemotherapy treatment, the cancer patients would be benefited to a very large extent
- This will help the audience understand that the alternative cancer treatment therapy such as green tea does not replace totally the available conventional treatment strategies. This research helps other faculty to expand their research. The study proves that these alternative treatments can substantially reduce the dosages / period of treatment by conventional chemotherapy treatment, the cancer patients would be benefited to a very large extent. It is also important to note that these alternate methods of treatment have no side effects so it will provide new information to assist cancer therapy. Thus, helping the patient to recover fast

### Biography:

Dr. Shanthi studied Public Health Dentistry at the Barkatullah University, India and graduated as MDS in 2011. She then joined as a Senior Lecturer in People's College of Dental Sciences and Research Center, Bhopal. Currently working as Faculty in Dentistry program, Ibn Sina National College for Medical Studies. She has published more than 40 research articles in SCI(E) journals.



**Eduardo Rubio**

University of Buenos Aires, Argentina

## Preventive treatment in sleep apnea patients

**S**leep apnea is a very common pathology. The patient has sleep disorders, with usually very loud snoring and stop respiration. It is a very common condition in class II patients or in long faces with posterior rotational growth of the mandible. It's very important to recognize that kind of patients, in order to treat them with a combined approach. Orthodontist and surgical procedures will be necessary. During this presentation will be discussing the facial and skeletal appearance, as well as the results of a surgical early treatment in those patients.

### Biography:

Dr. Eduardo Rubio is Graduated from the University of Buenos Aires in 1980. He did his PhD in the same University in 1983. Residency at the French Hospital Buenos Aires, Argentina. Oral and Maxillofacial Surgeon (Argentinian Oral and Maxillofacial Society in 1983) Staff of the French Hospital till 2001 Master in Health Care Administration in 2001 (University of Entrepreneur and Social Sciences). He is Professor at the University of Buenos Aires in 2008. Nowadays, Head of the Postgraduate Program in Oral and Maxillofacial Surgery at the Argentinian Catholic University and Adjunct Professor Oral and Maxillofacial Surgery III at University of Buenos Aires. He is an Associated professor in Oral and Maxillofacial Surgery III and IV at Argentinian Catholic University. Work at Private office with a staff of doctors devoted to OMFS. Dr Rubio is dedicates mostly to Orthognathic Surgery.



**Pat Keady**

Aerosol Devices Inc, Fort Collins, Colorado, USA

## Uncovering the mystery of bio-aerosol transmission and how to reduce risk

The COVID-19 pandemic has completely changed the way we look at hygiene, occupational health and public safety protocols, especially in professions such as medical and dental where close contact with people is a requirement. In the early stages of the worldwide pandemic, there was much controversy around how SARS-CoV-2 was transmitted across the community. World Health Organization and the US Centers for Disease Control had maintained that transmission occurred through inhaling respiratory droplets from an infected person or touching a contaminated surface and then your eyes, nose or mouth. The medical and dental professions were concerned about aerosol generating procedures (AGPs) which produce relatively large droplets and dismissed smaller particles that are emitted from exhaled breath. New guidance agrees that aerosol transmission of virus particles is not only likely, but that aerosol particles can remain in the air for significant periods of time after an infected person has left the room. Small aerosol particles containing virus can be exhaled when talking or just breathing. This leaves a new dilemma for the dental profession. How can I trust that my office is safe from infectious diseases that spread through the air?

This presentation describes an advanced method of airborne virus sampling formerly used only by aerosol scientists: condensation growth tube (CGT) capture. This approach has now been configured as a portable instrument for use by non-aerosol experts for sampling bioaerosols in indoor spaces. The CGT's cold-hot temperature zones create water vapor supersaturation forcing condensation onto particles to form a fog of microdroplets. These droplets are gently collected keeping viruses, bacteria and fungal spores intact. The unique advantages of the CGT are: (1) high collection efficiency directly onto a sterile swab (>95% of particles from <10 nm to 10 µm), (2) instant genomic preservation of DNA/RNA upon capture, and (3) concentrated sample collection compatible with standard genomic analyses such as RT-qPCR and DNA/RNA sequencing. The work flow for sample analysis is identical to that used in diagnostic testing of nasal swabs.

### Audience Take Away:

- This presentation is designed to inform dental professionals about the threat of airborne viruses such as SARs-CoV-2 and future strains/other viruses that will threaten our livelihood, plus provide an understanding of the science of virus transmission based on recent studies published by leading researchers
- We will inform these professionals about the latest in virus sampling technology and how they can use aerosol sampling as a means to reduce risk of airborne transmission of pathogens in their office

### Biography:

Pat Keady is an entrepreneur and co-founder of Aerosol Devices Inc, a small women-owned scientific instrument corporation in Fort Collins, Colorado, USA. The company offers advanced aerosol sampling technology using condensation growth capture. Pat serves as the President/CEO. Pat has an MS in Mechanical Engineering from the Univ. of Minnesota, and MBA coursework from the University of St. Thomas, St. Paul, MN. She is a Past-President of the American Association for Aerosol Research, has two issued and three pending patents for aerosol measurement and over 25 publications in peer-reviewed scientific journals.



**Lohana Maylane Aquino Correia de Lima<sup>1\*</sup> ; Victor Leonardo Mello Varela Ayres de Melo<sup>\*2</sup>; Maria Luísa Alves Lins<sup>2</sup>; Kleyciane Kévilin Pereira da Silva<sup>3</sup>; Frederico Marcio Varela Ayres de Melo Junior<sup>4</sup>; Júlia de Souza Beck<sup>4</sup>; Bruna Heloísa Costa Varela Ayres de Melo<sup>5</sup>; Rodrigo Henrique Mello Varela Ayres de Melo<sup>6</sup>; Deise Louise Bohn Rhoden<sup>7</sup>; Milena Mello Varela Ayres de Melo Pinheiro<sup>8</sup>; Esdras Marques da Cunha Filho<sup>8</sup>; Mayana Aquino Correia de Lima<sup>9</sup>; Rayana Cruz Correia de Lima<sup>10</sup>; Jussara Diana Varela Ayres de Melo<sup>11</sup>; Nely Dulce Varela de Melo Costa Freitas<sup>12</sup>; Neme Portal Bustamante<sup>13</sup>; Juan Carlos Barrenechea Montesinos<sup>14</sup>; Zélia de Albuquerque Seixas<sup>15</sup>; Marcela Côrte Real Fernades<sup>1</sup>; Lucas Alexandre de Moraes Santos<sup>15</sup>; Jorge Pontual Waked<sup>16</sup>; Ricardo Eugenio Varela Ayres de Melo<sup>17</sup>**

