9th Dental Students' Scientific Symposium

Faculty of Dentistry
Universiti Teknologi MARA
9-10 April 2019

Translating Research Evidence into Best Practice

Programme Book

Designed by Dr Eleena, Aida Adriana and Nur Hasanah

Contents

Welcome Note

by Professor Dr Hadariah Bahron
Assistant Vice Chancellor (Research & Innovation) UiTM

Assalamualaikum w.b.t

First and foremost, I would like to congratulate Faculty of Dentistry. One of faculties of UiTM Cawangan Selangor for being able to organize the 9th UiTM Dental Students' Scientific Symposium 2019. Allow me to extend a warm welcome to all participants, especially the international delegates for making time to join us.

With the theme of "Translating Research Evidence into Best Practice", and exciting program planned, I believed that everyone will benefit from this symposium and gain new knowledge besides expanding the social and intellectual network. As part of the Academic Calendar of the faculty, this symposium also promotes the aspiration of the university in becoming the centre of excellence in education and research in dentistry not only for Malaysia but the world over. This symposium highlights the creativity and innovative thinking of the students and their supervisors in extending the horizon through research activities that consistently translate into tangible outcomes.

I would like to thank the sponsors for their continuous support that has made this program possible. To the organizing committee, congratulations and thank you for ensuring this event run smoothly. Last but not least, I wish all the best to the competing participants, and to the international delegates, have a great stay in Malaysia.

Thank You.

Professor Dr Hadariah Bahron
Assistant Vice Chancellor (Research & Innovation) UiTM

Message from The Dean

by Professor Dato' Dr. Mohamed Ibrahim Abu Hassan
Founding Dean, Faculty of Dentistry,
UiTM Cawangan Selangor Kampus Sungai Buloh

Assalamualaikum and welcome to the 9th UiTM Dental Students' Scientific Symposium and welcome to our home, Faculty of Dentistry UiTM in Sungai Buloh. A special welcome to our international delegates from Manipal College of Dental Sciences, Mangalore India and Coorg Institute of Dental Sciences, India.

This symposium is our annual event since its inaugural in 2011. With the theme of "Translating Research Evidence into Best Practice", the symposium continues to showcase the research and other curricular outcomes from dentistry students. This is the awaited event where everyone is involved, be it student of academic staff. The highlights of this symposium is the Elective Research Projects presentations by the Year 4 students which are held in two days, on the 9th and 10th of April. There are other activities including the e-poster, debate, oral presentation, table clinic and dental suture-lympics competitions which involved the undergraduates as well as the postgraduate students. On top of that, this event will also help UiTM to discover our representative for our university for the National Dental Students' Symposium 2019.

We are so grateful to our sponsors whom have supported our programme financially and physically, contributing to the smooth and running of our symposium. I would also like to thank the organizing committee led by Associate Professor Dr Mohd Yusmiaidil Putera Mohd Yusof, for taking up the challenge to organize this year symposium and bring it to a success. Good luck to all the participants and wishing you a successful journey and enriching experience throughout this symposium. For our international guest, we hope that you will be able to take some time out to visit our places of interest in Kuala Lumpur and nearby.

Once again, thank you to all for your participation and contribution.

Thank You.

Professor Dato' Dr. Mohamed Ibrahim Abu Hassan
Founding Dean, Faculty of Dentistry,
UiTM Cawangan Selangor Kampus Sungai Buloh

Message from Chairperson

by Associate Professor Dr Mohd Yusmiaidil Putera Mohd Yusof
Chairman of 9th UiTM Dental Students' Scientific Symposium 2019

Assalamualaikum and Welcome to the 9th Dental Students' Scientific Symposium 2019.

First and foremost I would like welcome everyone to our annual symposium. Warmest welcome to the international delegates, speaker, judges and our own presenters. This is one of our highest time of the year where we are not only competing but also to make new friends and exchanging research findings and ideas.

Thus, I would like to express my heartfelt gratitude and thankfulness to the committee heads and members who unselfishly contribute their precious time and effort to make this symposium a successful one. I couldn't have asked for a better team to work with. A special thank you to our sponsors as well who have been supporting us throughout all these years.

For the first time in history, we have introduced a paperless abstract submission and paper reviewing system in this symposium with no extra cost at all. Parallel to the theme 'Translating Research into Best Practice', we managed to accept 67 research presentations from the undergraduate, postgraduate and international students. To put cherry on top, we have also been granted with ISBN number for the proceeding book which among others will showcase the extended abstracts and proceeding papers from selected research.

For those competing, I wish you all the very best! Please remember that winning keeps you strong but losing makes you stronger in life. And above all, each of you will always be the winner in our heart.
Thank you and have fun!

Associate Professor Dr Mohd Yusmiaidil Putera Mohd Yusof
Chairman
9th Dental Students' Scientific Symposium 2019

Programme Tentative

TIME	Venue			
	Al-Biruni	Al-Zahrawi	Al-Azhar	Jade & Emerald Hallways
8.00 – 9.00am	Registration Level 1			
9.00 – 10.30am	Oral Presentation 1 (UG Year 4)	Oral Presentation 2 (UG Year 4)	E-Poster Presentation (PG Year 2,3&4)	Table Clinic Competition (UG Year 2)
10.30 -11.00am	BREAK			
11.00-12.00pm	Oral Presentation 3 (UG Year 4 & International Dental UG)	Oral Presentation 4 (UG Year 4 & International Dental UG)	E-Poster Presentation (PG Year 2,3&4)	Table Clinic Competition (UG Year 2)
12.15–2.00pm	BREAK FOR LUNCH (Sponsored Lunch Talk by GSK @Al Jabor Hall)			
2.00–3.00pm	Oral Presentation 5 (UG Year 4)	Oral Presentation 6 (UG Year 4)	E-Poster Presentation (PG Year 2,3&4)	Table Clinic Competition (UG Year 2)
3.00-4.00pm	Colgate Talk in Al Biruni			
4.00-5.00pm	Oral Presentation 7 (UG Year 4)	Oral Presentation 8 (UG Year 4)	E-Poster Presentation (PG Year 2,3&4)	Table Clinic Competition (UG Year 2)
5.00 pm	END OF DAY 1			

TIME	Venue			
	Al-Biruni	Al-Zahrawi	Al-Azhar	Simulation Lab
8.00 – 8.30am	Registration Level 1			
8.30–10.00am	Oral Presentation 9 (UG Year 4)	Oral Presentation 10 (UG Year 4)	E-Poster Presentation (PG Year 2,3&4)	Dental Suture-lympics Competition
10.00-10.30am	BREAK			
10.30–12.30pm	Debate UG Final (UG Year 5)	Oral Presentation 11 (UG Year 4)	E-Poster Presentation (PG Year 2,3&4)	
12.30–2.00pm	BREAK FOR LUNCH			
2.00–2.40pm	Assoc. Prof. Dr Firdaus Hariri Keynote Speaker Evidence Based Approach in Clinical Practice: Our Role, Responsibility and its Reality			
	OPENING AND CLOSING CEREMONY AWARD PRESENTATION Best Oral Presentation Award Reviewer's Choice Award Best Research Award Best Oral Presenter Award Best Debate Team Award Best Debater Award Best E-Poster (PG) Award Best Case Report E-Poster (PG) Award Best Table Clinic Award			
5.00 pm				

Organising Committee

ADVISOR
Professor Dato' Dr Mohamed Ibrahim Abu Hassan

CHAIRMAN
Associate Professor Dr Mohd Yusmiaidil Putera Mohd Yusof

DEPUTY
Dr Ilham Wan Mokhtar

SECRETARY I
Dr Nor Hidayah Reduwan

SECRETARY II
Pn Nur Qurratu Aini Azman

TREASURER I
Pn Nur Nabilah Md Zen

TREASURER II
Pn Maskiah Abdullah

SCIENTIFIC COMMITTEE

Committee
Dr. Budi Aslinie Md Sabri
Dr. Noor Nazahiah Bakri
Dr Faezah Bohari
Assoc. Prof. Dr Yoshinobu Shoji

Sub-Committee
Wan Fathihah Wan Hussain
Roslinda Abdul Ghani

Judge
Dr Mohd Faizal Hafez Hidayat
Dr Nor Faharina Abdul Hamid
Dr Rohaida Abdul Halim

Organising Committee

COMPETITION COMMITTEE	
Main Committee	**Sub-Committee**
Debate	
Dr Noorharliana Mohamed Zohdi (Head)	Dr Nurul Ain Ramlan
Kapten (B) Dr Hayati Ishak	Dr Dayana Sheeren Anwar
Dr Aminda Faizura Omar Khattab Khan	
Oral Presentation and Table Clinic UG	
Dr Annapurny Venkiteswaran (Head)	Dr Nurul Whahidah Azmi
Dr Alaa Sabah Hussein	Dr Norashikin Abu Bakar
Dr Afzan Adilah Ayoub	Dr Nagham Abdullah
Dr Omar Emad Ibrahim	Dr Indah Yuri Noviarany
	Dr Luay Thanoon Younis
E-Poster PG	
Dr Erni Noor (Head)	Dr Hasnah Begum Said Gulam Khan
Dr Tengku Fazrina Tengku Ariff	Dr Noraina Hafizan Norman
Dr Saraswathy Devi Sinniah	
Dental Suture-lympics	
Dr Mohd Shawal Firdaus Mohammad (Head)	Pn Bariah Adilah Johari
Dr Hazmyr Abdul Wahab	En Mohammad Irfan Fahmie Mohamad Fared
Dr Adrean Husin	En Mohd Shollehin Che Dahalan
Tengku Dr Intan Baizura Tengku Jamaluddin	Pn Norlida Nordin
Dr Nazer Berahim	Pn Siti Noraslinda Mat Zin
Dr Michelle Clare Mah	
Dr Kherman Suparman	
Dr Azmeel Mazlee Anuar	
Dr Tan Su Keng	

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Pn Siti Zaleha Suki	Pn Wan Hazita Wan Hassan
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Main Committee	**Sub-Committee**
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Dr Faezah Sabirin	En Hasni Hassan
En Mohd Maaruf Abdul Malik	En Marwan Rosli
En Ahmad Hafifi Zainal Abidin	En Baderi Mohamad Mat Sarif
	En Adi Shahrir Ab. Razak
	En Muhammad Hafidz Zainuddin

