

Theme:

### **DENTAL SPECIALITIES:**

Together towards a successful tomorrow

Date:

9-11 March 2018

Venue:

Hotel Istana, Kuala Lumpur

## SCIENTIFIC COMPETITION

**Instructions to Oral Presenters: Pahang Room** 

Time	Activity
8.00 am - 9.00 am	Presenters to upload presentation onto available desktop
9.00 am – 12.30 pm	Scientific oral presentation
12.30 pm – 1.00 pm	Deliberation by judges
1.00 pm	Announcement of winners

Instructions to Poster Presenters: Hallway (In front of Exhibition Hall)

Time	Activity
8.00 am - 9.00 am	Presenters to mount posters on available poster board(s)
9.00 am - 12.30 pm	Scientific poster presentation
12.30 pm – 1.00 pm	Deliberation by judges
1.00 pm	Announcement of winners

# SCIENTIFIC COMPETITION

### ORAL PRESENTATION 26 JANUARY 2018 (FRIDAY)

VENUE : PAHANG ROOM, PUTRA WORLD TRADE CENTRE				
			Submental flap for oral reconstruction: Our experience in	
OR 1	9.15-9.30 am	Dr. Komalam Mugunam	Miri, Sarawak	
OR 2	9.30-9.45 am	Dr. Vinesh Raj	Angular cheilitis in prolong denture use	
OR 3	9.45-10.00 am	Mr. Sum Chern Yang	Prevalence and patterns of tobacco use among health science undergraduate students: A cross sectional study	
OR 4	10.00-10.15 am	Ms. Hong Jie Ru	Assessment of nasolabial angle among Malaysians with skeletal class II and class III relationships – A pilot study	
OR 5	11.30-11.45 am	Dr. Wan Nur Alwani Bt Wan Abdul Aziz	A preliminary study of self-perceived oral health of villagers in an urban district in Malaysia using GOHAI-MALAY	
OR 6	11.45-12.00 pm	Dr. Amani Binti Amran	Unilateral central giant cell granuloma in Noonan syndrome	
OR 7	12.00-12.15 pm	Dr. Niladri Maiti	Comparative evaluation of bioglass based gel and diode Laser in treatment of dentinal hypersensitivity: A scanning electron microscope study	



## TITLE: SUBMENTAL FLAP FOR ORAL RECONSTRUCTION: OUR EXPERIENCE IN MIRI, SARAWAK

Authors: Komalam Mugunam<sup>1</sup>, Lisamarie Sagan<sup>1</sup>, Shim Chen Kiong<sup>1</sup>

Affiliation Details: Klinik Pakar Bedah Mulut, Hospital Miri, Sarawak, Malaysia 1

**INTRODUCTION:** Many techniques have been described for the reconstruction of small to moderate defects caused by the surgical treatment of oral cancer. The submental island flap (SIF) is a simple and feasible technique that has been used since 1993. In this case report, we share our experiences in the using this technique for oral reconstruction.

CASES: Three cases of patients who were diagnosed with oral cancer of the mandible, ranging from the ages of 19 to 73 are included. Patients had undergone cancer surgery between early 2012 until mid-2017, with their oral cavity defects reconstructed using the submental island flap, with varying degrees of success. The patients also underwent subsequent radiation and /or chemotherapy.

**DISCUSSION:** Of the three patients, none of them experienced complete flap failure. All donor site defects were satisfactorily closed. No residual nodal or metastatic tumour growths within the flaps were observed, but one patient had undergone post-radiation neck dissection due to suspected nodal metastases of the cervical lymph nodes.

**CONCLUSION:** The submental island flap is a convenient and valid technique for reconstruction of small to moderate orofacial defects. However, its use could be limited by the site and size of the defect and submental lymph node metastases.

### ORAL 2

#### TITLE: ANGULAR CHEILITIS IN PROLONG DENTURE USE

Author: Vinesh Raj<sup>1</sup>

Affiliation Details: Klinik Pergigian Kampar, Kampar, Perak, Malaysia<sup>1</sup>

**INTRODUCTION:** Angular cheilitis is a fungal infection which occurs on corner of lips, commonly seen in prolonged denture wearing patient. It can be due to reduced vertical dimension of denture and poor denture hygiene maintenance. This can be managed by general dentist.