<sup>1</sup>Dental Surgeon; Master degree student in dental clinics, Federal University of Pernambuco, Recife, Pernambuco, Brazil

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<sup>6</sup>General Surgeon, Ministry of Health Brazil, Rio Grande do Sul, Brazil

<sup>7</sup>Doctor, Pathologist, Lutheran University of Brazil, Rio Grande do Sul, Brazil

<sup>8</sup>Undergraduate Medical Student, Olinda Medical Faculty, Olinda, Pernambuco, Brazil

<sup>9</sup>Undergraduate Medical Student, Catholic University of Pernambuco, Recife, Pernambuco, Brazil

<sup>10</sup>Doctor; University of Pernambuco, Recife, Pernambuco, Brasil.

<sup>11</sup>Physiotherapist, Faculty of Communication Technology and Tourism, Olinda, Pernambuco, Brazil

<sup>12</sup>Physiotherapist, University Maurício de Nassau, Recife, Pernambuco, Brazil

<sup>13</sup>College Professor of Dentistry Course, University National Federico Villarreal, Lima, Peru

<sup>14</sup>Dental Health of the Army of Peru, Peruvian Army, Lima, Peru

<sup>15</sup>College Professor of Dentistry Course, Federal University of Pernambuco, Recife, Pernambuco, Brazil

<sup>16</sup>College Professor of Dentistry Course; Federal University of Campina Grande, Campina Grande, Paraíba, Brazil

<sup>17</sup>Head of Department of Bucofacial of Dentistry Course; Coordinator of the Specialization Course in Oral Maxillofacial Surgery and Traumatology, Federal University of Pernambuco, Recife, Pernambuco, Brazil

## **Surgical excision of polymorphous adenocarcinoma in the left maxilla with mucocutaneous flap reconstruction**

**Introduction:** Low-grade polymorphous adenocarcinoma is a malignant neoplasm of salivary glands with uncommon occurrence in the head and neck region. The lesions occur more frequently among elderly females between the sixth and eighth decades of life, with a higher prevalence for the hard palate and soft palate. The most indicated surgical treatment is extensive surgical excision, including resection of the underlying bone. The purpose of this study is to describe a case report

of a surgical excision of polymorphous adenocarcinoma in the maxilla with mucous flap reconstruction. Case Report: A 63-year-old male patient complaining of a tumor-like lesion in his left maxilla, which gradually increased in volume. At the intra-oral clinical examination showed the presence of upper and lower total dentures, an increase in volume in the left maxillary tuberosity region and a lesion of nodular features with fibrous and smooth consistency, fixed, sessile, oval shape, defined edges, and painless symptomatology. Radiographic imaging by panoramic radiography revealed a lesion with mixed radiographic density projected in the left maxillary tuberosity region and the in computed tomography scans were obtained and used for 3D image reconstruction. An axial tomographic view indicated the presence of a heterogeneous lesion with osteolysis: alteration in the cortical/trabecular bone and reabsorption of the left palatine bone, with regular contour and defined edges. Given the extent and complexity of the lesion, the surgical treatment in this case consisted of hemimaxillectomy and the surgery proceeded with mucosal flap reconstruction. The postoperative period followed was the service protocol, with no complications and no sign of recurrence. The pathological specimen was sent to the Anatomopathological Service, where the free margins and diagnosis were confirmed. Conclusion & Significance: The low-grade polymorphic adenocarcinoma is a rare malignant neoplasm that affects the salivary glands whose potential for malignancy, recurrence and metastasis are relatively low.

#### **Audience Take Away:**

- Definition of Adenocarcinoma
- Clinical and histopathological characteristics of Oral Adenocarcinoma
- Forms of treatment
- Description of a surgical clinical case
- The dental surgeon must know how to identify neoplasms and their forms of treatment, avoiding worse stages of pathologies

#### **Biography:**

Dental Surgeon and Master's student in integrated clinics at the Federal University of Pernambuco, Brazil; Currently, she is an intern at Ambulatory of Maxillofacial Surgery and Traumatology Service at the Federal University of Pernambuco, being a member of the projects care for patients with oral diseases and facial traumas, the project prevention and treatment of cancer in face and mouth regions in Venturosa-Pernambuco-Brazil and the project intitled Use of Traditional Chinese Medicine in the treatment of patients with temporomandibular disorders. In 2019 was invited by the Peruvian Army to give a conference at the 30th National Congress of Military Police Dentistry "Ejercito del Peru". In 2020, she won several awards for presentations of scientific works and was International Keynote speaker in the United States, France and England.



**Maria Sara de Lima Coutinho Mattera<sup>1\*</sup>, Natália Francisco Scaramelle<sup>2</sup>, Flavia Lombardi Lopes<sup>2</sup>, Thais Veronica Saori Tsosura<sup>1</sup>, Bianca Elvira Belardi<sup>1</sup>, Fernando Yamamoto Chiba<sup>3</sup>, Renato Felipe Pereira<sup>1</sup>, Heloisa Macedo Sampaio<sup>1</sup>, Rodrigo Martins dos Santos<sup>1</sup>, Edilson Ervolino<sup>4</sup>, Doris Hissako Matsushita<sup>1,4</sup>**

<sup>1</sup>Multicenter Graduate Program in Physiological Sciences, Sao Paulo State University (Unesp), School of Dentistry, Araçatuba, Sao Paulo, Brazil

<sup>2</sup>Sao Paulo State University (Unesp), School of Veterinary Medicine, Aracatuba, Brazil,