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Main Committee	**Sub-Committee**
Media	
Dr Eleena Mohd Yusof (Head)	En Ahmad Aziz Farhan Rosli
Pn Aimi Nadia Razlan	En Azzuan Siaris
	En Omar Adnan
Publicity & Invitation	
Dr Indah Mohd Amin (Head)	Pn Nuriati Hussin
Pn Nurhayati Mohamad Zain	En Muhammad Affizie Hasan
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TENTATIVE PROGRAMME & PROTOCOL COMMITTEE	
Main Committee	**Sub-Committee**
Dr Maryati Md Dasor (Head)	Pn Salina Ibrahim
Dr Aiemeeza Rajali	Datin Juhara Tajul Ariffin
En Mohd Aizat Abdul Rahim	Pn Noor Haida Mohamed Shaari
	En Mohd Faizul Mohd Husin
	En Mazly Mohamad
Opening and Closing Ceremony:	**Sub-committee**
Dr Aminda Faizura Omar Khattab Khan(Head)	Cik Noor Farah Zaiti Mohd Zaidon
Dr Wan Nurhazirah Wan Kamil	Cik Noor Aznie Aziz
Dr Nadhirah Ghazali	Pn Azrin Rahayu Basri
	Pn Siti Hajar Omar
	Pn Rohana Nah Timan
	Pn Siti Noraslinda Mat Zin
	Performances: UG Year 3

REGISTRATION, GIFTS & CERTIFICATES	
Dr Nik Zarina Nik Mahmood (Head)	Pn Suriati Jaafar
Dr Nurhamani Harun	Pn Bariah Adilah Johari

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Main Committee	**Sub-Committee**
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Dr Marlena Kamaruzzaman	Cik Norfarina Mohd Kadim
Dr Nor Wati @ Nur Atikah Mustapha	Pn Hamidah Abdul Hamid
	Pn Marlina Ab Fattah
	Pn Rohaya Rahman

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Main Committee	**Sub-Committee**
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Dr Faiz Nasruddin	En Mohd Ibrahim Soid
En Muhammad Zaid Zainuddin	En Ahmad Sufi Asyraf Mohd Saidi
	En Saiful Nizam Ibrahim

Student Committee

PORTFOLIO	NAME
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REGISTRATION, GIFT & CERTIFICATE COMMITTEE	**SUPERVISOR**: DR NIK ZARINA NIK MAHMOOD **HEAD**: KHAMILA HANI KHRUL FAZRI 1. NURUL ZURAIN FATIHA ZULAIDI 2. FARHAA NASRIN NASARUDIN 3. MUKHLISA ALIYA MUSTAFFA 4. AIN NAJIHAH ABD RAHMAN
LOGISTIC, TECHNICAL, ACCOMMODATION & TRANSPORT COMMITTEE	**LOGISTIC & TECHNICAL COMMITTEE** **SUPERVISOR**: PN NORASHIKIN SALLEH **HEAD**: MOHAMAD LUQMAN HAKIM MOHAMAD RASIDI 1. HANIS FARHANA AMIRUDDIN 2. MUHAMMAD DANIAL AHMAD RAPIT 3. MUHAMMAD AFWAN MOHD ZIN 4. MOHAMMAD HAIRIE SHAH AB HALIM 5. MUHAMMAD SYAFIQ HASNY MOHD RUSNY 6. AHMAD IZZUDDIN AHMAD KHALIL 7. MUHAMAD AMIR HAZIM RAZLI **ACCOMODATION & TRANSPORTATION COMMITTEE** **SUPERVISOR**: PN NUR ALIANA HIDAYAH MOHAMED **HEAD**: NIK LAYLA HANI NIK RAZI RUDIMAN 1. NUR AISYA SYAHEERA ROHIZAN 2. MOHAMED HAKIM MOHAMED HISHAM 3. MUHAMMAD AZ-ZHARFAN ZAKARIA 4. ANIS NAJIHAH SALLEH 5. MUHAMMAD ZAFRAN KAMARUDDIN 6. LATUN FATIN LYANA AZMAN 7. MOHAMAD MUSLIHIN MOHD ZAKI
SCIENTIFIC COMMITTEE	**SUPERVISOR**: DR. BUDI ASLINIE MD SABRI **HEAD**: NUR HUMAIRA ISHAK 1. FATIN NABILAH SUIB 2. NUR ALYANI MD PISAR 3. SYAHIRAH MOHD ZOL 4. ENGKU ELISA AMIRAH ENGKU MOHD SUHAIMI 5. NUR AZRINA MUHAMMAD AZRI 6. NUR AMNI HUSNA MOKHTAR 7. HILMAN HUSSAINI HASMILI
COMPETITION COMMITTEE (DEBATE)	**SUPERVISOR**: DR NOORHARLIANA MOHAMED ZOHDI **HEAD**: AIN ASHRAF RIZWAL 1. NURSYEREEN AZAHAR 2. NUR AFINI HUSNA MOHD NASRAN 3. NURFAR'AIN NORPITRI 4. MUHAMMAD SYAHIDI ABDUL RAZAK

Student Committee

Committee	Members
COMPETITION COMMITTEE (ORAL PRESENTATION AND TABLE CLINIC UG)	SUPERVISOR: DR ANNAPURNY VENKITESWARAN HEAD: WAN NUR DIYANA WAN RUSAIDI 1. NUR FARIZA ZAHIRAH SABRI 2. NUR AISYAH ROSLAN 3. NUR ALAA'NASUHA ABD AZIZ 4. NUR AMNI NOOR AFFENDY 5. SHAMSUL SHAMIL SHAMSUL FADZIL 6. IZATUL ARIFAH MAHMOOD 7. HANI MOHAMAD SAFRAN 8. HAMIZAH MOHD TARIDI 9. NURUL AMIRAH MOHD SHAKRI 10. NURUL SYAFIQAH SURIA
COMPETITION COMMITTEE (E-POSTER PG)	SUPERVISOR: DR ERNI NOOR HEAD: MAIZATUL TASHA MAHASIN 1. KAREN KASING MARTINUS 2. NUR SYAQIRA HANANIE ZAINAL
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OPENING & CLOSING CEREMONY COMMITTEE	SUPERVISOR: DR AMINDA FAIZURA OMAR HEAD: NURUL SABRINA KHAN JAMAL-UD-DEEN NASIR KHAN 1. NIKKI LOUINA DANIELLA LUQMAN 2. NURNATASHA ADIRA MOHD RAHIDI 3. NUR AIDA AMIR 4. NURSHAFIKAH NAZIRAH ASMING 5. KHAIRUNNISSA NABILA RUZHAN 6. NUR SYAFIQAH ATHIRAH SALEH 7. SYAKIRAH SAHAR 8. IZZAT IZZUDDIN ISMAIL NUDIN 9. INTAN EQLISA SOFEA MOHAMED ISMAIL
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PUBLICITY COMMITTEE (MEDIA)	SUPERVISOR: DR ELEENA MOHD YUSOF HEAD: AIDA ADRIANA ABDUL HALIM 1. NUR HASANAH SAHE 2. IYLIA AQILAH MOHD FADZILAH
JUDGE COMMITTEE	SUPERVISOR: DR ROHAIDA ABDUL HALIM HEAD: KATHLEEN MENNI STEPHEN 1. NISA ERINA NOOR EDDIE PUTERA
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Undergraduate Oral Presentation

Symposium Day 1
9th April 2019 (Tuesday)

Session 1 (9- 10:30 am)

Time	Venue				
	Al Biruni			Al Zahrawi	
	Title	Presenter		Title	Presenter
9:00 - 9:15	Accuracy of Kvaal's Radiographic and Dentinal Root Translucency Techniques in Estimating Dental Age of Extracted Teeth	Intan Syakirah Ramli Ummi Solehah Muhd		A Survey of Dental Fear and Anxiety among Dental and Medical Students	Muhammad Syukri Mohd Kama Izzul Alif Ghazali
9:15 - 9:30	The Distribution of Malaysian Dental Practitioners in relation to the population: A Geographic Information System Study	Amirah Aina Ghazali Sarah Athirah Rizal		Antibiotic Prescribing Practices in Faculty of Dentistry, UITM	Nik Dhaniyah Nik Husni Nur Fitrah Zaulkapri
9:30 – 9:45	Antibacterial effect of Ganoderma Lucidum towards Streptococus mutans	Sharifah Alia Shahira Nur Khairunnisa' Zainal		Pre-Operative Diagnostic Radiograph Interpretation by Final Year Students On C-Shaped Canal	Muhammad Ariff Abidin Faezah Alia Azizan
9:45 – 10:00	Self-medication practice for dental pain among medical, dental and pharmacy students: A comparative study	Nur Farhaanah Azman Zaty Ainaa Mohamed		Investigating The Use Of Smartphones Among Universiti Teknologi MARA (Uitm) Dental Students	Nur Saiyidah Hanisah Ali Nadia Syahirah Mohd Nazri
10:00-10:15	Dental Caries Scenario Among 5, 12 And 15 Years Old Children Attended UiTM Dental Clinic: Nine Years Retrospective Study	Nur Sabrina Shes Su'eiba Nur Syara Abd. Wahid		Impact of Photodentistry on Dental Students' Empathy and Educational Experience in Comprehensive Patient Care	Farah Farhanah Rusle Diana Syazwani Muhd Radhi
10:15-10:30	The Parental Knowledge, Acceptance and Perception of Behavior Management Used for Their Pre-school Children Dental Treatment	Nur Fatin Faqhira Jalani Nur Amirah Hamid		Pledge Your Teeth! The Willingness Of Dental Students To Donate Their Teeth	Masyitah Mohd Zairi Sajidah Zaharudin

Session 2 (11am - 12 pm)

Time	Venue				
	Al Biruni			Al Zahrawi	
	Title	Presenter		Title	Presenter
11:00-11:15	The pH Of Fruit Drinks, Juices, Sports Drinks, Malted Drinks and Carbonated Drinks In Malaysia	Nur Nabila Abd Wahab Nur Afiqah Rosman		Parents' Knowledge and Children's Feeding Patterns in Relation to Caries Experiences	Nusra Zakaria Syarena Mohd Shaari
11:15-11:30	Evaluating The Efficiency Of Babshets' Pulp-Tooth-Ratio Formula For Age Estimation on Maxillary Canines On Panoramic Radiographs	Reiyna Nair Archana Krishnan V		Patient Satisfaction towards Dental Services in Faculty of Dentistry, Universiti Teknologi MARA (UiTM)	Aiman Abu Kassim Muhd Irfan Maruan
11:30-11:45	Antibacterial Effect of Ziziphus mauritiana leaves extracts on Streptococcus mutans	Grace Nyura Anak Jambai Puteri Emanda Mohd Azlan		Erosive effect of cultured drink (probiotic) on tooth enamel	Dasilanah Daslam Nur Fazlin Syahirah
11:45-12:00	Antimicrobial Effects of Vitamin D 3 on Streptococcus mutans: An in vitro study	Siti Arisya Nazli Nuraina Efira Nor Effandy		The Role of Selfies In Establishing Post- Mortem Identity	Pratheeksha Kalappa Archana Krishnan V

Session 3 (2 - 3 pm)

