

**ABSTRACTS
FOR
POSTER
PRESENTATIONS**

PP1

Geriatric Dental Care: Knowledge, Attitude and Practice among Undergraduate Dental Students in UM

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Objectives: This study was aimed to assess the dental students' knowledge, attitude and practice towards Geriatric Dental Care and to determine the factors that influence them in providing dental care towards elderly patients. The findings from this study may help to enhance the conduct of geriatric dental curriculum at the undergraduate level.

Methods: A descriptive cross-sectional survey was conducted among the clinical dental undergraduates from Faculty of Dentistry, University of Malaya. A set of questions were designed based on the Knowledge, Attitude, Practice (KAP) model and the questionnaire were sent to 173 dental students who had met the inclusion and exclusion criteria. The data were collected and analysed using the Statistical Package for the Social Sciences (SPSS) software version 12.0.1 for Windows.

Results: The response rate for the survey was 70.5%. In terms of knowledge, there were no significant differences between gender and year of study, however respondents from year 5 (28.6%) performed better overall. A substantial number of the respondents demonstrated poor attitude (44.7%) towards the dental care of elderly patients, although generally they showed moderately good care practices when treating these patients.

Conclusion: This study highlighted that dental students generally have limited knowledge and poor attitude towards elderly patient but they provided good care while treating these patients. There needs to be a revision on the structure of the curriculum for the future as the demand for geriatric dental care will only increase with time.

Keywords: Geriatric dental care, dental students, curriculum, knowledge, attitude, practice

PP2

Influence Of Scaler Tip Design On Intensity Of Pain And Discomfort During Scaling

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Objective: To evaluate patients' subjective preferences to scaling with narrow probe-shaped EMS Perio Slim PS tips compared to conventional tips based on pain perception using the Visual Analogue Scale (VAS).

Methods: Ten patients were treated using a piezoelectric ultrasonic device (EMS) and two different scaler tips representing a conventional scaler tip and a Perio Slim PS scaler tip in a randomized, split-mouth design. Pain was evaluated after 2 minutes scaling using Visual Analogue Scale (VAS).

Results: Pain assessment after treatment confirmed by the Visual Analogue Scale (VAS) showed that the Perio Slim PS scaler tip (maximum pain score: 4, minimum: 2) caused less pain than the conventional scaler tip (maximum: 8, minimum: 3) (p-value = 0.007).

Conclusions: Using Perio Slim PS scaler tip caused less pain and discomfort during scaling treatment when compared with conventional scaler tip. Thus, it might be possible to increase the patient's compliance during dental treatment with ultrasonic instruments.

Key Words: Slim scaler tips, conventional scaler tips, pain perception, scaling, gingivitis, VAS score

PP3

Assessment Of Sphingosine Kinase Inhibitors As Potential Drugs For Oral Cancer

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Objectives: To assess the effect of sphingosine kinase (SK) inhibition on oral squamous cell carcinoma (OSCC) cell viability and to evaluate the possible synergism between SK and topoisomerase inhibitors.

Methods: An SK inhibitor, PLR-11, was used in cell viability assays, as a single drug and in combination with 2 topoisomerase inhibitors: Camptothecin and Irinotecan. OSCC cells (H357 and H400) were treated with these drugs in various concentrations and cell viability was measured after 72 hours using MTT assays. The IC₅₀s and the drug combination indices (CI) were computed to check for possible synergistic effect.

Results: PLR-11 alone decreased cell viability and acted synergistically with Irinotecan in the OSCC cell lines, H357 and H400. No significant synergy was observed in the PLR-11 and Camptothecin combination.

Conclusion: SK inhibitors reduced the viability of OSCC cells, implying that it may be suitable as a novel chemotherapeutic agent for OSCC in combinational drug treatment to achieve effective cancer therapy.

Keywords: Sphingosine kinase; camptothecin; irinotecan; drug combinations; oral squamous cell carcinoma.