**OBJECTIVE:** Managing angular cheilitis in prolong denture wearing patient.

CASE REPORT & TIPS: A 79 year old, Indian Muslim female patient came with chief complain of pain on corner of lips. Patient complains pain comes whenever she wears denture and reliefs on not wearing the denture. On examination, acrylic teeth on patient's existing removable denture have undergone attrition leading to reduced vertical dimension leading to pooling of saliva on corner of lips. As management, patient was told not to wear the old denture, anti-fungal cream given to be used for 14 days and a new denture was fabricated and issued and a proper oral hygiene and denture hygiene care was given. Patient was strictly asked to use denture cleanser on daily basis. After 14 days of issue of new denture patient came for review and lesion on corner of lips subsided

**CONCLUSION:** Patient with angular cheilitis is required to come for routine review visits as this will help the dentist to assess the denture condition and fungal infection and manage them as needed.



### TITLE: PREVALENCE AND PATTERNS OF TOBACCO USE AMONG HEALTH SCIENCE UNDERGRADUATE STUDENTS: A CROSS SECTIONAL STUDY

**Authors: Chern Yang Sum**<sup>1</sup>, Jea Yue Chew<sup>1</sup>, Jie Qi Lim<sup>1</sup>, Wan Chien Chong<sup>1</sup>, Priyadarshini Ramamurthy<sup>1</sup> **Affiliation Details:** <sup>1</sup>Faculty of Dentistry, SEGi University, Petaling Jaya, Selangor Darul Ehsan, Malaysia

**INTRODUCTION:** Tobacco usage is a common encounter among university students, but its prevalence and patterns have not been explored so far.

**AIM:** To determine the prevalence and patterns of tobacco use among health science faculty students of SEGi University, Kota Damansara.

MATERIAL AND METHODS: This cross-sectional study was conducted on 500 students of four health science faculties at SEGi University Kota Damansara. Modified Global Youth Tobacco Survey (GYTS) questionnaire was used to collect required information on tobacco usage. The survey form was administered as Google Form for the participants to fill after obtaining informed consent. Data was analysed using SPSS version 22. Descriptive statistics & Chi square test were used. P<0.05 was considered significant.

**RESULTS:** Response rate was 87%. About 95% of participants had heard of tobacco and 22% had used tobacco. The main form of tobacco used was cigarette (90%), followed by shisha and vaping. Main reason for using tobacco was self-enjoyment (65%). About 95% were aware of the harmful effects of tobacco and 52% were ready to quit if assistance was provided.

**CONCLUSION:** There is an urgent need for reinforcement of education on quitting tobacco among the undergraduates of health science faculties as they are the future health care professionals who have to educate public on tobacco.



### TITLE: ASSESSMENT OF NASOLABIAL ANGLE AMONG MALAYSIANS WITH SKELETAL CLASS II AND CLASS III RELATIONSHIP – A PILOT STUDY

**Authors:** Jieru Hong<sup>1</sup>, Suvita Sahundarajoo<sup>1</sup>, Joon Li Tan<sup>1</sup>, Su-Kwan Yew<sup>1</sup>, Chaithanya Karnati<sup>1</sup> **Affiliation Details:** Faculty of Dentistry, SEGi University, Petaling Jaya, Selangor Darul Ehsan, Malaysia<sup>1</sup>

**INTRODUCTION:** One of the main soft tissue parameter in orthodontic analysis is the nasolabial angle. It is an excellent clinical and cephalometric parameter to reveal the anteroposterior position of the maxilla and skeletal malocclusions.

AIM: The purpose of this study was to evaluate the nasolabial angle among Malaysians with skeletal class II and skeletal class III relationship.

MATERIAL AND METHODS: This cross-sectional study was conducted on patients visiting SEGi Oral Health Centre, Kota Damansara. 40 lateral cephalometric radiographs were selected from the records of the patients and all the samples were Malaysians within the age range of 18 to 35 years. They were classified into class II (20) and class III (20) based on ANB value. 6 reference points and 4 skeletal angular measurements were manually traced on the lateral cephalograms. The angular measurements were analysed statistically using software SPSS Version 22 applying independent sample t-test and p-value of ≤0.05 is considered as significant.