Time	Venue				
	Al Biruni			Al Zahrawi	
	Title	Presenter		Title	Presenter
2:00-2:15	The Efficacy of the Maxillofacial Suturing Kit in Assessing Undergraduate Skill Performance	Sakinah Hamuddin Naquib Abdul Bari		A Single-Tooth Implant versus Resin Bonded Bridge in Single Missing Tooth Replacement: A Study of Patient's Satisfaction	Hadib Jazmine Mohd Hatta Nuha Amirah Ahmad Syukri
2:15-2:30	Comparison of Bimaxillary Protrusion Occlusion Morphology: A Geometric Morphometric Analysis	Nurul Fazleen Anis Che Aziz Safiyyah Mohamad Yunos		The Beauty of Rosa Damascena in Oral Health	Dzulfakhrul Najwan Nabilah Abdullah Sani
2:30-2:45	Ficus deltoidea leaves extracts - promising therapeutic agent for oral candidiasis and denture stomatitis	Mimi Syafiqa Ahmad Jafri Fazleen Zulzaidi		Green Synthesis of Silver Nanoparticles From Psidium Guajaya Leaf Extract – A Review	Niharika Tp Sequeria CM
2:45-3:00	Association Between Oral Health Status To Oral Health Literacy Among Management Students	Debotri Basu Dr Ramya Shenoy		Dental Care for Elderly	Arubarna Dasgupta Siddharth Maitra

Undergraduate Oral Presentation

Symposium Day 1
9th April 2019 (Tuesday)
Session 4 (4 – 5 pm)

Time	Venue			
	Al Biruni		Al Zahrawi	
	Title	Presenter	Title	Presenter
4.00–4.15	Evaluation of Stress Among Postgraduate Clinical Residence in Faculty of Dentistry of Selected Universities in Selangor, Malaysia	Masturina Md Amin / Anis Maizan Azmimurad	The Impact of Fixed Prosthodontic Education Kit on Patients' Awareness and Knowledge in Universiti Teknologi MARA (UiTM)	Nur Nabila Rosli / Siti Hajar Mohd
4.15–4.30	Dental Patients' Awareness on Effects of Smoking and Patients' Perception on the Role of Dentists in Smoking Cessation Activities	Najwa Mohd. Kazmin / Nik Nur Adleena Nik Mohd Kamil	Evaluation of Antimicrobial Effect of Malaysian Propolis with Aloe Vera against Enterococcus faecalis to be used as Intracanal Medicament in Endodontics	Farah Aminah Hamka / Nur Amirah Azmi
4.30–4.45	Identification of Microbial Population Isolated from UiTM Dental Students' Mobile Phones	Muhammad Amirul Mukminin Mohd Kahiruzhar / Annissa Azfa Anuwa	The Relationship of Facial Measurements with the Mesiodistal Width of the Maxillary Anterior Teeth	Nur Ilyana Aifa Aziz / Nadia Che Mohd
4.45–5.00			Engineer Your Way To Regeneration	Ashmita Deb / Shweta Bhambhu

Symposium Day 2
10th April 2019 (Wednesday)

Session 5 (8.30 – 10.00 am)

Time	Venue	
	Al - Biruni	
	Title	Presenter
8.30– 8.45	Dental Erosive Potential of Non-Nutritive Sweeteners (Aspartame, Acesulfame-K, Sucralose), and Steviol Glycosides in Carbonated Drinks	Nur Aqilah Mohd Zainuri / Muhamad Adib Abd Halim
8.45– 9.00	Morus alba L.: Creating Miles of Smiles	Noor Izzyani Mahadzir / Nur Haleesa Mohd. Hairi
9.00– 9.15	Experience, Knowledge and Awareness of Sport-Related Dental Injury among Malaysian Athletes	Ahmad Safwan Mohd. Elias / Nur Al Huda Mansur
9.15– 9.30	Characterization of Tooth Dimension for the Malay Ethnic in Malaysia using CAD Technology	Khalisyah Che Hashim / Ahmad Yusri Abd. Kuddus
9.30– 9.45	Autologous Platelet Concentrates In Dentistry	Anahita Deo / Suhani Jindal

Session 5 (8.30 – 10.00 am)

Time	Venue	
	Al - Biruni	
	Title	Presenter
8.30– 8.45	Dental Erosive Potential of Non-Nutritive Sweeteners (Aspartame, Acesulfame-K, Sucralose), and Steviol Glycosides in Carbonated Drinks	Nur Aqilah Mohd Zainuri / Muhamad Adib Abd Halim
8.45– 9.00	Morus alba L.: Creating Miles of Smiles	Noor Izzyani Mahadzir / Nur Haleesa Mohd. Hairi
9.00– 9.15	Experience, Knowledge and Awareness of Sport-Related Dental Injury among Malaysian Athletes	Ahmad Safwan Mohd. Elias / Nur Al Huda Mansur
9.15– 9.30	Characterization of Tooth Dimension for the Malay Ethnic in Malaysia using CAD Technology	Khalisyah Che Hashim / Ahmad Yusri Abd. Kuddus
9.30– 9.45	Autologous Platelet Concentrates In Dentistry	Anahita Deo / Suhani Jindal

Postgraduate E-Poster Presentation

	DAY 1: TUESDAY 9TH APRIL 2019		
EP	**TIME**	**PRESENTER + SUPERVISORS**	**TOPIC**
EP01	9.15-9.25 am	Dr Mohd Salman Masri Dr Nurul Ain Mohamed Yusof Dr Erni Noor	Management of Extensive External Root Resorption Leading to Root Perforation: A Case Report
EP02	9.30-9.40 am	Dr Najiyatu Nazihah Zakaria Dr Saraswathy Devi Sinniah	Management of Rotated Central Incisor: A Case Report
EP03	9.45-9.55 am	Dr Siti Nadia Rahimi Dr Juzailah Roffie Dr Tengku Fazrina	A Hollow Obturator Design to Minimise Weight in Maxillectomy Patient: A Case Report
EP04	10.00-10.10 am	Dr Nurul Ain Mohamed Yusof Dr Mohd Salman Masri Dr Erni Noor	Removal of Failed Dental Implant with Application of Concentrated Growth Factor (Cgf): Case Report
EP05	10.15-10.25 am	Dr Nadia Izyan Dr Indah Noviaranny	Fibrotic Encapsulation of Quadhelix in Palatal Mucosa: A Case Report
	BREAK (10.30-11.00 am)		
EP06	11.00-11.10 am	Dr Muhammad Hilmi Dr Erni Noor Prof Fouad Hussain Al-Bayaty Dr Faizal Hafez Hidayat Dr Farha Ariffin	Atypical Form of Generalized Aggressive Periodontitis, A Case Report
EP07	11.15-11.25 am	Dr Noor Aaina Dr Zethy Hanum Kassim Dr Abu Razali Saini Dr Lim Tong Wah	Endocrown: Stepwise Clinical Preparation and Restoration Using CAD-CAM Composite and Pressed Lithium Disilicate Materials: Case Report
	DELIBRATION FOR E-POSTER (CASE REPORT)		
	LUNCH (12.15-2.00 pm)		
EP08	2.00-2.10 pm	Dr Sayfaldeen Kashmoola Dr Tengku Fazrina Dr Hazmyr Abdul Wahab	Facial Anthropometry and 2D Photography: A Pilot Study
EP09	2.15-2.25 pm	Dr Nurul Qamar Salehuddin Dr Farha Ariffin	Impact of Surgical vs Non-surgical Management of Chronic Periodontitis on Patient's Quality of Life – A Pilot Study
EP10	2.30-2.40 pm	Dr Nor Dayana Mohd Ali Dr Nagham Mohamad Dr Noraina Hafizan Norman	Assessment of Pain Levels In Patient with Orthodontic mini screw implants using a Pain diary – A Pilot study
EP11	2.45-2.55 pm	Dr Nur Zety binti Mohd Noh Dr Erni Noor	The Effect of Poly Lactic-co-Glycolic Acid (PLGA) Scaffold with Concentrated Growth Factor (CGF) on

Postgraduate E-Poster Presentation

		Dr Nur Aliana Hidayah Mohamed	Biological Behaviour of Human Osteoblast Cells: A Pilot Study
BREAK (3.00-4.00 pm)			

EP	TIME	PRESENTER + SUPERVISORS	TOPIC
EP12	4.00-4.10 pm	Dr Mohd Zulkifli Kassim Dr Nor Wati @ Nur Atikah Mustafa Professor Madya Dr Rohana	The Effect of Thickness on Masking Ability of Translucent Monolithic Zirconia Ceramic - A Pilot Study
EP13	4.15-4.25 pm	Dr Sharul Nisha Ali Dr Erni Noor Dr Noorharliana Mohamed Zohdi	Step by step approach to aesthetic crown lengthening (Periodontal point of view)
EP14	4.30-4.40 pm	Dr Azaitun Akma binti Shahrin Dr Noraina Hafizan Norman Dr Sarah Haniza Abdul Ghani	Evaluation of Root Resorption In Relation to Adjunctive Orthodontic Treatment with Micro-Osteoperforations: A Randomized Clinical Trial

END OF DAY 1 (5.00 pm)

DAY 2: TUESDAY 10TH APRIL 2019

EP	TIME	PRESENTER + SUPERVISORS	TOPIC
EP15	8.30-8.40 am	Dr Juzailah Roffie Dr Hazlina Abd Ghani Dr Zuratul Ain Abd Hamid	Clinical evaluation factors affecting efficacy of Green denture adhesive.
EP16	8.45-8.55 am	Dr Yuliana Ayob Prof Fouad Hussain Al-Bayaty	Antimicrobial Effects of Malaysian Coconut Oil Against *Aggregatibacter Actinomycetemcomitans*
EP17	9.00-9.10 am	Dr Mohd Helmi bin Mahamad Nazir Dr Maryati Md Dasor Dr Saraswathy Devi Sinniah Assoc. Prof Dr. Norashikin Yusof	Longevity of Metal Bracket Bonded on Acrylic Teeth and the Impact On Quality of Life Of Orthodontic Patient – A Prospective Study
EP18	9.15-9.25 am	Dr Jumanah Babiker Dr Nur Hafizah Kamar Affendi Dr Mohd Yusmiaidil Mohd Yusof	Accuracy of Gingival Thickness Measurement Using CBCT Scan
EP19	9.30-9.40 am	Dr Siti Balqish Oon Dr Noraina Hafizan Norman Dr Aspalillah Dr Sarah Haniza Abdul Ghani	Shape Visualization of Dental Inclination in Orthodontic Malocclusion through Geometric Morphometric Analysis
EP20	9.45-9.55 am	Dr Rostam Iffendi Idris Dr Lim Tong Wah Assoc Professor Dr Yoshinobu	Prescale Film for Occlusal Force Analysis
EP21	10.00-10.10 am	Dr Liyana binti Ghazali Dr Noraina Hafizan Norman Dr Mohd Yusmiaidil Mohd Yusof	Clinical Evaluation of Dose Variation on Diagnostic Image Quality In Digital Orthodontic Radiographic Assessments
EP22	10.10-10.20 am	Dr Nainan Isaac Dr Vinod Thangaswamy	Esmarch Procedure for Recurrent Unilateral TMJ Ankylosis

BREAK (10.00-10.30 am)

DELIBRATION FOR E-POSTER (RESEARCH)
10.30-12.30 pm

Table Clinic Competition

Year 2 Students Table Clinic Competition Dental Students' Symposium 2019

Group	Centre of Studies	Topic
A	Oral and Maxillofacial Surgery	Tea Extract : Hidden Gem in Promoting Post Extraction Haemostasis
B	Paediatric Dentistry & Orthodontics	Child's Diet and Dental Caries
C	Restorative Dentistry	Easy Peasy Teeth Set Up
D	Oral and Maxillofacial Diagnostic and Medicine	Caries Explosion Box
E	Preclinical Orofacial and Medical Sciences	Dentist on The Front Line Against Oral Cancer
F	Periodontology	Slowly but Surely, Baby Steps to Scaling and Root Debridement (SRD) Skills; The Implementation of Innovative Pre-clinical Periodontal Procedures
G	Comprehensive Care	The Dental Life-light: Making Communication Brighter
H	Population Oral Health & Clinical Prevention	Do You Want To Burn?