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<sup>4</sup>Department of Basic Sciences, Sao Paulo State University (Unesp), School of Dentistry, Aracatuba, SP, Brazil

## **Maternal periodontal disease promotes changes in microRNA expression patterns in adult offspring**

The fetal programming hypothesis suggests that stimuli or aggressions during intrauterine life may result in permanent physiological and metabolic changes in the offspring, increasing the risk of disease in adult life. Changes in microRNA expression patterns are considered one of the molecular mechanisms responsible for this programming. Previous studies have demonstrated that maternal periodontal disease (PD) promotes insulin resistance, increased plasma concentrations of cytokines, reduced GLUT4 content, plasma membrane, translocation index and expression in adult offspring. In addition, maternal periodontal disease was able to activate inflammatory pathways in the skeletal muscle of adult offspring. This activation was confirmed by increased expression of TNF-alpha, NF-kBp65, NF-kBp50, IKK alpha/beta and ERK1/2. However, no changes in DNA methylation of the GLUT4 gene and JNK expression were observed in adult offspring. It was possible to infer that one of the reasons for the observed reduction of GLUT4 expression in the muscular tissue of adult rats with PD occurred through the activation of inflammatory pathways. These findings evidenced the need for further studies to verify other mechanisms involved, such as miRNAs expression patterns in the adult offspring. Therefore, the aims of the present study are to evaluate in adult rats, offspring of rats with periodontal disease: a) body weight; b) global expression of miRNAs in gastrocnemius skeletal muscle. Rats were distributed into two groups: 1) with periodontal disease (PED), induced by ligation with silk thread around the 1st molar, 2) control rats (CN). Seven days after ligature placement, rats of both groups were mated, and copulation was verified by daily vaginal smears. Pregnant rats were separated into individual boxes. After weaning, male offspring were distributed into control offspring (CN-o) and periodontal disease offspring (PED-o) groups. Body weights were measured from 0–75 days of age. At day 75, analysis of the global expression of miRNAs was performed by microarray in total RNA extracted from gastrocnemius skeletal muscle samples. There was a significantly lower birth weight in the PED-o group compared to the CN-o group. However, body weight did not differ at the weekly weighing, carried out until 75 days of age, between the CN-o and PED-o groups. We identified 11 miRNAs that were modulated in adult offspring of rats with periodontal disease (fold change  $\pm$  1.5;  $p < 0.05$ ) when compared to control rats. Among these, 5 miRNAs were upregulated and 6 downregulated. Therefore, maternal periodontal disease is capable of promoting low birth weight, catch-up growth and, in adulthood, changes in microRNA profile in muscle. These findings reinforce the importance of caring for maternal oral health during pregnancy in order to avoid adverse pregnancy outcomes and epigenetic modifications in their adult offspring. This study was supported by the Sao Paulo Research Foundation (FAPESP) [grant #2019/04183-9] Sao Paulo, SP, Brazil.

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## **Audience Take Away:**

The aims are to alert the audience to:

1. Maternal oral health
2. Periodontal disease and gestational outcomes
3. Periodontal disease and epigenetic modifications
4. In addition to stimulating research in this area, as other changes may be occurring.

## **Biography:**

Maria Sara de Lima Coutinho Mattera graduated in Pharmacy from Paulista University (UNIP). She received her masters degree and PhD in Physiology from Multicenter Graduate Program in Physiological Sciences, Sao Paulo State University (Unesp), School of Dentistry, Araçatuba, Brazil. The principal investigator was Dr Doris Hissako Matsushita. She did sandwich PhD at the Eccles Institute of Human Genetics at the University of Utah in the United States (2018), the principals investigators were Dr. John David Symmons and Dr. Sihem Boudina. Currently a postdoctoral fellow in endocrinology laboratory at the Dental School of Araçatuba, Unesp.





**Julian Leow<sup>1\*</sup>, Karunakar Prabhu<sup>2</sup>**

<sup>1</sup>Oral and Maxillofacial Surgery Senior House Officer, Department of Oral and Maxillofacial Surgery, Ipswich Hospital, Ipswich, UK

<sup>2</sup>Oral and Maxillofacial Surgery Specialty Doctor, Department of Oral and Maxillofacial Surgery, Ipswich Hospital, Ipswich, UK

## **A unique case of a non-radiation induced angiosarcoma of the parotid mimicking temporomandibular joint disease**

**Introduction:** Temporomandibular disease (TMD) is a common yet not fully understood condition. Many patients with TMD present to oral and maxillofacial clinics, however it is important to have a differential diagnosis as symptoms of certain conditions are similar. We present a case where an angiosarcoma of the parotid was mistaken for TMD and was initially treated as such. It is to the authors' knowledge, that this is the first reported case of an angiosarcoma of the parotid mimicking TMD.

**Case Report:** A 92 year old male patient was referred by his dentist to our maxillofacial unit under the routine pathway with the diagnosis of painful and clicking temporomandibular joint. The patient presented 5-6 weeks after referral complaining of the right jaw feeling dislocated. On clinical examination there was a swelling over the right parotid region which was ill defined and approximately 3cm in diameter. A non-contrast magnetic resonance imaging of the head and neck suggested a lymphoproliferative process and a core biopsy reported angiosarcoma with epithelioid morphology. The tumour had rapidly grown and the patient was put on supportive care.

**Discussion:** Despite TMD being a common presenting disease, it is important not to forget other differential diagnosis. A surgical sieve is required to rule out other possible conditions. Early correct diagnosis is crucial in conditions such as angiosarcomas.

**Audience Take Away:**

- It is to the authors' knowledge, that this is the first reported case of an angiosarcoma of the parotid mimicking temporomandibular joint dysfunction
- Careful assessment of patients presenting with temporomandibular joint like pain is prudent
- It is important to always have a surgical sieve when considering this condition

**Biography:**

Dr. Leow studied Dentistry at King's College London and graduated in 2017, after which he spent 1 year in general dental practice. Following this, he continued his training by working in hospitals as an Oral and Maxillofacial Dental Core Trainee. During this time, he received a Postgraduate Certificate in Medical Education and a Diploma of Membership of the Faculty of Dental Surgery with the Royal College of Physicians and Surgeons of Glasgow.