**RESULTS:** The mean nasolabial angles in class II and class III skeletal profile were  $91^{\circ} \pm 14.9^{\circ}$  and  $88.4^{\circ} \pm 12.0^{\circ}$  respectively. There is no significant difference was found in the nasolabial angle between class II and class III skeletal relationship with p=0.541.

**CONCLUSION:** The present study shows that nasolabial angle is not significantly different in different skeletal patterns.



### A PRELIMINARY STUDY OF SELF-PERCEIVED ORAL HEALTH OF VILLAGERS IN AN URBAN DISTRICT IN MALAYSIA USING GOHAI-MALAY

**Authors: Wan Nur Alwani binti Wan Abd. Aziz¹**, Wan Mohamad Nasir bin Wan Othman¹, Haslinda binti Ramli¹, Mohd Dzulkhairi bin Mohd Rani², Wan Nor Syariza binti Wan Ali¹, Muslimah bt. Ithnin² **Affiliation Details:** Faculty of Dentistry, USIM¹, Faculty of Medicine and Health Sciences, USIM²

**BACKGROUND:** Measurement of self-perceived oral health status (SPOHS) as an adjunct to the objective-oriented clinical assessment is gaining greater interest. The most common instrument used for the assessment is General Oral Health Assessment Index (GOHAI).

**OBJECTIVE**: The objective of this study was to investigate SPOHS of urban resident of selected district in Malaysia using GOHAl-Malay.

METHODOLOGY: A cross-sectional study of SPOHS was conducted among villagers in an urban district in Malaysia using a stratified two-stage sampling method. Respondents were interviewed by using the validated GOHAI-Malay questionnaire to assess their SPOHS according to socio-demographic variables, presence of diabetes mellitus, cardiovascular disease, smoking status and obesity based on BMI. The data were evaluated using Chi-square test with level of significance at p≤0.05.

**RESULT:** A total of 207 residents from five villages were interviewed. The age of the respondents were between 19 to 86 years old with mean age of 53.48 years (SD $\pm$ 17.89). A total of 63.3% of respondents interviewed were females with 19.3% of respondents had tertiary education. The mean ADD-GOHAI score was 53.16(SD $\pm$ 7.10) with 44.4% demonstrated high level score, 24.6% average level score and 30.9% low level score indicating poor oral health quality of life. The ADD-GOHAI score was not statistically significant for all the socio-demographic variables as well as for diabetes mellitus (p=0.57), cardiovascular disease (p=0.87) and BMI (p=0.42).

**CONCLUSION:** Almost three-quarters of the respondents in an urban district appeared to have relatively good oral health-related quality of life. Their underlying health condition does not affect the perception on their oral health.



#### TITLE: UNILATERAL CENTRAL GIANT CELL GRANULOMA IN NOONAN SYNDROME

Authors: Amani Amran, Navasheilla Retna Retnasingam 1, Mimi Syazleen Abdul Rahman 1

Affiliation Details: Department Of Paediatric Dentistry, Hospital Serdang<sup>1</sup>

**INTRODUCTION:** Central Giant Cell Granuloma (CGCG) is a benign, aggressive neoplasm composed of multinucleated giant cells that almost exclusively occurs in the jaws though extragnathic incidence is rare. It is associated with conditions like neurofibromatosis and Noonan syndrome (NS)

CASE DESCRIPTION: An 11 year old child with Noonan Syndrome was referred for persistent swelling of left cheek for 3 years with history of nasal bleeding. He also has Atrial Septal Defect (ASD), moderate valvular and supravalvular pulmonary stenosis and undergoing heart surgery. Clinically, he presented with a diffuse swelling involving left nasomaxillary region causing facial asymmetry. Cardinal features of NS including broad based webbed neck, posteriorly angulated ears, mild ptosis, and ocular hypertelorism was evident. Intraorally, he has a class III malocdusion with narrow maxilla and cross bite. Computed tomography revealed an expansile osteolytic lesions with sclerotic margin arising from the anterior wall of maxillary sinus. Surgical enucleation accompanied with chemical curettage and peripheral ostectomy was carried out. Upper left permanent canine had to be extracted as the lesion was attached to it. Histopathological examination revealed the diagnosis of CGCG.