Abstracts
Undergraduate Oral Presentations

Accuracy of Kvaal's Radiographic And Dentinal Root Translucency Techniques In Estimating Dental Age Of Extracted Teeth

Intan Syakirah Ramli[1], Ummi Solehah Muhd[1], Mohd Yusmiaidil Putera Mohd Yusof[2]

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[2]Center for Oral and Maxillofacial Diagnostics and Medicine Studies, Faculty of Dentistry, Universiti Teknologi MARA

OBJECTIVE: The use of teeth to estimate the age of unknown bodies provides much helps especially in skeletal remains with no soft tissues left for identification. However, dental age estimation utilizing degenerative changes in teeth like dentinal translucency is often hampered with large margin of error range. This study aims to compare the accuracy of modified Bang-Ramm dentinal root translucency method with Kvaal's radiographic method (intraoral periapical radiograph) in estimating dental age in adults. METHODS: Nineteen teeth of maxillary and mandibular incisors and canine were collected following dental extraction. Date of birth, date of extraction and gender were documented prior to extraction. All teeth were assessed using two methods of dental age estimation; 1) The equation from Kvaal's radiographic method and 2) Formula from modified Bang-Ramm non-sectional dentinal root translucency method. The results from the age estimation were compared to the chronological age of the persons from whom the teeth were extracted. RESULTS: The average dental age estimated using both methods significantly correlated with the chronological age for both men and women. Overestimation and underestimation with mean absolute error up to 13 years and 15 years was observed in modified Bang-Ramm and Kvaal, respectively. The estimated age calculated from both methods also showed increasing value in range of standard deviation as the patient gets older. CONCLUSION: From the obtained results it is reasonable to conclude that modified Bang-Ramm method gives better accuracy for dental age estimation in adults.

The Distribution of Malaysian Dental Practitioners In Relation To The Population: A Geographic Information System Study

Sarah Athirah Rizal[1], Amirah Aina Azahari[1], Nor Faezah Md Bohari[2], Atika   Ashar[3]

[1]Faculty of Dentistry, University Teknologi MARA
[2]Centre of Population Oral Health and Clinical Prevention Studies, Faculty of Dentistry, Universiti Teknologi MARA
[3]Centre for Craniofacial Diagnostics and Biosciences, Universiti Kebangsaan Malaysia

OBJECTIVE: The aim of this 2018 study was to analyse the distribution of dental practitioners in relation to the population in Klang Valley and Borneo Island, to prove the hypothesis that an uneven distribution of dental practitioners in Malaysia. METHODS: All dental practitioners in four selected states; W.P Kuala Lumpur, Selangor (Klang Valley), Sabah and Sarawak (Borneo Island) were located and mapped against the population, using Geographic Information Systems (GIS) tools. The practicing address for each dental practitioner was gathered from Dental Practitioners' Information Management System (DPIMS) and population data were obtained from the Population and Housing Census of Malaysia 2010. All data for analysis were extracted from the integrated database in QGIS into Microsoft Excel. The de-identified data for each dental practitioner including date of registration to Malaysian Dental Council (MDC), practice type (government or private) and qualification were also analysed. RESULTS: A total of 1,092 and 1,831 dental practitioners practiced in W.P Kuala Lumpur and Selangor respectively. 437 dental practitioners practiced in Sabah and 532 in Sarawak. The highest dental practitioner to population (DPtP) ratio found in this study was in Sabah with a ratio of 1: 6,555. Beluran district in Sabah had the highest DPtP ratio which was 1: 52,242 while Sabak Bernam district in Selangor had the lowest DPtP ratio of 1:1,159. CONCLUSION: Dental practitioners were distributed relative to high population density, were unevenly distributed across Malaysia, and the majority of people that has the most inaccessibility to a dental practitioner, reside in Sabah.

Antibacterial Effect Of Ganoderma Lucidum Towards *Streptococus mutans*

Sharifah Alia Shahira Sharulmizam[1] , Nur Khairunnisa' Zainal[1] , Khor Goot Heah[2] , Hasnah Begum Said Gulam Khan[2]

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OBJECTIVE: This study was performed to assess the antibacterial effect of Ganoderma lucidum against Streptococcus mutans. METHODS: Antibacterial activities of aqueous extract of Ganoderma lucidum (A), and ethanolic extract of Ganoderma lucidum (E) were tested against Streptococcus mutans with methods of disc diffusion, Minimum Inhibitory Concentration (MIC) and also Minimum Bactericidal Concentration (MBC). For data analysis, Kruskal-Wallis test, Mann-Whitney test and Repeated Measure Anova test were applied using SPSS, version 25 with p-value <0.05 is expected statistically significant for the study. RESULTS: For disc diffusion method, chlorhexidine that act as positive control give a maximum clear zone with diameter median (IQR) of 32 (8) mm in growth inhibition surrounding the disc, followed by E of 10 (4.5) mm, and A of 7 (9.5) mm, (p-value<0.001). As for MIC reading, observation of 1st well (100 mg/mL) until 4th well (12.5mg/mL) appeared clear in solution, whereas 5th well (6.25mg/mL) and 6th well (3.125mg/mL) showed turbidity. On the other hand, MBC results showed from the 1st well (100mg/mL) of the ELISA plate appeared clear in turbidity, whereas from 2nd well (50mg/mL) to 4th well (12.5mg/mL) showed turbidity. CONCLUSION: By comparing the two types of Ganoderma lucidum extracts (A and E), the E exhibited maximum antibacterial activity while the A was found to be less comparatively effective against Strep. mutans.

Self-Medication Practice For Dental Pain Among Medical, Dental And Pharmacy Students: A Comparative Study

Zaty Ainaa Mohamed[1], Nur Farhaanah Azman[1], Mohd Aizat Abdul Rahim[2], Mahyunah Masud[3]

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OBJECTIVES: The study was conducted to determine the prevalence of self-medication for dental pain, to compare the perception and awareness regarding the drugs used, dosage and side effects among medical, dental and pharmacy students. It is hypothesized that there is a difference in the prevalence, perception and awareness in the practice between first and final year students. MATERIALS AND METHODS: A cross-sectional study was conducted among undergraduate medical, pharmacy and dental students in first and final year. Validated paper-based questionnaire was prepared and distributed among the students. The questionnaire consisted of demographic information, self-medication practice, factors contributing to self-medication, perception and awareness. The data was analysed using SPSS version 23 for descriptive statistic, independent T test and one-way ANOVA. RESULTS: The prevalence of self-medication practice in comparison between first year and final year for dental students were 25.3% and 42.2%, for medical students were 26% and 41.8%, for pharmacy students were 45.3% and 50.8% respectively. Final year students of the three disciplines perceived that they were able to treat dental pain by self-medication. Final year students of medical and pharmacy students were more aware of drug interaction compared to first year. However, this was not significant for dental students. The most common drug used for dental pain was oral analgesic. Unfortunately, there were few of them who prescribed themselves an antibiotic. CONCLUSION: The study revealed that the majority of the students do not self-medicate for dental pain. Their awareness and perception seem appropriate and commendable as they are going to be the future healthcare professionals

Dental Caries Scenario Among 5, 12 And 15 Years Old Children Attended UiTM Dental Clinic: Nine Years Retrospective Study

Nur Sabrina Shes Su'Eiba[1], Nur Syara Abd Wahid[1], Luay Thanoon Younis[2], Izyan Hazwani Baharuddin[1]

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OBJECTIVE: To identify the dental caries scenario in children age 5, 12 and 15 attended UiTM dental clinic from 2008 – 2016. METHODS: Records of patients treated at the clinics during a ten year period were evaluated. Patients with caries records in deciduous teeth were included in the study. A table was prepared in Excel spreadsheet to extract the data. The data was searched for dental caries prevalence in index age group (5, 12 and 15 years old) separately and following data was extracted: age, gender, years and DMFT index. The database was set up in Microsoft Office 2010 Excel, was submitted and analyzed in the Statistical Analysis Systems program (SPSS 23) using Pearson Chi-Square analysis. The significance level for all the analysis was set at P<0.05. RESULTS: There is a significant difference in the prevalence of caries of 9 years data collected (P=0.048). The highest percentage of caries prevalence (68.1%) was observed in year 2010. Meanwhile the lowest percentage of caries prevalence (56.4%) was observed in year 2013. The mean for DMFT in 2010 was 3.62 (σ = 4.019) while in 2013 the mean for DMFT was 2.82 (σ = 3.873). Caries prevalence in 2008 was 60.5% (σ = 2.093); while in 2016, it was 57.6% (σ = 4.360). CONCLUSION: The results showed that the prevalence of dental caries was fluctuating throughout the years, which would indicate that there is a need for improvement in the oral health service and more strategic preventive measures must be implemented.

The Parental Knowledge, Acceptance And Perception Of Behavior Management Used For Their Pre-School Children Dental Treatment

Nur Fatin Faqhira Jalani[1], Nur Amirah Hamid[1], Izyan Hazwani Baharuddin[1], Ilham Wan Mokhtar[2]

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OBJECTIVE: To evaluate parents' knowledge, acceptance and perceptions towards passive restraint, active restraint, parents separation, voice-control, tell-show-do, conscious sedation and general anaesthesia on their child during dental treatment as one of behaviour management techniques in dentistry. METHODS: A 32–items questionnaires constructed in four (4) domains; demographic, knowledge, perception and acceptance. The questionnaire is accompanied by seven set videos of selected behaviour management techniques. Acceptance of each technique is measured using a 100mm horizontal visual analogue scale. Data were analysed using SPSS version 22. RESULTS: Fifty-five parents were recruited. The sample consists of parents with children age between 3 – 5 years old. 98% of the parents are married and only 2% are single parents. Most of the parents are degree holder that contributes 31%. 42% parents stated that they assist their children in brushing their teeth that imply good oral home care practise. More than half of the parents have substantial awareness of oral care as 60% parents do bring their children to dentist. Above all the behavioural management technique measured in this study, Tell-Show-Do (TSD) is the most accepted technique by the parents in dental treatment. The least accepted is general anaesthesia. CONCLUSION: The parental knowledge, acceptances and perception of suggested behaviour. Management technique used for their children is above average. Proper explanation and clarification of the technique will improve acceptance and lessen the parents' concern about their children dental treatment. Optimum oral health home care practises is an important factors in accepting dental treatment for the pre-school children.