## **Julian Leow<sup>1\*</sup>, Kohmal Solanki<sup>2</sup>, Mahesh Kumar<sup>3</sup>**

<sup>1</sup>Oral and Maxillofacial Surgery Senior House Officer, Department of Oral and Maxillofacial Surgery, Northwick Park Hospital, London, UK

<sup>2</sup>Oral and Maxillofacial Surgery Registrar, Department of Oral and Maxillofacial Surgery, Northwick Park Hospital, London, UK

<sup>3</sup>Consultant Oral and Maxillofacial Surgeon, Department of Oral and Maxillofacial Surgery, Northwick Park Hospital, London, UK

## **Fusion of an impacted third and supernumerary fourth molar tooth with concrescence of the second molar: A very rare case and novel treatment approach**

**Introduction:** We report the very rare case of a symptomatic 41-year-old female presenting with fusion of an impacted third (LL8) and fourth (LL9) mandibular molar tooth with concrescence of the second molar tooth (LL7). We share our experience of pre-operative cone-beam computed tomography (CBCT) to aid surgical planning and the novel use of piezoelectric surgery.

**Case Report:** A 41-year-old female was referred to the oral and maxillofacial surgery clinic with left jaw pain and swelling. Panoramic radiography revealed an impacted LL8-LL9 fused tooth with concrescence of the LL7. Cone-beam computed tomography showed direct contact with the inferior dental nerve (IDN) and lingual aspect of the double tooth. The patient underwent surgical removal of the LL8-LL9 using piezoelectric surgery to separate the double tooth from the LL7 and minimise trauma to the IDN. The patient was reviewed two weeks post-operatively with no lip/chin/tongue paraesthesia and a well healing socket.

**Discussion:** Though initially used for osteotomies, piezosurgery has also found success in endodontic and third molar surgery. We present the first case of successfully using pre-operative CBCT in the planning of surgery and piezoelectric surgery to separate an impacted fused LL8-LL9 from a concrescent LL7 without causing trauma to the LL7 or intimately positioned IDN.

### **Audience Take Away:**

We present the only known case of an impacted fused mandibular third and supernumerary fourth molar in direct contact lingually with the ID canal with concrescence of the second molar

Using pre-operative cone-beam computed tomography, we were able to extract the LL8-LL9 without trauma to the ID nerve and use piezoelectric surgery to separate it from and preserve the distal root of the LL7

Piezoelectric surgery is a useful option in retaining potentially functional teeth in cases of fusion and concrescence

### **Biography:**

Dr. Leow studied Dentistry at King's College London and graduated in 2017, after which he spent 1 year in general dental practice. Following this, he continued his training by working in hospitals as an Oral and Maxillofacial Dental Core Trainee. During this time, he received a Postgraduate Certificate in Medical Education and a Diploma of Membership of the Faculty of Dental Surgery with the Royal College of Physicians and Surgeons of Glasgow.

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**Nermin Hayek\*, Manraj Rai, Rohit Patel, Karim Hussain**

King's College Hospital, Oral and Maxillofacial Surgery Department, London, UK

## **The influence of the first coronavirus wave on the two-week-wait head and neck cancer referrals to a London hospital**

The coronavirus Covid-19 has sent reverberations in all aspects of healthcare, where its spread in 2020 has impacted multiple National Health Services, including the head and neck cancer clinics. Early diagnosis combined with the appropriate treatment plays an unquestionable significant role in the survival rates and prognosis for head and neck cancer patients. King's College Hospital sits in the heart of south-east London, serving a population of 700,000; however also acts as a tertiary care centre receiving referrals for a multitude of specialties from across the South of England. A retrospective review was conducted of 365 cases referred for suspected head and neck cancer to the Oral and Maxillofacial Surgery and Oral Medicine two-week-wait clinic at King's College Hospital during the first coronavirus wave (1st of March 2020 to 31st of September 2020) and the same time period in 2019. A total of 233 suspected head and neck cancer referrals were made via the Pan London referral pathway during the first wave in 2020, compared to 132 referrals made in 2019. A total of 3.4% (n=8) of the patients referred during the first wave were diagnosed with a subtype of head and neck cancer, compared with 9.8% (n=13) in 2019. Of these referrals, the proportion of patients not seen within the required 14-day period only slightly increased from 3.03% (n=4) in 2019 to 3.86% (n=9) in 2020. There was a significant impact from the government-enforced lockdown where reduced face-to-face examinations impacted the quantity of referrals and their diagnosis via the two-week-wait pathway. This study allows reflection of the impact of the first coronavirus wave on the two-week-wait head and neck cancer referrals and gives valuable insight for service implementation and staff reallocation in the event of future periods of waves to prevent overburdening of services.

### **Audience Take Away:**

- To gauge a better understanding of the impact of the coronavirus pandemic on the two week wait head and neck cancer services
- To familiarize themselves referral criteria to the two week wait head and neck cancer services as per NICE guidelines
- To encourage thought in developing ways to improve the referral service to head and neck cancer two week wait clinics to reduce overburdening of services in future circumstance

### **Biography:**

Nermin Hayek completed her Bachelor of Dental Surgery degree from King's College London. She worked as a dental core trainee in the Oral and Maxillofacial Surgery department in King's College Hospital and is currently carrying out a dental core training year in Community Dental Services. She is focused on furthering her post graduate education by participating in post graduate training courses particularly in the field of paediatric dentist and orthodontics.