PP4

Two-Colour Mixing Ability Test Of Masticatory Performance: Validation Of A New Colourimetric System

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Objectives : To assess masticatory performance (MP) in complete denture wearer by using color-changeable chewing gum xylitol and to determine the validity of the new two-color chewing gum “mastimeter” or RG gums for mixing ability.

Methods : Two groups of samples were involved in this study, full natural dentition group (N=25) as a control group and complete denture wearer group (N=10) as a test group. Subjects have to chew specimens (RG Gums and Xylitol). There were asked to sit upright and chewed on their preferred side (RG Gums: 15 cycles, Xylitol: 60 cycles). This task was repeated three times consecutively. The specimens were then washed, dried and placed in a plastic bag. The chewed xylitol was flattened to a thickness of 1 mm by compression between two glass plates and measured using a colorimeter (CR-13; Konica-MinoltaSensing, Tokyo, Japan). ImageJ 1.51m software was used to analyze the images of chewed RG gums.

Results : Mastimeter value for RG gums and a* value for Xylitol showed statistically different between natural dentition group and complete denture wearers group. Both methods can differentiate MP differences and have almost similar range of value. As a result, the correlation between the results from the two tests was excellent.

Conclusion : Based on consideration of high validity in the results proved that new system of two-color mixing ability chewing gum is valid for MP assessment and provides a convenient tool for clinical settings.

Keywords : Masticatory performance, two-color chewing gum, complete denture wearers, mixing ability

PP 5

Effect of Resin-coating on Flexural Properties of Highly Viscous Glass Ionomer Cements

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Objective: To investigate the effect of resin-coating on flexural strength and elastic modulus of highly viscous glass ionomer cements (HVGICs)

Methods: The materials evaluated were three HVGICs; Equia Forte [EQ], Zirconomer [ZR] and Riva Self Cure [RV]. Test specimens (12 x 2 x 2mm) were fabricated using customized stainless steel molds. After initial set, the specimens were removed from their molds, finished, measured and divided into three coated and three non-coated groups (n=7). The specimens were conditioned in the following mediums for 7 days at 37°C: distilled water, artificial saliva and 0.02N citric acid. After conditioning, the specimens were rinsed, blotted dry, measured and subjected to flexural testing using a universal testing machine. Data was subjected to statistical analysis using Mann-Whitney U Test followed by Kruskal Wallis and Tukey's post-hoc tests.

Results: When immersed in distilled water, uncoated RV displayed the highest elastic modulus with 18.06 ± 1.85 GPa, whereas uncoated ZR gave the lowest elastic modulus with 4.08 ± 0.69 GPa. When conditioned in citric acid, uncoated EQ gave the highest flexural strength value (56.84 ± 4.65 GPa), whereas uncoated ZR gave the lowest flexural strength (26.53 ± 3.08). There were significant differences between ZR and RV, and between ZR and EQ; with or without resin coatings ($p < 0.05$).

Conclusion: In general, resin coatings did not improve the flexural properties of both EQ and RV. Both uncoated EQ and RV displayed highest flexural strength when conditioned in citric acid. Flexural properties were found to be material and medium dependent.

Keywords: Highly viscous glass ionomer cements, resin coating, flexural strength, elastic modulus

The Need of Double Qualification of Oral Maxillofacial Surgeons In Malaysia

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Objectives: 1. To determine the scope of practice of OMFS in Malaysia; 2. To analyze factors influencing the scope of practice and confidence level; 3. To know the perception of OMFS in Malaysia on the need to acquire medical degree in addition to dental degree.