The pH Of Fruit Drinks, Juices, Sports Drinks, Malted Drinks And Carbonated Drinks In Malaysia

Nur Afiqah Rosman[1], Nur Nabila Abdul Wahab[1], Annapurny Venkiteswaran[2], Norashikin Abu Bakar[2]

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OBJECTIVE: The aim of this study is to identify the acidity and erosive potential of commercially available soft drinks in Malaysia. MATERIALS & METHODS: A pilot study showed that there was a significant difference in the pH of beverages when measured under different temperature and exposure time. Hence the timing of reading and the room temperature was standardized for the main study. A total of 151 beverages were included in the main study and classified according to types of drinks which were fruit drinks, juices, sports drinks, malted drinks and carbonated drinks. Mettler Toledo™ pH meter was used to measure the pH of each beverage in triplicate readings. The readings were taken immediately upon opening of the can and at room temperature of 25⁰C. The mean pH value of the beverages were then classified as extremely erosive (pH< 3.0), erosive (pH 3.0 to 3.9), minimally erosive (pH 4.0 to 5.4) and non-erosive (pH> 5.5). RESULTS: None of the beverages showed an extremely erosive potential of pH less than 3.0. Only 11.3% of the beverages showed an erosive potential with pH between 3.0 to 3.9. Majority of the beverages (74.8%) were classified as minimally erosive with pH value between 4.0-5.4 The remaining 13.9% of the beverages were classified as non-erosive. CONCLUSION: This study outlines the mean pH and erosive potential of popular non-dairy beverages found in Malaysia. This vital information can be used for specific dietary advice based on the patient's beverage consumption

Evaluating The Efficiency Of Babshets' Pulp-Tooth-Ratio Formula For Age Estimation On Maxillary Canines On Panoramic Radiographs

Reiyna Nair, Archana Krishnan V

Coorg Institute of Dental Sciences, India.

INTRODUCTION: Age estimation is one among the most well established and researched fields of forensic odontology. The continuous deposition of secondary dentin, and the resulting decrease in pulp volume, still remains one of the major principles behind all age estimation formulas. Bahbshets' pulp to tooth ratio formula, also based on this principle, was originally proposed for extracted teeth and post-mortem age estimation. The purpose of our study was to evaluate the efficiency of this formula formaxillary canines on panoramic radiographs. METHOD: 16 panoramic radiographs were randomly collected from the O.P.D of our institute. The pulp and Tooth ratio were measured as pixel value using the freely downloadable GNU Image Manipulation Program- GIMP©. The data so obtained was used to calculate the pulp to tooth ratio and this value was used in Babshets' formula to arrive at an age range and estimate. RESULT: The results showed that the formula was able to provide an estimated age range within which the original age of the individual fell. But at the same time it proved unreliable in estimating the age of individuals below the age of 15. CONCLUSION: Babshets' formula can be used as an alternative or accessory to other methods of age estimation when no other options seem available and for persons over the age of 15. With the role of forensic odontology increasing in age estimation for human rights, evaluation and re-evaluation of existing techniques and their applications is of utmost importance.

Antibacterial Effect Of Ziziphus Maurituana Leaves Extracts On *Streptococcus mutans*

Grace Nyura Jambai[1] , Puteri Emanda Binti Mohd Azlan[1] , Hasnah Begum Said Gulam[2] , Khor Goot[2]

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OBJECTIVE: The application of natural products has been discovered widely as an alternative to synthetic antimicrobial agent due to their lower side effect, safe, effective and economical. In the current study Ziziphus mauritana Lam. leaves belongs to the family Rhamnaceae has been selected as it has been used widely for thousands of years in the prevention and treatment of various diseases. Thus, the aim of this study is to determine the antibacterial effect of ethanolic Z. mauritiana leaves extract against S. mutans, which is known as an etiological agent in the development of dental caries. MATERIAL AND METHODS: The plants extracts were prepared using maceration method in 100% ethanol for 72 hours. The ethanol filtrate was separated and concentrated using a rotary evaporator. Then, the extract was lyophilized using freeze dryer for three days. The antibacterial assay of the leaves extracts was conducted on S. mutans (ATCC 25175) by disc diffusion method, minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC). RESULTS: The results of disc diffusion method are determined by the diameter of zone of inhibition. For 200mg/ml and 500mg/ml of the ethanolic extract of Ziziphus maurituana leaves extract the zone of inhibition are 11.67mm and 13.9mm respectively. The MIC and MBC value is 3.125mg/ml. CONCLUSION: The findings reported in this study suggest that ethanol extracts of Ziziphus maurituana leaves have a potential to be developed as a therapeutic agent in preventing development of dental caries.

Antimicrobial Effects Of Vitamin D3 On *Streptococcus mutans*: An In Vitro Study

Siti Arisya Nazli, , Nur Aina Efira Nor Effandy[1] , Alaa Sabah Hussein[2] , Hassanain Issam Yehya Yehya Al-Talib[3]

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OBJECTIVE: This study aimed to evaluate the antimicrobial effects of vitamin D3 against Streptococcus mutans (S. mutans) that considers the main causative bacteria in dental caries development. METHODS: In this study, the antimicrobial effects of vitamin D3 were evaluated using agar well diffusion method following the guideline by Clinical Laboratory Standards Institute (CLSI). Broth microdilution method was used to determine the minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC). Moreover, scanning electron microscope (SEM) was performed to assess the possible changes in the morphology of S. mutans cells following the application to vitamin D3 with different concentrations. RESULTS: Vitamin D3 showed excellent inhibitory effects on S. mutans with inhibition zone of 15 mm at 6.25 mg/ml, in comparison with chlorhexidine (0.12%) as a positive control. The MIC of vitamin D3 was 250 µg/ml while the MBC was 500 µg/ml. There were significant changes in the treated cells with vitamin D3 compared to the non-treated control cells. CONCLUSIONS: These findings suggested that vitamin D3 has excellent antimicrobial effects against S. mutans and may be considered as a useful compound in the prevention of dental caries in the future. Further research is recommended to elucidate the mechanism of vitamin D3 on S. mutans.

Prediction Of Mesiodistal Width Of Canine And Premolars In Mixed Dentition Stage

Nagham Mohammed Abdullah Al-Jaf[1], Sarah Husna Khairulzan[2], Rowena Diane Saruyan[2]

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OBJECTIVES: The objective of this study is to assess the applicability of Moyer's prediction tables and equations to the Malay population and to formulate a regression model to predict the size of mesiodistal width of unerupted canine and premolars if proved necessary. METHODS: Dental study models, from the pre-treatment records of Malaysian Malay orthodontic cases in Faculty of Dentistry, UiTM Sungai Buloh, were screened. Our inclusion criteria were matched by 13 male records and 31 female records. Each gender group was subdivided into maxillary and mandibular subgroup. A digital vernier caliper with an accuracy of 0.01 mm was used to measure the mesiodistal width of the mandibular central and lateral incisors, mandibular, maxillary canines (C), first premolars (P1), and second premolars (P2) of all four quadrants. Using the collected data of the summed widths of the four mandibular incisors and the summed widths of canine and premolars, the applicability of Moyer's probability table and two different equations were tested. The data were used to formulate a prediction regression equation of the type y=a+bx for one group. RESULTS: One of the tested equations were applicable to all groups except for the male maxilla group. While the other equations were not applicable for all groups. The regression coefficient (R) was 0.6 with an R^2 value of 0.36 for male maxilla group. CONCLUSIONS: Moyer's 1973 equations are applicable for Malaysian Malay subjects except for the male maxilla group, for which the formulated prediction equation can be used.

Comparison Of Bimaxillary Protrusion Occlusion Morphology: A Geometric Morphometric Analysis

Nurul Fazleen Che Aziz[1], Safiyyah Yunos[1], Aspalilah Alias[2], Mohd Yusmiaidil Putera Mohd Yusof[3], Noraina Hafizan Norman[4]

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OBJECTIVES: To compare the craniofacial shape and size in bimaxillary protrusion morphology according to its severity by application of geometric morphometric technique. METHODS: Lateral cephalometric radiographs of 92 bimaxillary protrusion patients (24 males, 68 female) aged between 21±2 years old were classified into mild, moderate and severe. Eleven landmarks were incorporated by geometric morphometric shape analysis using TPSUtil© software which then underwent Procrustes superimposition and subjected to canonical variate analysis (CVA), discriminant function analysis (DFA) and Procrutes ANOVA assessments under MorphoJ© software. Principal components analysis in shape and form spaces was used for evaluating shape patterns. RESULTS: The differences of skeletal and dental components of bimaxillary protrusion occlusion can be classified into its severity of craniofacial morphology (mild, moderate or severe). The CVA illustrated that the clusters of each group as slightly overlapping indicating a marked separation between these groups. The Procrustes ANOVA showed that the dental aspect has significant differences (p<0.05) suggesting that these groups have distinct variation, which can be categorized appropriately. However, it can be seen that skeletally, there was no significant difference (p>0.05), which signifies similarities of bimaxillary protrusive skeletal structures across all groups. The DFA showed a percentage of 70±10% within the classification of bimaxillary occlusions upon cross validation which demonstrates the accuracy in classifying these groups. CONCLUSIONS: Craniofacial shape and size of bimaxillary protrusion occlusion and its diversities are identifiable particularly in the dento-alveolar regions. Geometric morphometric analysis can be used as an alternative tool to classify bimaxillary protrusion patients according to its severity.-

Ficus Deltoidea Leaves Extracts - Promising Therapeutic Agent For Oral Candidiasis And Denture Stomatitis

Fazleen Zulzaidi1, Mimi Syafiqa Ahmad Jafri1, Vivi Noryati Ahmad2, Indah Amin2, Nurhayati Mohamad Zain2

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OBJECTIVES: The aims of this study are to investigate antimicrobial and anti-biofilm activities of F. deltoidea leaves extract against Candida albicans (C.albicans). METHODS: The antifungal activity was evaluated using minimum inhibitory concentration (MIC) and minimum fungicidal concentration (MFC). The potential of F. deltoidea leaves extract as antibiofilm agent was evaluated using biofilm inhibition assay and biofilm eradication assay. Chlorhexidine 0.12% was used as a positive control. Each experiment was performed in triplicate and repeated four times independently. All the data obtained were analysed using SPSS version 23. Statistical significance measured using Kruskal Wallis test and post-hoc Mann Whitney test which presented as means ±SD with P value <0.05. RESULTS: F. deltoidea extract showed antifungal activity against Candida albicans with MIC and MFC, 50mg/ml and 100mg/ml respectively. The extract exhibited inhibitory effect on candida biofilm formation (69.5%). The preformed biofilm was significantly dispersed by extract upon 5 minutes treatment with eradication percentages 66.63%. The biofilm inhibition and biofilm eradication percentages for positive control CHX 0.12% were 43.0% and 58.97% respectively. CONCLUSION: Results of this study suggest the potential of F. deltoidea leaves extract as preventative and therapeutic agents against candida biofilm-related infections such as oral candidiasis and denture stomatitis.