# KEYNOTE FORUM

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**Sergio Charifker Ribeiro Martins**

University of Guarulhos, Brazil

## The challenging of immediacy in implantology: immediate implant placement and provisionalization

The Prosthetic rehabilitation has evolved since the introduction of implant therapy. The implant protocol has changed through time, mostly because of the confidence in the new screw's surfaces, some allowing early osseointegration and biomaterial in special deproteinized bovine bone grafts with slowly resorption and different graft particles sizes, increasing it's application. We can't believe, nowadays, in literatures that presents range near 99% of success in implant therapy and that is why, a question needs to be answered: Does it shows the clinical reality when we think about aesthetic results? In fact, there is now plenty of high-quality results (that's the excellence dentistry era) associated with less time rehabilitation and less interventions (minimally invasive treatments), less manipulation with the patient, choosing tissues substitutes instead of autogenous bone. The most traumatic situation, that has significant psychological impact, is the failure of a tooth, mainly the anterior maxillae - the aesthetic zone. The rehabilitation of these cases can be accelerated and solved in one-time procedure, extracting the root, immediate implant placement, filling the gap with bone substitutes and provisionalizing the temporary prosthetic crown. While the posterior tooth doesn't need to have a provisional crown installed, because of the low aesthetic necessity, the space maintain and gingival architecture can be provided by personal healing cap, on the other hand, single appointment with the installation of provisional prosthetic crown is useful principally at the anterior maxillary teeth. Having said that, any tooth can be replaced by immediate implant after extraction, following rigid protocol as installing the screw inside the bone triangle, grafting when it is needed, both soft and hard tissue, respecting distances between implant/tooth and implant/implant, buccal/lingual position and depth. The natural tooth crown can be prepared and used as a temporary prosthesis with good biological results. The most challenging scenario is to maintain trough the time the gingival margin without recession and the comprehension of biological width and the knowledge of Trans mucosal abutment high and creeping attachment is critical for stable results.

### Audience Take Away:

- Explain the workflow used for the treatment of failing tooth with immediate implant and provisionalization, to create a routine in the clinic
- The use of immediate treatment minimizes the psychological trauma of losing tooth, and needs less appointments, with no need of sophisticated procedures
- The use of immediate approaches provides the maintenance of ridge architecture, and following the steps for good results, creates a pink/white esthetic simulating natural tooth
- Researches can be done in order to compare results of different biomaterial used to fill the gap between implant and buccal wall

## **Biography:**

Sergio Charifker Studied Dentistry at the Federal University of Pernambuco, Brazil and graduated in 2003. In 2004 finished his first specialization course, Surgical Anatomy of the Face. Concluded the post-graduation in Oral and Maxillofacial surgery in 2008 and became oral and maxillofacial surgeon in the Brazilian Air Force. Received the master's degree in implantology in 2018 by studying the response of bone substitute in the grafted sinus. Since 2017 presents lectures in implantology area, and offers improvement course at SOEPE, in Recife. Coordinates courses in the field of implantology.

SPEAKERS | DAY  
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**David G Gillam**

Queen Mary University of London, UK

## The impact of dentine hypersensitivity on the quality of life: An overview

**D**entine Hypersensitivity (DH) is a recognised clinical condition that is somewhat enigmatic in nature and impacts on the QoL of those who suffer from the problem. It is therefore imperative that clinicians not only identify and diagnose DH, but also be aware of the impact of DH on their patients' QoL during their day-to-day activities. One of the problems facing investigators when evaluating the actual impact of DH on the QoL is the differences between the patient's and clinician's perception on the extent and severity of the problem. The use of QoL questionnaire (patient/person centred) studies therefore have been utilized in clinical studies to consider the effect of DH on the QoL of those individuals with the problem on a day-to-day basis using QoL measures such as the Oral Health Impact Profile (OHIP-14 or OHIP-49) or the Dentine Hypersensitivity Experience Questionnaire (DHEQ). Clinicians should also be aware that dental procedures such as ultrasonic cleaning, air from dental air syringes may also be unpleasant for patients with DH and may cause considerable stress to an already anxious patient. It is therefore important to alleviate this stress whenever possible by providing the relevant information regarding these procedures in a relaxed and reassuring manner. The application of a desensitizing polishing paste or varnish together with a recommendation of a suitable desensitizing toothpaste or mouthwash may also benefit the patient following the procedures. The patient should also be reassured that any symptoms from these dental procedures may be transient and will resolve within one week. The clinician should also stress the importance of continuing professional oral care, together with the relevant information to the patient on maintaining good oral health (including recommendations on dietary intake and modification of any overzealous toothbrushing techniques) to successfully managing the impact of DH and improve the patient's QoL during their daily activities. The aim of this short overview is to update clinicians on the impact of dentine hypersensitivity (DH) on the QoL of those suffering from this troublesome clinical condition and provide recommendations for reducing or eliminating the impact of DH and the QoL of those individuals who suffer from the condition.

### Audiences Take Away:

- Provide clinicians with an update on the impact of Dentine Hypersensitivity on the Quality of Life (QoL) on patients who suffer with the clinician
- Provide recommendations for reducing or eliminating the impact of Dentine Hypersensitivity and the Quality of Life (QoL) of those individuals who suffer from the condition
- Provide examples of Quality of Life (QoL) questionnaires that may be used to assess the impact of Dentine Hypersensitivity on the Quality of Life (QoL) in clinical practice

### Biography:

David G Gillam graduated from Edinburgh Dental School in 1977 and have been involved in Dentistry over the last 40 years. I have worked in both clinical practice and in University Dental Hospitals as well as in Industry (1998-2001) initially with SmithKline Beecham and subsequently with Block Drug Company. From 2003 to 2008 I worked with a Clinical Research Organization and currently I am a Clinical Reader in Translational Research in Relation to Dentistry at the Bart's and the London School of Medicine and Dentistry QMUL in London (2009-). My main research interest is in the Management of Dentine Hypersensitivity and I have published over 100 papers on numerous dental topics as well as contributing to several books as Editor and several book chapters as a contributor.