Methods: This is a questionnaire survey on Malaysian OMFS who has at least 3 years of working experience after completing training. A questionnaire consisting of open and close-ended questions was sent via WhatsApp. Level of confidence for each procedure is evaluated using the Likert scale of 0 to 3. Results were analyzed with SPSS version 12.0.1

Results: Out of 74 respondents, only five had medical degree. Malaysian OMFS practices a broad scope of procedures regardless of basic qualification. The double qualified generally have higher confidence level but only significant for facial cosmetic surgery ($p=0.034$). Years of working experience influence confidence level for orthognathic and craniofacial surgery ($p=0.008$), pathology and reconstructive surgery ($p=0.026$). No double qualified has performed radial forearm flaps and only one is somewhat confident in fibular flap. Four single qualified are very confident in radial forearm and fibula flaps for reconstruction. The single qualified have higher mean score of confidence level in cleft lip and palate repair. Experience in tracheostomy insertion is also not exclusive to double qualified. 32.4% of single qualified felt it was necessary to have a medical degree, while all double qualified defended their decision.

Conclusion: This study does not demonstrate significant difference in scope of procedures between single and double qualified OMFS in Malaysia although the perceived need for double qualification is expressed by one third of the total respondents.

Keywords: Oral and maxillofacial surgeon; double qualifications; scope of practice

Oral Health Behaviours and Preventive Dental Care Experiences among Adults with Special Health Care Needs

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Objective: To assess the oral health behaviour and preventive dental care experiences of adults with special health care needs (SHCN) who attended the Special Care Dental (SCD) Clinic at University of Malaya.

Methods: Data were collected from 31 patients using a self-administered questionnaire which consisted of questions pertaining to their oral health behaviours and experiences on receiving preventive dental care (PDC). For patients who were unable to answer due to existing health conditions, parents or primary caregivers were approached as proxy. Descriptive analysis was conducted and reported based on percentages to identify the oral health behaviour and PDC of the individuals. PDC experiences were evaluated through feedback from the participants.

Results: Majority brushed their teeth at least once a day (84%), used fluoridated toothpaste (87%) and oral hygiene aids (58%). However, almost half of them (48%) require assistance from parents or caregivers during tooth brushing and consumed sugary snacks in between meals (58%). About 80% had received PDC where the type of care received was mainly oral hygiene advice (77%). Slightly more than 80% preferred the one-to-one demonstration method during PDC. Most gave positive evaluation on their PDC experience especially on items pertaining to the dentist's attitude.

Conclusion: Whilst most of the SHCN patients in this study had positive perception on the PDC that they received and practised good brushing behaviour, their dietary habits need to be improved. This study highlighted the importance of preventive dental visit amongst SHCN adults for appropriate and comprehensive dental care in maintaining oral health.

Keywords: Special health care needs, oral health behaviour, dietary habits, preventive dental care, special care dentistry, oral hygiene.

Functional Pathway Analysis of Potential Biomarker of Oral Squamous Cell Carcinoma (OSCC)

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Objectives : To enumerate previously discovered genes and associate novel possible functional pathways that may be attributed to OSCC .

Methods : A finalized list of 305 genes and proteins were subjected to pathway analysis using bioinformatic tools such as DAVID, IPA and STRING. Our list of OSCC genes and proteins were uploaded to the DAVID analytical tool and significance was achieved when the functional organization has a p-value lower than 0.05($p < 0.05$). IPA was used by transferring and interpreting lists of focused genes to identify local networks and relates them with cancer. STRING analysis was used for the examination of protein-protein interaction network.

Results : Gene Ontology analysis in DAVID revealed that TP53 was involved in the positive regulation of gene expression that induces anoikis. MAPK signaling pathway also revealed the involvement of TP53 based on the Kyoto Genes and Genomes (KEGG) pathway. STRING analysis showed interaction between POTE ankyrin and Actin family. IPA analysis confirmed that 72 identified genes were involved in cancer diseases.

Conclusion : The present study suggests that binding interaction between POTE and Actin gene family members may induce cancer metastatic cascade.

Keywords : Oral squamous cell carcinoma , functional pathways, metastatic cascade, bioinformatics

Prevalence of Temporomandibular Disorders and Stress Among clinical and Non-clinical Dental Students in University of Malaya

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Objectives: 1) To evaluate the prevalence of temporomandibular disorders (TMD) and stress among clinical and non-clinical dental undergraduate students in University of Malaya. 2) To investigate the association between TMD and their signs and symptoms with levels of psychological distress and other demographic data.