Association Between Oral Health Status To Oral Health Literacy Among Management Students

Debotri Basu, Ramya Shenoy

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BACKGROUND: There has been a number of advances in the field of dentistry today and yet oral health remains a neglected sector among the upcoming generation. Oral Health Literacy is merely a tool to propagate the importance of maintaining oral health and thus bridging the gap between the health provider and the patient. The aim of this study was to assess the association between oral health literacy to oral health status among management students. METHOD: A cross sectional survey of 150 students presently studying in School of Management, Manipal was carried out. The Oral health Literacy was assessed using the Rapid Estimate of Adult Literacy (REALD-30) followed by examination of oral health status using DMFT index. The association between comprehension (number of words taken without any pause) and the decayed teeth was assessed using spearman correlation coefficient. Student 't' test was applied to assess the association between time taken to presence of caries among students. RESULTS: The mean age of the study population was 20.68±1.87. The mean time taken was 45.12±12.85. The Oral Health Literacy was average with REALD-30 Score ranging from 2 to 25 with a mean score of 15.37±4.40. There was a positive correlation between decayed teeth and OHL (r=0.225, p=0.06). CONCLUSION: With an increase in REALD-30 score which indicates low Oral health literacy associated with increase in the number of decayed teeth among management students involved in the present study.

Evaluation Of Stress Among Postgraduate Clinical Residence In Faculty Of Dentistry Of Selected Universities In Selangor, Malaysia

Masturina Md Amin[1], Anis Maizan Azmimurad[1], Rohaida Abdul Halim[2], Erni Noor[3]

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[2]Centre of Paediatric Dentistry and Orthodontic Studies, Faculty of Dentistry Universiti Teknologi MARA
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OBJECTIVES: To identify the perceived stress among Universiti Teknologi Mara (UiTM), Universiti Kebangsaan Malaysia (UKM) and Universiti Malaya (UM) postgraduate clinical residents. MATERIALS AND METHODS: One hundred and twenty six postgraduate residents (PG) were invited to participate in the study via online survey. Among the 126, only 30 (23.8%) responded to the questionnaires. Result: Majority of the respondent (80%) were females and the mean age was 31 (SD=62.64). From the total 30 respondents, 25 (83.3%) were from UiTM, 4 (13.3%) from UM and only one (3.3%) from UKM. Among them, 33.7% were from Periodontology, 23% from Orthodontics, 27% from Prosthodontics and 16.6% from other specialty program. The result showed that 53.3% of the PGs reported they were stressed, with female (87.5%) being more stressed than males and this finding was statistically non-significant. Main contributor for elevated stress levels were found to be (i) lack of time for relaxation and neglect of personal life (86.7%), (ii) too much workload inadequate time (93.3%), and (iii) stress of academic activities like seminar and case presentation (100%). Among the stress coping strategies, hanging out with friends and music were found to be most effective, with 83.3% and 76.7% of PGs finding this as a best stress buster. CONCLUSION: In our findings the PGs clinical resident in 3 selected universities in Selangor reported to have high level of stress. The study further concluded that there were various factors that contribute to the condition and also various mechanism for stress coping strategies. The findings of this study further support the need to consider re-evaluation and improvement of the curriculum design in order to minimize students' stress level.

Dental Patients' Awareness On Effects Of Smoking And Patients' Perception On The Role Of Dentists In Smoking Cessation Activities

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OBJECTIVE: The objectives of this study are to assess the awareness of patients towards effects of smoking on their general and oral health and patients' perception regarding the role of dentists in smoking cessation activities and their willingness to follow dentists' advice. MATERIALS AND METHODS: Study population consists of 114 patients chosen through convenient sampling for a period of six months. Self-administered questionnaires, which included questions on knowledge of impact of smoking on health and role of dentists in smoking cessation, were distributed and collected within the same visit. Descriptive statistics and Chi-square test were used to analyse the data. RESULTS: The results showed that education level did not have significant effect on smoking status (p > 0.05). More than 90% of the respondents were aware of the effect of smoking on their general health. Both smokers and non-smokers showed positive attitude towards dentists' role in smoking cessation activities. Results also showed that more than 70% of the smokers were willing to follow the dentists' recommendations on smoking cessation and about 80% of the smokers could recall their dentists' advice on effects of smoking on oral health and the use of nicotine replacement therapy to quit smoking. CONCLUSION: Dentists have an important role to educate patients regarding the effects of smoking on general and oral health and to strongly advice patients not to smoke.

Identification Of Microbial Population Isolated From UiTM Dental Students' Mobile Phones

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OBJECTIVES: The aim of this study was to assess the awareness level of mobile phone hygiene practice and to identify different types of microbial population isolated from UiTM dental students' mobile phones; among preclinical and clinical students. MATERIALS AND METHODS: 80 students; 40 each from preclinical and clinical years were randomly selected. A questionnaire assessing their awareness and mobile phone hygiene practice was distributed. Swabs were taken from the students' mobile phones using sterile cotton swab, cultured on nutrient agar and incubated for 24 to 48 hours. Bacterial colonies were harvested, transferred onto glass slide, gram-stained and viewed under light microscope. Data obtained were analysed using chi-square and t-test based on SPSS 25 program. RESULTS: There was no significant difference in all parameters assessed in the questionnaire between the clinical and preclinical students. Bacterial contamination was identified on all 80 (100%) mobile phones. 38.75% (n=31) showed a single colony type, 41.25% (n=33) had two different colony types while 20% (n=16) of the cases grew three or more different colony types. Of all isolated bacteria, 82.5% (n=66) was Gram positive, 16.25% (n=13) was Gram negative, while 1.25% (n=1) was Candida spp. The load of Gram negative bacteria was statistically higher on the mobile phones of clinical students compared to preclinical students ($p<0.05$). The most common bacterial shape was coccus (82.5%), followed by bacillus (16.25%) and Candida (1.25%). Coccus was further categorized into Staphylococcus spp (38.75%), followed by Streptococcus spp (30%), diplococcus (12.5%), and tetrad (1.25%). CONCLUSIONS: A high level of awareness but poor attitude towards mobile phone hygiene practice was observed among preclinical and clinical students. This study suggested that Gram negative bacteria was mainly harbored in the dental clinics and simulation laboratory. The bacterial source conceivably originate from skin and oral region; and transferred onto the mobile phones by direct contact or through saliva splash.

Dental Erosive Potential Of Non-Nutritive Sweeteners (Aspartame, Acesulfame-K, Sucralose), And Steviol Glycosides In Carbonated Drinks

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INTRODUCTION: Dental erosion is increasing especially in developed country. The main contributing factor is due to acidic soft drink consumption. Recently, there is a new trend on acidic soft drinks manufacture which is incorporation of artificial sweeteners. However, the dental erosive potential related to this shifting remains uncertain. Objective: To assesses the dental erosion potential related to non-nutritive sweeteners (Aspartame, Acesulfame-K, Sucralose), and Steviol Glycosides in carbonated soft drinks on 60 extracted healthy premolar teeth. METHODS: This in vitro study involved 60 extracted healthy human premolar teeth. Samples were randomly distributed into five groups: Group 1: Classic CokeTM (pH 3.25±0.015), Group 2: Light CokeTM (pH 3.53±0.015), Group 3: Stevia CokeTM (pH 3.52±0.031), Group 4: Mineral Water (pH 7.24±0.161), Group 5: Distilled Water (pH 7.24±0.027). Initially, characterization of beverages was analysed by measuring pH, titratable acidity and calcium content. Standardize enamel surface area of premolar teeth were exposed in selected five beverages in 5-minute duration, three times in 4 hours interval daily for four consecutive days. The erosive potential was determined by measuring calcium released and teeth weight loss. RESULTS: All tested carbonated soft drinks showed significance differences $p<0.05$. Light CokeTM showed the highest dental erosion. Stevia CokeTM produced less dental erosion as compared to Classic CokeTM. CONCLUSION: These findings suggest the consumption of these acidic beverages caused enamel dissolution over time. Natural sweetener (Steviol Glycoside) produces less dental erosion in contrast to non-nutritive sweeteners in carbonated soft drinks.

Morus Alba L.: Creating Miles Of Smiles

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OBJECTIVES: The aims of the study are to determine the antimicrobial and antibiofilm activities of Morus alba leaves extract against Streptococcus mutans (S.mutans). METHOD: The antimicrobial activity was evaluated using minimum inhibitory concentration (MIC) and minimum bacterial concentration (MBC). The antibiofilm potential of extract was evaluated using biofilm inhibition assay and biofilm eradication assay. Oradex mouthwash with 0.12% CHX was used as a positive control. All experiments were performed in triplicate and repeated four times independently. Data were analysed using SPSS software version 23. A Kruskal-Wallis test followed by post-hoc Mann-Whitney U test was applied and level of significance was set at P < 0.05. RESULTS: Morus alba leaves extract showed antimicrobial activity against S.mutans with MIC and MBC, 25mg/ml and 50mg/ml respectively. The adherence of bacteria on an extract treated surface (0.5x MIC) was significantly reduced with adherence inhibition percentage of 72.5% compared to positive control CHX 0.12% (54.3%). At 0.5x MIC concentration, the extract also disrupted preformed biofilms with eradication percentage of 52.87%. CONCLUSION: The results suggest that Morus alba represents an untapped source of local plant with antibiofilm activity against S.mutans that could be a resource in the development of therapeutic natural products in managing dental caries.