**Raed AlDelayme**

NYU Langone Dental Medicine, USA

## **Prediction of risk factors associated with the severity of pain, swelling and trismus following impacted lower third molar surgery**

### **Biography:**

Dr. Raed AlDelayme graduated with a Bachelor of Dental Science (BDS) in 2003 from the University of Mosul, Iraq. He has gained many qualifications in Oral and Maxillofacial Surgery from various residency programs which include: Syrian specialty (SOMFS) in 2009; Arab Board (CABOMFS) in 2009; Royal College of Physician and Surgeons in Glasgow (MOMSRCPSG) in 2010; Royal College of Surgeons in Ireland (MFD) in 2011; and Fellowship of Faculty of Dentistry from the Royal College of Surgeon in Ireland in the field of Oral surgery and Oral medicine (FFDOSOM) in 2013, Fellowship in Dental Surgery from the Royal College of Surgeons of Edinburgh (FDS) in 2019 and Fellowship in Dental Surgery from the Royal College of Surgeons of England (FDS) in 2020, Furthermore, he received a subspecialty in laser medicine (HDLaser) in 2015, Fellowship in Urgent Care in 2017 and Advanced Education in General Dentistry (AEGD) in 2019 from Eastman Institute of Oral Health, University of Rochester, USA. Dr. AlDelayme held the prestigious appointment as Dean of the faculty of Dentistry, Dijlah University College and Senior OMFS Surgeon, OMFS Department, Alyarmouk Teaching Hospital, Baghdad, Iraq where he supervised residents in their work to obtain their degree in OMFS. Dr. Al-Delayme has published several research studies and holds the position of Editor in chief, Editor and Reviewer for several research journals. Dr. Al-Delayme holds two dental licenses in Chicago and Maryland where he practices in various clinics, and he is an Oral Surgery Lecturer in NYU Langone residency Maryland programs for past three years. Dr. AlDelayme passion and contribution to academia, research, and clinical training from patient care to hands on continuing education hands on courses are endless.



**Sunny K Tilwani**

University of Illinois at Chicago, Illinois, USA

## Digital dentistry: Beyond implants

Digital technology has become an integral part of dentistry in recent years. The congruence of scanning, visualization, CAD, milling, rapid prototyping and 3D printing technologies have led to its use in all aspects of dentistry. This presentation focuses on the applications of digital technology beyond implant dentistry and in the fields of craniofacial, maxillofacial, orthognathic, and periodontal treatments, including but not limited to medical modelling, drilling, and cutting guides, reconstruction plates, socket preservation, periodontal repair and regeneration, sinus and bone augmentation, tooth transplantation and education. The presentation also reviews types, materials, and modalities of digital techniques available and their future perspectives.

### **Audience Take Away:**

- New and exciting applications of digital technology in dentistry
- Materials and modalities employed in the digital field
- Advantages and disadvantages of these techniques
- This presentation will also discuss future implications of digital technology in dentistry

### **Biography:**

Dr. Sunny K. Tilwani completed his Periodontology residency program at Boston University Henry M. Goldman School of Dental Medicine. Dr. Tilwani earned MS in Health Administration, MBA from University of St. Francis, and MPH from the University of North Florida. He is a Diplomate of the American Board of Periodontology and Dental Implant Surgery. His research interests focus on the role of biological growth factors in periodontal regeneration, utilization of piezoelectric devices during periodontal surgery and applications of digital technology in dentistry.



**Kajal Patel B\*, Kilgariff, J.K.**

Dundee Dental Hospital & School (DDH&S), UK

## **Clinician experience of virtual consultation within a dental hospital setting during the covid-19 pandemic: A cross-sectional observational study**

The COVID-19 pandemic has had devastating implications for the UK dental profession. As a result of the mode of transmission of coronavirus, clinical dentistry has had to rapidly evolve and there have been drastic changes to the way in which UK dental professionals operate. Following complete cessation of elective dental treatment initially, there has been a gradual phased return towards normal services.

However, the capacity for face-face patient appointments still remains limited due to factors such as unsuitable operating environments and the consideration of fallow time following aerosol-generating procedures (AGPs). Safety changes have included minimizing the number of patients and chaperones circulating through dental hospitals and ensuring compliance with social distancing regulations. Consequently, a large number of face-face appointments have been reassigned to virtual or remote (such as videoconferencing or telephone) consultations. This shift in practice comprises part of a national effort to safeguard public health during the pandemic. It is however vital that despite these changed practices, clinicians can continue to provide evidence-based, good quality care and balance safeguarding with the risks of delayed and/or misdiagnosis of oral diseases.

A systematic literature review was undertaken on the use of virtual consultations within dentistry. The study sought to investigate if virtual consultation platforms are thought to be fit-for-purpose when undertaking oral assessments during the COVID-19 pandemic. Participants were recruited via email invitation. A questionnaire was designed, piloted and distributed to 80 dental clinicians within a specialist secondary care dental setting. Data collection is currently underway and will be analysed using SPSS software and simple descriptive statistics.

### **Audience Take Away:**

- Apprise the audience of the current literature on the scope of virtual consultations platforms within healthcare environments
- Participants will gain insight into the benefits and shortcomings of using virtual consultation platforms within dental specialties
- Participants will benefit from heightened awareness and deeper understanding when adopting and inculcating remote consultations within their own scope of healthcare practice

### **Biography:**

Dr Patel has undertaken postgraduate dental core training posts at three different units in the United Kingdom in Oral & Maxillofacial Surgery and Restorative Dentistry specialties. Since joining DDH&S, Dr Patel has embarked on a number of quality improvement and research projects, working closely alongside the Scottish Dental Clinical Effectiveness Programme team.



**Shima Chundoo**

Birmingham Children's Hospital, UK

## A literature review on the oral and dental manifestations in paediatric oncology patients using PRISMA guidelines

**Background and Aims:** There are 1,878 new cancer diagnoses in children in United Kingdom. Oral infection or disease can be a serious contraindication to progression of further surgical treatment and quality of life.

The aim of this review is to evaluate current research in oral health complications associated within the paediatric oncology patient population. The secondary aim is to raise awareness of the need for dental care in this vulnerable cohort and highlight oral complications and treatment modalities available.

**Methodology:** PubMed literature review with use of PRISMA guidelines. Search terms: paediatric oncology and dentistry and oral or dental. 1,511,086 results found. Articles filtered for randomised controlled trials, meta-analysis, systematic review, reviews and clinical trials (N=104,374). Articles filtered by age range and human species (N=15,353). Articles filtered for English language (N=14,767). Articles screened for full text (N=5,793). Articles screened by title (N=21). Articles screened by abstract (N=17). Inclusion criteria limited to patients aged 18 and under.