**DISCUSSION/CONCLUSION:** Giant cell lesions are likely to be a part of the spectrum of findings in Noonan's syndrome and not a distinct entity. There are several treatment choices for giant cell lesions, but no specific one is reported for those lesions in NS patients. In this case, we have opted for surgical enudeation, as the lesion was growing and symptomatic. The child is currently under periodic follow up and no evidence of recurrence is seen after 10 months.



# TITLE: COMPARATIVE EVALUATION OF BIOGLASS BASED GEL AND DIODE LASER IN TREATMENT OF DENTINAL HYPERSENSITIVITY: A SCANNING ELECTRON MICROSCOPE STUDY

**Authors: Dr. Niladri Maiti¹** Dr. Eugenia Anagnostaki², Dr. Wayne Selting² Dr. Steven Parker², Prof. Dr. Stefano Benedicenti³

**Affiliation Details:** Department of Conservative Dentistry & Endodontics, Guru Nanak Institute of Dental Science and Research, Kolkata, India<sup>1,</sup> Department of Surgical Sciences & Integrated Diagnostics, University Of Genova, Italy<sup>2</sup>, Dean of the Laser Department Center of the University of Genova, Italy<sup>3</sup>

AIM: The aim of this study is to compare the efficacy of Bioglass and Diode laser in occluding dentinal tubules using Scanning electron microscopy.

MATERIAL AND METHODS: Extracted Molar tooth were taken. The root surfaces of all teeth were firstly scaled with an ultrasonic scaler .The teeth were sectioned in mesio-distal direction using a water-cooled diamond disk and microtome. From each buccal surface, a sectioned sample was obtained including the cervical area. The buccal surface is used for the study. The samples were divided into 4 groups. First group is the control group, second group is treated with bioglass based gel, third group is treated with bioglass & diode laser and the fourth group is treated with laser only. The samples were then seen under scanning electron microscope (SEM) to evaluate occlusion of dentinal tubules. After that, the data was analysed using ANOVA test.

**RESULTS:** Results of this study showed that diameter of dentinal tubules were reduced in bioglass material applied & simultaneously laser irradiated groups, compared with control group. Mean indices of dentinal tubules diameters of the group treated with bioglass and laser was lowest of all the groups.

**CONCLUSION:** All the treatment groups exhibited significantly higher percentage of tubule occlusion compared to control group. Among the treated groups the specimen treated with combination of bioglass based gel and Diode Laser showed the highest percentage of tubule occlusion followed by Diode Laser and then Bioglass only.

# SCIENTIFIC COMPETITION

### POSTER PRESENTATION 26 JANUARY 2018 (FRIDAY)

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VEI	IOE . HALLWAY (I	IN FRONT OF EXHIBITION HAD	The erosive potential of fruit-flavoured tea
P 1	9.15-9.30 am	Dr. Syathirah Hanim Bt Azhar Hilmy	according to pH: An in vitro study
P 2	9.30-9.45 am	Dr. Nor Azura Ahmad Tarmidzi	Preference of dental practitioner on antibiotic prophylaxis for infective endocarditis guidelines
P 3	9.45-10.00 am	Dr. Salma Shakirah Binti Said	Association of non-syndromic hypodontia with different types of malocclusion among orthodontic patients
P 4	10.00-10.15 am	Dr. Wan Mahadzir Mustafa	The management of an impacted first permanent molar: A case report
P 5	11.30-11.45 am	Dr. Shazreena Bt Razak	Response of the muscle extracellular matrix to different stretch regimes
P 6	11.45-12.00 pm	Dr. Ten Li Hua	Prognostic value of the salivary biomarkers of periodontitis
P 7	12.00-12.15 pm	Dr. Abdul Azim Asy Bin Abdul Aziz	Posterior restoration selection among general dental practice in Malaysia: A preliminary study

# POSTER 1

## TITLE: THE EROSIVE POTENTIAL OF FRUIT-FLAVOURED TEA ACCORDING TO pH: AN IN VITRO STUDY

**Authors: Syathirah Hanim¹**, Wan Mohamad Nasir¹, Wan Nor Asma¹, Nur Hana¹

**Affiliation Details:** Faculty of Dentistry, Universiti Sains Islam Malaysia (USIM), Kuala Lumpur, Malaysia <sup>1</sup>

**BACKGROUND:** Dental erosion is an emerging public health problem among youngsters, with the prevalence ranging from 30% to 60% worldwide. It occurs when the pH is <4.5. One of the contributing factors is consumption of sugar sweetened beverages (SSBs). Fruit-flavored tea in the form of SSBs is increasingly popular among young people.