Experience, Knowledge And Awareness Of Sport-Related Dental Injury Among Malaysian Athletes

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OBJECTIVES: The aim of this study is to assess the prevalence of sport-related dental injuries among athletes and to determine the awareness of the prevention in sport-related dental injury and the usage of protective gears. METHODS: In this cross-sectional study, athletes from different sport activities in Malaysia were recruited to participate in a survey through convenience random sampling. A self-administered questionnaires were elicited on demographic data, prevalence of dental injuries, knowledge and awareness of protective gears and availability of dental team. All data obtained were subjected to descriptive analysis and Pearson's Chi-square tests. RESULTS: Total of 254 athletes (61%, male, 39% female) responded and categorised into non-direct contact (n:4, 16%) and direct contact sport (n: 213, 83.9%). The prevalence of self-reported dental injury was 51.2% (n=130). Most common was bruised face (11.4 %) followed by lip laceration (10.6%) and crown tooth fracture (10.6%). The injury experience was significantly associated with male athletes ($\chi 2=6.194$, p=0.013) and direct contact sport activity ($\chi 2=16.718$, p<0.001). Most athletes (n= 229,90.2%) acknowledged the importance of protective gear in sport but has no significant association with using it (n:128, 50.4%). Overall mouthguard used was ready-made type (n:94, 73%) and significant with contact sport activity ($\chi 2=8.728$, p=0.003) but not significant with the prevalence of dental injuries ($\chi 2=1.283$, p=0.257). CONCLUSIONS: It is possible to conclude that Malaysian athletes still require more information and education regarding dental trauma and the awareness regarding the usage of mouthguard need to be intensify.

Characterization Of Tooth Dimension For The Malay Ethnic In Malaysia Using CAD Technology

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OBJECTIVE: The purpose of this study was to 1) characterize tooth dimension measurements of Malay ethnicity and 2) to compare tooth dimension measurement methods utilizing CAD technology versus conventional digital caliper. MATERIALS AND METHOD: Sample calculation (power of 80%) was carried out. Thirty-six participants of Malay ethnicity that fits the inclusion criteria were chosen. Each participant was subjected to an impression that produced a cast which was measured with a Vernier digital caliper (Hammacher Solingen) and a CAD scanner (CEREC Omnicam, Denstply Sirona) with internal measuring software, repeated three times per tooth. Teeth 16-26 (maxilla) and 36-46 (mandible) were selected. The width of each tooth was measured from its mesial to distal contact point at its greatest interproximal distance. The height was measured from the lowest part of the gingival margin to the highest point of crown. All data was analyzed in SPSS version 23. Descriptive statistics were performed to reveal mean and standard deviation for individual tooth sizes. Independent sample t-test was then performed to compare between the two techniques. RESULTS: Descriptive statistics analysis reveals the mean for mesiodistal and height of tooth (I_1, I_2, C, Pm_1, Pm_2, M_1) for maxilla and mandible of Malay ethnicity. Results comparing CAD measurements versus conventional measurements were not significantly different ($p>0.05$). CONCLUSION: Knowledge of tooth dimensions of Malay ethnicity can be clinically used in prosthodontics and orthodontics applications. Measurement utilizing CAD scanners looks a promising alternative to the conventional method of gaining data for tooth dimensions.

Autologous Platelet Concentrates In Dentistry

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Platelet concentrates are blood derivatives prepared from the patient's own blood in which activated platelets are trapped in a fibrous matrix scaffold and release growth factors and cytokines involved in the process of tissue regeneration by mimicking physiological healing process. Platelet concentrates such as PRP and PRF etc. are employed in various fields of dentistry like Endodontics, Periodontology, Orthodontics, Implantology, Oral Surgery etc. to promote the process of revascularization and healing. This poster highlights the use of PRF in different fields of dentistry.

A Survey Of Dental Fear And Anxiety Among Dental And Medical Students

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OBJECTIVE: To determine the prevalence of dental fear and anxiety among dental medical and dental students and its association towards dental stimuli and other sociodemographic factors. METHODS: A cross-sectional study was conducted among students of UiTM Sungai Buloh. A validated Index of Dental Anxiety and Fear Scale (IDAF-4C+) questionnaires were distributed by stratified random sampling to 497 students. Data on demographic characteristics were also collected. A cut point of 2.5 in average score for IDAF-4C module was set to indicate the presence of dental fear and anxiety. Prevalence was determine by descriptive statistics. Pearson's correlation was used to check the association of related dental stimuli (IDAF-S module) towards dental fear and anxiety score. Logistic regression was used to determine the associated sociodemographic factors. RESULTS: Response rate was extremely good (86.9%). Medical students reported higher prevalence of dental fear (25.6%) compared to dental students (18.9%). The highest stimuli correlated to dental fear and anxiety is "feeling sick, queasy or disgusted" (r=0.537) followed by "not being in control of what is happening" (r=0.484). Having bad dental dental experience increases the likelihood of dental anxiety and fear by 4 times while those from T20 income group has 51.7% lower likelihood compared to those from B40 income group. CONCLUSION: Medical students have higher anxiety and fear towards dental treatment compared to dental students, which mostly correlated to feeling sick, queasy and disgusted. The bad dental dental experience and low household

Antibiotic Prescribing Practices In Faculty Of Dentistry, UiTM

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OBJECTIVE: To observe the antibiotic prescribing practices at the Faculty of Dentistry, UiTM and to identify whether these practices adhere to the national clinical practice guidelines on antibiotic prescription. MATERIALS AND METHODS: Records of patients prescribed with antibiotics between 1/1/2015 until 31/12/2018 were collected through all manual written prescription booklets and IDERMS electronic prescription records from the Pharmacy Unit, Faculty of Dentistry UiTM. All records that had antibiotic prescription were traced for clinical records and data through existing folders and IDERMS electronic records. Prescriptions with complete patient data and records were included. However, prescriptions with incomplete patient data or information and antibiotics that were prescribed for reasons that had no published national clinical practice guidelines were excluded. Records that met the inclusion criteria were then compared with all available national clinical practice guidelines published by Academy of Medicine Malaysia and Ministry of Health Malaysia. RESULTS: A total of 717 antibiotic prescription records were collected from the Pharmacy Unit of Faculty of Dentistry, UiTM however only 250 cases that met all inclusion criteria was included in this audit. A total of 96(38.4%) cases of antibiotics were prescribed following the clinical practice guidelines while 154(61.6%) cases did not follow the guidelines. Antibiotics were mostly prescribed for surgical removal of wisdom teeth (24.6%) and dental extraction (14.1%). CONCLUSION: The current audit highlighted the non-adherence to current clinical practice guidelines with respect to correct antibiotic prescribing practices and inadequate clinical record keeping by clinicians.

Pre-Operative Diagnostic Radiograph Interpretation By Final Year Students On C-Shaped Canal

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OBJECTIVE: The aim of this study is to determine the proportion of final year dental students in Malaysia who can interpret pre-operative diagnostic radiographic features of C-shaped canal on molar tooth. METHODS: The study has been conducted in self-administered method. A set of questionnaires were given to the final year students of faculty of dentistry from selected government and private universities. The universities selected are located in Selangor and Kuala Lumpur. The questionnaires consist of three sections which are Section A (demographic data), Section B (clinical endodontic experience) and Section C (pre-operative radiograph of molar tooth). The data collected had been analysed using SPSS version 24 and Chi-square test was conducted. RESULTS: The result showed that only 34.5% of final year students were able to interpret pre-operative diagnostic features of C-shaped canal configuration on molar tooth which 25.5% of them were female while 9.1% were male. From the overall result, 31.4% were from government universities and 3.2% from private university. CONCLUSIONS: Only one third of the final year dental students were able to interpret C-shaped canal configuration on pre-operative diagnostic radiograph. The result show that, less than half of final year dental students in Malaysia were able to differentiate between C-shaped canal configuration and normal canal configuration. In order to improve the knowledge of dental student on C-shaped canal, dental school should insert basic knowledge regarding C-shaped in their syllabus and give more exposure to undergraduate student about C-shaped canal configuration.

Investigating The Use Of Smartphones Among Universiti Teknologi MARA (UiTM) Dental Students

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OBJECTIVES: The objective of this study was to investigate the attitudes towards the used of smartphones for learning purposes of Universiti Teknologi MARA dental students. The evolution of smartphones throughout the years had made it a very useful tool in teaching and learning (T&L). Some high education institutions has slowly implemented the used of smartphones as part of learning aids in classes. MATERIALS AND METHODS: All dental students were invited to participate in a self-administered questionnaire (content validated, pre-tested) survey, conducted online, involving students across all academic years. RESULTS: The overall respond rate was 59.2% (n=215). Majority of the respondents owned a smartphone (99.1%), with 93.5%, agreed that smartphone was useful tool for their study. More than half of respondents used smartphone during T&L session such as during tutorials (67.8%) and in the lecture hall (62.8%). While, nearly half of respondents (47.9%) used it in the simulation laboratory or clinic. 92.1%, of respondents agreed that smart phone can bring many opportunities to the learning process. One-way analysis of variance (ANOVA) revealed there were statistical significant differences (p = 0.02) among the students' attitudes with regard to their academic year. Post-hoc comparisons by Tukey test indicated that statistical differences was noted between second year and fourth year student (p=0.05). CONCLUSION: Generally, students had positive attitudes towards the used of smartphone as future education tool. This might gave a chance for dental educators to design educational methods, activities, and materials that were suitable for smartphones in future.

Impact Of Photodentistry On Dental Students' Empathy And Educational Experience In Comprehensive Patient Care

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OBJECTIVES: Preparing future dental graduates for providing comprehensive patient care with empathy requires adequate training in such practice. This study was undertaken to investigate the effectiveness of PhotoDentistry learning activity, which utilises visual arts, in improving dental students' empathy and learning experience in comprehensive care dentistry. METHODS: All Year 4 undergraduate dental students (n=69, Response rate=100%) participated in the PhotoDentistry learning activity developed by specialists in dentistry, arts and education. The Toronto Empathy Questionnaire (TEQ) was conducted pre- and post- test, followed by an open-ended written survey of their reflection towards the learning activity. Quantitative data was analysed via paired t-test (p<0.05). Qualitative data was analysed via thematic analysis. RESULTS: There was a significant increase in students' total mean empathy score, and the individual score for 8 (out of 16) items of the TEQ after the learning activity. Students cited that they had an improved understanding of comprehensive care dentistry (e.g. managing medically compromised patients and treatment-planning). Students also reported development of skills (e.g. observation, communication and critical-thinking) and positive attitudes (e.g. empathetic and responsible) towards patient care. CONCLUSION: PhotoDentistry is an effective innovative learning approach in improving dental students' empathy and learning experience in comprehensive patient care.

Pledge Your Teeth! The Willingness Of Dental Students To Donate Their Teeth

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OBJECTIVES: To evaluate the sociodemographic and preclinical training factors associated with the willingness to donate teeth among students in the Faculty of Dentistry, UiTM. METHODS: A total of 257 dental students from year two to year five who had undergone preclinical training participated in this study. In order to evaluate their willingness to donate teeth, a questionnaire that used a multiple-choice grid was developed using Google Forms and emailed to students. The quantitative data were analyzed using SPSS (Cramer's V correlation analysis, p<0.05). RESULTS: There was no statistically significant relationship between gender, ethnicity, religion, delayed preclinical work and difficulty in finding extracted human teeth with the willingness to donate teeth. The majority of students were willing to donate their teeth after extraction for educational purposes (n=128, 49.8%), followed by keeping their tooth (n=85, 33.1%), leaving it behind as clinical waste (n=32, 12.5%) and donating it to research (n=12, 4.7%). Out of 257 students, 59.9% (n=154) were not willing to donate teeth after death. 95.7% of students (n=246) had their work delayed for not having the tooth needed for a particular project especially molars (n=220,85.6%). Most of the extracted human teeth collected were unsuitable for the preclinical projects (n=174, 67.7%). CONCLUSION: There is a lack of supply of extracted human teeth that are suitable for preclinical training. Promoting tooth donation to meet the demand for dental schools in Malaysia could be considered. However, for standardization of teaching and assessment purposes, the usage of artificial teeth might be a better option in the future.