**Results:** Critical appraisal of all included literature was completed, examining hierarchy of evidence, patient contact, author, type of study. In total, there were 4 randomised controlled trials, 7 reviews, 4 studies and 2 systematic reviews. Dental implications ranged from oral mucositis, candidiasis and gingivitis. Agnathia was seen most in children undergoing chemotherapy. Significant oral implications associated with haemopoietic stem cell transplants. Lymphocytic leukaemia is mostly associated with paediatric patients and oral implications. Treatment modalities examining cryotherapy and lasers for mucositis have been recommended.

**Conclusion:** The oral implications associated with cancer diagnosis, treatment and therapy are significant. It is imperative to manage each paediatric patient as holistically as possible. Members of oncology team should recognise oral health complications and implement appropriate management, symptomatic relief or referral to specialist. Further research into reporting of oral manifestations and possible interventions are needed to establish a standardised oral health care model for paediatric oncology patients.

### Audience Take Away:

- Paediatric oncology cases are rising
- Oral and dental manifestations are frequent
- Dentists and paediatric teams need to be aware of the signs and symptoms as well as appropriate management pathways
- Highlight the need for further research into oral manifestations associated with oncology care and treatment

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## **Biography:**

Shima Chundoo studied Dentistry at the University of Birmingham and graduated as Bachelor of Dental Surgery in 2016. She achieved her MFDS postgraduate qualification from the Royal College of Surgeons of Edinburgh in 2018. Shima completed foundation training within the City Scheme of HEE West Midlands Deanery. After completing Dental Core Training years 1 and 2 at Shrewsbury and Telford Trust, Shima is currently a Dental Core Trainee 3 in Paediatric Dentistry and Oral and Maxillofacial surgery at Birmingham Children's Hospital. Shima is due to start work as an NHS regional clinical fellow in leadership and management from September.



**Arpit Sikri**

Bhojia Dental College & Hospital, India

## The evolution & revolution in Dentistry: Digital implantology

The digitalisation in the field of dentistry particularly talking in terms of Dental Implantology is running swiftly. The contribution from the various sources of digital dentistry i.e. the digital devices namely the 3D CBCT (Cone Beam Computed Tomography), Digital Scanners including the Intraoral scanners & Extraoral (Lab) scanners with recent introduction of Facial scanners along with 3D Photogrammetric approaches have paved the way for the dental surgeon to cater the patients virtually. A commonly used term i.e. Digital Workflow, also helped the clinician to treat the patients in a proper stepwise manner. The workflow approach has helped the clinicians to deal with the patients, right from the diagnosis, scanning, designing and final fabrication of the prosthesis. Digital workflow in implant dentistry has always ensured better treatment planning with increased accuracy and predictability of the final treatment thereby helping the dental surgeons to foresee the exact surgical procedure giving due respect to the anatomy and the associated landmarks and thereby treating the patient with minimal discomfort. This review article highlights about the incorporation of digital dentistry and digitization as nuances in the field of dental implantology with more accuracy and reduced error and further possible complications to improve the final planning and prosthetic rehabilitation of the patient.

### Audience Take Away:

- The digital workflows in dental implantology
- Incorporating the digital implantology and devices in clinical practice
- Incorporating the digital implantology and devices as a part of research and teaching as it is an emerging discipline
- Digital implantology as a boon to the implantologists by improving the clinical efficacy and accuracy
- Digital workflows will help the practitioners to eliminate the number of steps for fabrication of prosthesis

### Biography:

Dr. Arpit Sikri [BDS (Gold Medallist), MDS (Prosthodontics), PGDHM, DWCOI] is currently working as Associate Professor & Post Graduate Teacher in the Department of Prosthodontics, Bhojia Dental College & Hospital, Baddi, Himachal Pradesh, India. He had earlier worked as Senior Resident in the most prestigious dental institute of the country i.e. Maulana Azad Institute of Dental Sciences, New Delhi, India. He had also worked as Senior Lecturer in Santosh Dental College, Santosh Deemed to be University, Ghaziabad (Delhi NCR) & Senior Lecturer in Sudha Rustagi College of Dental Sciences & Research, Faridabad, Haryana, India.



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## Face injury caused by dog bite

The bites that are of most interest to the dental surgeon are caused by domestic animals, especially dogs and cats. These injuries are of great importance, as they have a high rate of contamination and can cause some systemic diseases caused by bacteria, viruses, protozoa and parasites. Purpose: To clarify and explain possible differences regarding the treatment of these injuries. Case report: Male patient, 3 years old, victim of physical aggression by a dog of his own family, was taken to the emergency room of the reference Hospital in Recife, Pernambuco, Brazil, under regular general condition, walking, conscious, oriented, afebrile and eupneic. On clinical examination, an extensive scalp wound was found, and a laceration as well as a contusion in the right preauricular area with profuse hemorrhage. Under general anaesthesia, the treatment was based on strict rinse with 0.9% saline and polyvinylpyrrolidone, the team performed the removal of foreign bodies, debridement of

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devitalized tissues and hemostasia of the blood vessels. Family members were instructed to observe the offending animal for 10 days. Tetanus prophylaxis was not indicated because the child was vaccinated. There were no postoperative complications and the wound healing achieved good results. Conclusion: Bite wounds are treated a little differently than the other wounds, since they have saliva rich in microbiota, being highly susceptible to infection. As for the need for prophylaxis of human rabies, the patient should be referred to a specialized service, and the offending animal should be kept isolated from other individuals and animals.