AIM: The objective of this study was to analyse the erosive potential of fruit-flavored tea in SSBs that were available in Malaysia based on their hydrogen ion concentration (pH).

MATERIAL AND METHODS: Fruit-flavoured tea packaged as bottled SSBs were purchased from the local hypermarket. The pH of these beverages were assessed in the Multipurpose Laboratory at the Faculty of Medicine and Health Sciences, USIM using pH meter (Mettler, Toledo, USA). A 40ml volume was used for pH measurement for each sample in triplicate immediately after it was opened at the temperature of 25 degree centigrade. The pH data were recorded as mean (standard deviation).

**RESULTS**: A total of 13 tea-flavoured SSBs were assessed. The erosive potential of these beverages were classified into extremely erosive (pH<3), erosive (pH 3.0 to 3.99) and minimally erosive (pH>4). The pH of the samples ranged from 3.20 (SD $\pm$ 0.04) to 3.86 (SD $\pm$ 0.03). The pH of orange juice as control was 3.93 (SD $\pm$ 0.03).

**CONCLUSION:** All the samples of fruit-flavoured tea beverages have erosive potential. This information is beneficial to consumers to avoid choosing beverages with erosive potential. With this information, dinician can also provide appropriate dietary advice in prevention of dental erosion based on patient's dietary history.



### TITLE: PREFERENCE OF DENTAL PRACTITIONER ON ANTIBIOTIC PROPHYLAXIS FOR INFECTIVE ENDOCARDITIS GUIDELINES

**Authors: Nor Azura Ahmad Tarmidzi** <sup>1</sup>, Nalisha Mohamed Ramli <sup>1</sup>, Norzalina Ghazali <sup>1</sup>, Ammar Yasser b. Abdul Hakim @ Abdul Khakin <sup>1</sup>, Mohd Nazrin Mohd Isa <sup>2</sup>

Affiliation Details: Faculty of Dentistry, Universiti Sains Islam Malaysia<sup>1</sup>, Ministry of Health <sup>2</sup>

AIM: The aim of this study is to elicit the current practice of prophylaxis antibiotic for Infective endocarditis among dental practitioner.

MATERIALS AND METHOD: A pre-tested questionnaire forms was designed to investigate the prescribing preference for antibiotic prophylaxis against infective endocarditis. The questionnaire was distributed to participants attending a seminar organised by Faculty of Dentistry, USIM.

RESULTS: 92 questionnaires were answered by the participants of the seminar. More than 90% of the respondents have work experience less than 10 years. Majority of the respondent daimed that they followed guidelines that advocate antibiotic prophylaxis for the prevention of infective endocarditis (American Heart Association, British Cardiac Society, European Society of Cardiology) while others claimed to follow The National Institute for Health and Clinical Excellence guidelines (no antibiotic prophylaxis). Confusion still exists among the dental practitioner in cardiac condition and dental procedure that need to be covered with antibiotic prophylaxis.

**CONCLUSION:** Majority of the respondent preferred to choose AHA guidelines for antibiotic prophylaxis. Efforts to increase awareness of the guidelines among the dental practitioner should be taken.



### TITLE: ASSOCIATION OF NON-SYNDROMIC HYPODONTIA WITH DIFFERENT TYPES OF MALOCCLUSION AMONG ORTHODONTIC PATIENTS

Authors: SS Said<sup>1</sup>, FS Abdul Rahim <sup>1</sup>, M Jaapar<sup>2</sup>

**Affiliation Details:** Orthodontic Unit, Klinik Pergigian Jalan Sultan Mahmud, Kuala Terengganu<sup>2</sup>, Bentong District Dental Health Office, Bentong, Pahang<sup>2</sup>.

AIM: The aim of this study was to investigate the putative relationship between hypodontia and different types of malocclusion among orthodontic patients in Klinik Pergigian Jalan Sultan Mahmud, Kuala Terengganu.

MATERIALS AND METHODS: A retrospective study of 351 orthodontic patients' records were conducted, consist of 104 males and 247 females. The Chi-square and Fisher's Exact Tests were carried out for statistical analysis.