Methodology: This cross-sectional clinical-based research was conducted from January to October 2017. Sixty dental students from University of Malaya were selected through stratified random sampling. Required information was compiled through standardized physical temporomandibular joint examinations in accordance to the DC-TMD examination form and two validated questionnaires (GHQ-12 and DC/TMDs). Data collected was analysed with SPSS version 22, using Chi-square tests and Fisher's exact tests.

Results: Prevalence of TMD was 50% in non-clinical students and 46.7% in clinical students. GHQ-12 questionnaires showed 56.7% of non-clinical students scoring over average compared to 36.7% among clinical students. There was no significant association between TMD or their signs and symptoms with GHQ-12 stress scores ($p>0.05$). Only gender showed significant association with deviation in mandible ($p=0.005$).

Conclusion: Prevalence of TMD and psychological distress were slightly higher among non-clinical dental students. There was no significant association between stress and TMD or their signs and symptoms among clinical and non-clinical dental students.

Keywords: Temporomandibular disorders, signs and symptoms, psychological stress

PP10

A Study Of The Relevance Of Maxillofacial Trauma Review Clinic

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Objective: This study aimed to identify relevance of continuing maxillofacial trauma review clinic in Faculty of Dentistry, University of Malaya, in term of patients' problems and knowledge, and patient-clinician relationship.

Methods: Record of patients from 2014 until 2017 were traced. Patients who had met the inclusion and exclusion criteria were contacted to do a questionnaire by phone call, interview and online survey. Data were analyzed in term of demographic background, patients' problems, knowledge, cooperation and compliance, clinic environment and patient-clinician relationship.

Results: Eighty-two patients were included in this study. The ratio of male to female was 3.1:1. Most common age involved was 19-40 years. Most problems faced by patients were lack of time (39.6%), followed by transportation (28.3%), financial problem (20.8%), living in rural area (7.5%), and others (3.8%). Majority of the patients had good patient-clinician relationship. 96.3% patients were satisfied with the clinic environment. Majority of the patients had higher level of knowledge regarding the review clinic, gave cooperation and compliance to attend the review clinic.

Conclusion: Maxillofacial trauma review clinic is relevant and should be continued because majority of patients are satisfied with the treatments and gave positive feedback regarding the knowledge of review clinic.

Key words: Maxillofacial, Trauma, Review, Clinics

PP11

Parental Experiences In The Management Of Children With Syndromic Craniofacial Deformities

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Objectives: This cross-sectional study aimed to assess the experiences of parents who have children diagnosed with syndromic craniofacial deformity (CFA) in terms of their: 1) feelings in caring for the children 2) perceived social stigmatisation experiences and; 3) perceptions of the support gained from health professionals and community.

Methods: The sampling frame was all parents of CFA children (aged 18 years and below) who have registered at the Combined Oro-Craniomaxillofacial Deformities Clinic, University of Malaya Medical Centre. The study instruments comprised of a validated self-administered questionnaire which used a Likert scale of 1 to 4 (strongly disagree to strongly agree) to assess the first and third objectives and a scale of 1 to 3 (almost never, sometimes, often) to assess the second objective. Descriptive analysis of the data was conducted using SPSS.

Results: A total of 30 parents participated in the study (response rate: 75%). In terms of the respondents' feelings, about 90% felt anxious whenever their child had to undergo an operation despite having positive perceptions on the outcome. Most parents had never had negative stigmatization experiences, where about 60% reported receiving 'positive comments' and were 'treated with respects' when they were with their CFA child. Majority of the respondents agreed that they obtained the appropriate and adequate support from health professionals and community with regards to caring of their child.

Conclusion: Most parents of CFA children in Malaysia had positive experiences in caring for their child, had no significant social stigmatization experiences, and were provided with the necessary professional and community supports.

Keywords: Syndromic Craniofacial; Craniofacial Deformities; Craniofacial Surgery; Parental Experience; Social Stigmatization; Parental Attitude.