## **Audience Take Away:**

- Learn about the procedures taken during the operation
- Understand facial anatomy
- Have a quick look in some trauma statistics
- Learn about treatment and prognosis based on brazilian ministry of health on the prophylaxis treatment for rabies

## **Biography:**

Dental School student in Maurício de Nassau University, Brazil, Currently, an intern at Ambulatory of Maxillofacial Surgery and Traumatology Service in Clinical Hospital at the Federal University of Pernambuco. As a member of the project to take care of patients with oral diseases, facial traumas, project entitled prevention and treatment of cancer in face and mouth areas in Venturosa-Pernambuco-Brazil. Also, use the Traditional Chinese Medicine in the treatment of patients with temporomandibular disorders.





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## **Surgical removal of unerupted teeth associated with dentigerous cyst in the mandibular symphysis region - case report**

**U**nerupted or impacted tooth is a dental organ that, even when fully developed did not erupt at the regular time, lying inside the bone completely surrounded by bone or bone and mucosal tissue. This paper aims to report a clinical case of a 14-year-old female patient who attended the Ambulatory of Maxillofacial Surgery and Traumatology Service at the Federal University of Pernambuco, reporting mentonian discomfort. The symptomatology was induced by an unerupted lower canines associated with two other supernumerary teeth that, radiographically had similar characteristics to canines surrounded by a radiolucent image suggesting a dentigerous cyst in the mentonian region of the mandible, in an atypical position of “Kisses Teeth”. Due to the extension of the lesion, the patient underwent a surgical procedure under general

anesthesia in order to remove the teeth and the lesion. Firstly, incisions were performed, followed by osteotomies and ostectomies to approach the lesion. The elements were removed aided by Seldin elevators, then, cystic enucleation with cavity cleaning and bone regularization and the lesion was sent to perform the histopathological screening. Over the postoperative period, the patient evolved without philogistic signs and after 1 year, another facial radiography was requested for post-surgical control. Radiographically, the bone tissue healing in the region was observed, preserving the root apices of the inferior elements. Clinically, the patient presented with preserved tissues and all dental elements demonstrated pulp vitality. The radiographic aspect presented in our case report differs from the most common aspect mentioned in the literature, since the lesion comprised four dental elements involved by a single dentigerous cyst, reaching larger proportions. The case reported here is considered rare because the impacted teeth was in the mandibular region and the prevalence of unerupted canine occurs more frequently in upper canines. They also presented with their normal size, with no association of traumas in the region and without loss of early deciduous elements. In addition, the dentigerous cyst was crossing the median line which characterizes another variant, once it involves multiple dental elements. The unerupted canines study is very important in Dentistry, since successful results depend on correct and early diagnosis for proper management and success of the proposed treatment.

#### **Audience Take Away:**

- Understand the causes of mandibular canine impaction and transmigration
- Learn the main clinical findings to diagnose the presence of impacted canines and understand the importance of an early diagnose
- How to determine the correct treatment - The preservation of these impacted teeth or surgical removal
- Learn about dentigerous cyst, a pathological accomitment of unerupted teeth - How to diagnose and how to solve and determine the treatment

#### **Biography:**

Undergraduate Dentistry student of University Center Facol - UNIFACOL, Brazil. Intern at Ambulatory of Maxillofacial Surgery and Traumatology Service at the University Center FACOL and Ambulatory of Maxillofacial Surgery and Traumatology Service at the Federal University of Pernambuco, being a member of the projects care for patients with oral diseases and facial traumas, the project prevention and treatment of cancer in face and mouth regions in Venturosa – Pernambuco - Brazil and the project intituled Use of Traditional Chinese Medicine in the treatment of patients with temporomandibular disorders.



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## **Reconstruction of zygomatic-orbital fracture in pediatric patients victim of physical aggression by a large-caliber firearm projectile**

**F**acial trauma can be considered one of the most devastating aggressions found in trauma centers due to the emotional consequences and the possibility of deformity. This eventuality acquires a much greater danger when produced in children, because regardless of the possible facial scars, they can also affect the centers of growth and development of the facial skeleton, with future repercussions in functional defects that translate as adults with hypoplasias, atrophies and facial disharmonies. For this reason, one must act with great professional security in the face of such emergencies, which require

special care regarding diagnosis, classification and treatment, mainly because the face is one of the noblest regions of the body. This study aims to report a case of a pediatric patient victim of a domestic accident by firearm projectiles in which hit the right zygomatic-orbital causing permanent loss of vision. Female patient, 7 years old, accompanied by her mother, went to the emergency hospital in Recife-Pernambuco-Brazil reporting a domestic accident, where the hunting gun accidentally went off between two children. On extraoral clinical examination, the patient presented a perforated-blunt wound in the infected right zygomatic region and characteristic signs of bilateral amaurosis, with ecchymosis and bilateral periorbital edema. On imaging examination, he showed several fragments of firearm projectiles in the posterior region of the left orbital cavity, and with a right zygomatic-orbital fracture affecting the lateral wall and orbit floor, characterized destruction of the midface. The patient underwent, under general anesthesia, procedures for excision of foreign bodies, removal of devitalized tissues and local cleaning, minimizing risks of infection and tissue necrosis. The postoperative period continued in the normal patterns and the patient was rehabilitated with bilateral ocular prosthesis, returning aesthetic and facial symmetry. Understanding the cause, severity and temporal distribution are important factors in the effectiveness of treatment since, facial trauma is a public health concern because of its impact on quality of life.

#### **Audience Take Away:**

- Definition and characteristics of facial trauma in pediatric patients
- Trauma statistics in a pediatric patient
- Description of a case report
- The importance of the management of pediatric patients and the complete treatment of the initial care until the rehabilitation of the traumatized patient

#### **Biography:**

Academic in Dentistry in Federal University of Pernambuco, Brazil, Currently is an intern at Ambulatory of Maxillofacial Surgery and Traumatology Service in the Clinical Hospital of Federal University of Pernambuco, being a member of the project to care for patients with oral diseases and facial traumas and the project entitled prevention and treatment of cancer in face and mouth regions in Venturosa-Pernambuco-Brazil. Won awarded for presentation of scientific works at national and international events and in 2018, was invited by Universidad Nacional Federico Villareal to give a conference at the XIII Congreso Internacional de Odontología and for I Jornada Internacional Multidisciplinaria de Estomatología Peruano Brasileira by Peruvian army.

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