**RESULTS:** Thirty-eight patients exhibited congenital absence of one or more teeth which yield prevalence of hypodontia at 10.8%.10.2% hypodontia patients had single missing tooth but rarely more than 3 missing teeth. A significant difference was found between males and females (p = 0.048). Female was 2.4 times more likely to have hypodontia.

**CONCLUSIONS:** No significant difference was found among races (p = 0.829). Hypodontia patients had different types of malocclusion as 15.8% having Class I malocclusion,34.2% with Class II division 1 malocclusion,7.9% with Class III division 2 malocclusion and 42.1% hypodontia patients exhibit Class III malocclusion, however no significant difference was found (p = 0.428). Therefore, no relationship was found between hypodontia and type of malocclusion which was in line with what has been reported in previous studies (Chung et al,2008;Oslu et al,2009). Higher frequency of missing teeth was seen in Class III malocclusion which indicates a great need for orthodontic treatment as it has a psychosocial impact on the quality of life. Early detection and accurate diagnosis are essential in dealing with hypodontia cases so that alternative treatment modalities can be well planned.



### TITLE: THE MANAGEMENT OF AN IMPACTED FIRST PERMANENT LOWER MOLAR: A CASE REPORT

**Authors:** Wan Mahadzir Mustafa<sup>1</sup>, Maria Jirom<sup>2</sup>, Mukhriz Hamdan<sup>3</sup>.

**Affiliation Details:** <sup>1</sup>MAHSA University Kuala Lumpur<sup>1</sup>, Klinik Pergigian Cahaya Suria, Kuala Lumpur<sup>2</sup>, Hospital Permaisuri Bainun, Ipoh<sup>3</sup>.

#### **ABSTRACT**

Unerupted or impacted lower first permanent molars are a rare finding. Nevertheless their presence should be suspected when there is delay in eruption of the tooth compared with the contralateral counterpart. Impaction or retention of the first permanent molar presents with several therapeutic approaches. However early diagnosis and treatment gives the dinician more options in the management of these cases. We report a case of impacted permanent lower first molar and discuss the management of one such case in a 20 years old Chinese male. Multidisciplinary cooperation between the oral surgery and orthodontics specialty is necessary for a successful outcome.



### TITLE: RESPONSE OF THE MUSCLE EXTRACELLULAR MATRIX TO DIFFERENT STRETCH REGIMES

**Authors:** Shazreena Razak<sup>1</sup>, Nigel Hunt<sup>2</sup>, Rishma Shah<sup>2</sup> **Affiliation Details:** Klinik Pergigian Tudan, Miri, Sarawak, Malaysia<sup>1,</sup> UCL Eastman Dental Hospital, London., England.<sup>2</sup>.

AIM: To investigate the response of the muscle extracellular matrix to different stretch regimes MATERIALS AND METHODS: This study investigated the production of Matrix metalloproteinase 2 (MMP-2), Matrix metalloproteinase 9 (MMP-9), Tissue inhibitor of matrix metalloproteinase 1 (TIMP-1) and Tissue inhibitor of matrix metalloproteinase 2 (TIMP-2) in the muscles subjected to different stretch regimes. These muscle constructs were subjected to different types of strain using a custom made strain apparatus. The control group was held passively between two fixed ends (C), one group was exposed to a constant strain of 10% (FS) and another group was strained intermittently every 12 hours (IS).

RESULTS: MMP-2 level was the highest in all groups (C, FS, IS). TIMP-2 level was about one third of MMP-2 level however MMP-9 and TIMP-1 levels were very low compared to MMP-2 and TIMP-2. The cumulative MMP-2 levels in the FS group and IS group were comparable but the cumulative MMP-9 levels in the FS group was higher than in the IS group. TIMP-1 and TIMP-2 protein production were higher in unstrained muscles compared to stretched muscles.

**CONCLUSION:** When the muscle constructs were subjected to either continuous or intermittent stretch (simulating fixed and removable functional appliances), there was an increase in MMP and TIMP production. However, MMP-2 was produced in the greatest amounts in comparison to its main inhibitor, TIMP-2, suggesting an increase in the rate of matrix turnover and possibly muscle adaptation and orientation to the new functional length.

### POSTER 6

#### TITLE: PROGNOSTIC VALUE OF THE SALIVARY BIOMARKERS OF PERIODONTITIS

Authors: Li Hua Ten<sup>1</sup>, Belkais Farag Abuaisha Karim<sup>2</sup>, Francis Hughes<sup>2</sup>

**Affiliation Details:** <sup>1</sup>Periodontal Unit, Jelapang Dental Clinic, Ipoh, Perak, Malaysia. <sup>2</sup>King's College London, London, United Kingdom.

AIMS: To investigate the prognostic value of pre-operative concentrations of salivary interleukin-1beta (IL-1 $\beta$ ), osteoprotegerin (OPG) and receptor activator of NF-kB ligand (RANKL), and RANKL/OPG ratio to predict treatment outcome in subjects with chronic periodontitis, and to assess the changes in the biomarker concentrations after non-surgical periodontal treatment.

METHODS: Subjects with moderate to severe chronic periodontitis were recruited. Unstimulated saliva samples were collected prior to periodontal examination. Subjects were then treated with a course of non-surgical periodontal therapy. Clinical re-examination and saliva sampling were repeated after 8 to 10 weeks. Salivary IL-1 $\beta$ , OPG and RANKL concentrations were measured by ELISA. "Non-responders" were those who had  $\geq$ 50% of the deep pockets showing deterioration or <2mm reduction in the probing pocket depth post-operatively.

**RESULTS**: 53 subjects completed the protocol and were included in the final analysis. Thirteen subjects were categorised as "non-responders". There was no statistically significant difference in the pre-operative level of IL-1 $\beta$ , OPG and RANKL and the RANKL/OPG ratio between responders and non-responders, therefore the biomarkers were considered as having no prognostic value. IL-1 $\beta$  concentrations reduced significantly from baseline to reassessment among all subjects, within responders and non-smokers (p<0.001). Reduction in OPG concentrations (p=0.022) and increase in RANKL/OPG ratio (p=0.048) were also observed in non-smokers after treatment.

**CONCLUSIONS:** The results suggest that pre-operative salivary concentrations of IL-1 $\beta$ , OPG, RANKL and RANKL/OPG ratio have no prognostic significance to predict short term treatment outcome. Overall, periodontal treatment results in significant reduction in salivary IL-1 $\beta$  concentrations.

# POSTER 7

### TITLE: POSTERIOR RESTORATION SELECTION AMONG GENERAL DENTAL PRACTICE IN MALAYSIA: A PRELIMINARY STUDY

**Author(s):** Abdul Azim Asy Abdul Aziz<sup>1</sup>, Aimi Amalina Ahmad<sup>1</sup>, Aws H Ali Al-Khadhim<sup>1</sup>, Azlan Jaafar<sup>2</sup>, Norazlina Mohammad<sup>1</sup>.

**Affiliation Details:** <sup>1</sup>Restorative Dentistry Lecturer, <sup>2</sup>Dental Public Health Lecturer. Faculty of Dentistry, Universiti Sains Islam Malaysia, Kuala Lumpur, Malaysia

AIM: The aims of this study are to determine the posterior restoration selection and factors contributed to its preferences among private dental practitioner in Malaysia.

MATERIAL AND METHODS: This is a cross sectional study, and a self-administered questionnaire was distributed randomly using a simple random method, among general private dental practitioner in Kuala Lumpur. Data gathered then analysed using SPSS version 21.0 and alpha error was set at p < 0.05.

RESULTS: A total of 77 respondent participated in this study with the mean age 36.1 years (SD= 10.4). From the study, the common posterior restoration material used was tooth-coloured materials (85.7%). In shallow, moderate and deep cavity composite restoration is most commonly used at 92.2%, 71.4% & 42.9% respectively. In deep cavity, tooth coloured restorative material is the material of choice at 80.6%, while amalgam is only being used at 19.5%. The mostly preferred tooth coloured restoration in deep cavity is composite (42.9%) followed by GIC (32.5%). Most of respondents agreed that preservation of tooth structure is the major factor which influenced the selection of restoration material (75%). A well-documented dinical performance of the dental material (73%) and the feasibility to obtain moisture control (71%) are the main predictors as well.

**CONCLUSIONS**: Most of private practitioner in this study preferred to use tooth coloured restoration for posterior tooth. Although the study is not reflecting the true picture, it is of author concern on the choice of material selection among the practitioner especially for deep cavities. concentrations.