Parents' Knowledge And Children's Feeding Patterns In Relation To Caries Experiences

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OBJECTIVES: The objective of this study was to assess the association of parents' knowledge, children's feeding pattern and other contributing factors with caries experience of a child. METHODS: This was a cross-sectional study involved questionnaire validation by three experts in the field followed by data collection of 145 children aged 2-8 years old from Dental Faculty, UiTM and a kindergarten at Klang Valley. Parents/guardians of pediatric were given the set of validated questionnaires to assess the socio-demographic, parent's knowledge, and children's feeding pattern. Dental caries status was traced from the patient's record in the Integrated Dental Records Management System (IDERMS) and clinical examination was done for those who did not have the dental record. Charting was recorded using dentition status and treatment need as per World Health Organization criteria (1997). RESULTS: Study participants were 74 (51%) boys and 71 (49%) girls. The mean dmft score of the participants was 3.31(4.36). Caries experience was statistically significant with the reason for first dental visit (p<0.001), the age of the children discontinues bottle feeding (p<0.001), habits of leaving bottle while sleeping (p=0.011), children wake up for night feeding (p=0.050), knowledge of parents on the effect of leaving bottle while sleeping (p=0.037) and the impact of oral health on the general health of the children (p<0.001). Household income and parent's education level were not associated with dental caries of the children. CONCLUSION: Knowledge on the risk factors of dental caries among parents are important predictors for caries experience among children aged 2-8 years old.

Patient Satisfaction Towards Dental Services In Faculty Of Dentistry, Universiti Teknologi MARA (UiTM)

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OBJECTIVES: The aims of this study were to determine patients' satisfaction regarding the quality of dental care provided by the Faculty of Dentistry, UiTM and to identify specific aspects in the service for improvement. METHODS: A cross sectional study was conducted between June and December 2018 in the faculty's clinics using A validated bilingual Short-Form Patient Satisfaction Questionnaire (PSQ-18) scale. RESULTS: A total of 384 subjects which comprised of 57.9% females and 41.8% males were recruited for this study. 92.2% of the respondent were Malay. Most of the subjects had at least two visits (43.4%) in the past. There were seven subscales were studied based on the questionnaires: General Satisfaction; Technical Quality; Interpersonal Manner; Communication; Financial Aspects; Time Spent with Doctor; Accessibility and Convenience. There were 51% of the respondent were very satisfied with the service provided in general. More specific, 60.8% and 55.8% of respondents were very satisfied with the technical quality and interpersonal manner of the clinician respectively. Another subscales of the questionnaires were looking at communication between clinicians and patients where 56.6% were very satisfied. Remarkably only 50.8% of respondents were satisfied with financial aspects even though majority of patients were paying at no cost when treated by students. In terms of time spent with doctor and accessibility with the clinician, 54.0% and 55.5% of respondents were satisfied respectively. CONCLUSIONS: Generally, patients were satisfied with the dental services provided in Faculty of Dentistry Universiti Teknologi MARA (UiTM) however some aspects of service need to be improved.

Erosive Effect Of Cultured Drink (Probiotic) On Tooth Enamel

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OBJECTIVES: The study aimed to evaluate the erosive activity of six cultured drinks on tooth enamel. MATERIALS AND METHODS: The erosive activity was evaluated by measuring the pH, titratable acidity (TA), tooth weight loss and rate of calcium release. RESULTS: The pH of the cultured drinks was found to be in acidic range (3.08-4.10) with different TA value depending on the bacterial strain presence. The highest pH value showed minimum TA. The erosion was determined by the rate of calcium release and weight loss from the enamel surface on exposure to cultured drinks. Minimal or none calcium content release was found after 5 minutes of exposure daily, over the 7 days. However, all the samples showed persistent weight loss over 7 days of exposure. CONCLUSION: Although the cultured drinks were found to be acidic, it exhibited low erosive activity most probably due to the presence of calcium level in the drink. The number and type of bacterial strain in the drink did not significantly contributed to the erosion of the enamel.

The Role Of Selfies In Establishing Post-Mortem Identity

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INTRODUCTION: The need to establish postmortem identity is of utmost importance from religious, social and legal perspectives. But the biggest obstacle to this, in India,is the lack of ante-mortem dental records that are indispensable for postmortem comparison. At the same time we have amassed, unconsciously, a surfeit of ante-mortem data for ourselves in the form of 'selfies'. This study throws a positive light on the social epidemic and how it can be used as a source of ante-mortem records. METHOD: The study is carried out by collecting selfies and alginate impressions of dentition from student volunteers (n=9) at our institute. Following this a comparison of the anterior dentition visible on the selfies and the dentition cast were made by three unbiased, blinded observers of different cadres. RESULTS: The results showed that it was possible to make a positive identification using selfies and dentition casts. It was also observed that the accuracy of the results varied proportionately with the training and experience of the observer. CONCLUSION: The study was successful in proving the efficiency of selfies as a source of ante-mortem data to establish positive post- mortem identification

A Single-Tooth Implant Versus Resin Bonded Bridge In Single Missing Tooth Replacement: A Study Of Patient's Satisfaction

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OBJECTIVE: To compare the patients' satisfaction between patients treated with single-tooth implant (STI) and resin bonded bridge (RBB) for single missing tooth replacement. METHODS: A cross-sectional study was conducted in Faculty of Dentistry, Universiti Teknologi MARA (UiTM). Patients treated using STI (n=26) and RBB (n=26) were prospectively recruited. A validated patient satisfaction questionnaire was given to the participants to assess the aesthetics, masticatory function, phonetics, ease of cleaning and cost satisfaction using 7-point Likert scale. Demographic (gender and age) and treatment data (site of treatment) were also collected. Differences in various aspects of satisfaction were compared. Significance was predetermined at p=0.05. RESULTS: STI and RBB groups has similar demographic and treatment characteristics. Both groups revealed high satisfaction with most of the aspects in the questionnaire. There was no statistically significant difference in overall satisfaction between the two treatment groups (p=0.189). However, STI group had a significant higher score in existing appearance (p=0.010), mastication (p=0.018) and phonetics (p=0.029) compared with RBB group. Level of satisfaction did not differ by gender, age and site of the prostheses (p>0.05). Almost all of the participants would choose to undergo the same treatment again in UiTM (STI=96.2 %, RBB=92.3 %). CONCLUSION: Both STI and RBB participants were highly satisfied with the aesthetics, phonetics, cost and found that the treatment fees were justified and reasonable in UiTM.

The Beauty Of Rosa damascena In Oral Health

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OBJECTIVES: The aims of this study are to investigate antibacterial and antibiofilm activity of Rosa damascena flower extract against Staphylococcus aureus (S. aureus). METHOD: The antibacterial activity was assessed with minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC). The potential of Rosa damascena flower extract as antibiofilm agent was evaluated using biofilm inhibition assay and biofilm eradication assay. Chlorhexidine (CHX) 0.12% was used as positive control. The experiment was performed in triplicate and repeated four times independently. All the data obtained were analysed using SPSS version 23. A Kruskal-Wallis test followed by post-hoc Mann-Whitney U test was applied and level of significance was set at P < 0.05. RESULTS: From this study, Rosa damascena shows antibacterial activity with MIC 50 mg/ml and MBC 100 mg/ml. Treatment with 0.5x MIC of extract inhibited 43.2% of biofilm formation. The biofilm eradication assay shows that 60.9% (p<0.001) of biofilm was eradicated by the extract upon 5 minutes treatment and 50.65% by 0.12% CHX. CONCLUSION: The results of this in-vitro study suggest a possible utilization of Rosa damascena flower extract in treating S.aureus biofilm-associated infection in oral environment.

Green Synthesis Of Silver Nanoparticles From Psidium Guajava Leaf Extract - A Review

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INTRODUCTION: Nano particles being the fundamental building blocks of nano technology, for safe and biocompatible application of nanoparticles in medicine, different biogenic routes are developed to synthesis. Particularly, this paperwork shows rapid and ecofriendly method for the synthesis of silver nano particles from aqueous silver nitrate solution using Psidium guajava leaf extract as reductant and stabilizer. DISCUSSION: Recent advances in nanotechnology have enabled us to synthesis silver nanoparticles. Silver has long been recognized as having antimicrobial activity in medical and industrial process. Silver nanoparticles are attractive since they are non-toxic at low concentrations and have broad spectrum antibacterial actions. New methods to the synthesis of these materials extend the choice of properties that can be obtained. In this present study green synthesis silver nanoparticles from aqueous silver nitrate (1mM) through a simple and eco-friendly route using leaf broth of Psidium guajava as reductant. Psidium guajava is a well-known medicinal plant and leaves of it are widely used in the ayurvedic system of medicine as well as in Indian folk medicine. The aqueous silver ions when exposed to leaf broth were reduced and resulted in the green synthesis of silver nanoparticle. CONCLUSION: Nanotechnology is one of the most active research areas in modern material science.Especially silver nano particles have a wide range of application in the field of medicine.In the present study plant extract was used for the synthesis of silver nano particles because it is biocompatible and needs less purification compared to the presently

Dental Care For The Elderly

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The usual constitutional predicament of the elderly varies greatly from that of the others. The influence of physiological changes of age progression with systemic morbidity and polypharmacy, along with their dependent lifestyle patterns, bear a significant impact on their oral health: a problem unique to this population. With the increase in the life expectancy of the average man, the United Nations predictions state that 20% of the world's population will be constituted by this strata by the year 2050. Hence this is an area of dental therapy which is still untapped in many countries in the world wherein the elderly are still treated in the same gambit as the other population. This poster highlights tailor-made dental needs of the elderly to achieve optimum oral health.

The Impact Of Fixed Prosthodontic Education Kit On Patients' Awareness And Knowledge In Universiti Teknologi MARA (UiTM)

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BACKGROUND: Fixed Prosthodontic Education Kit (FPEK) is an 'All in One' prototype consist of the various model representing the various types of fixed prosthodontic treatment. **OBJECTIVES:** The study aimed to measure the patient's awareness and knowledge on fixed prosthodontic treatment options using FPEK and to evaluate the patient's knowledge in advantages and disadvantages of each type of prosthesis. **MATERIALS AND METHODS:** This is a cross-sectional study and divided into 2 phases; construction of FPEK and questionnaire distribution to patients. A comprehensive FPEK consists of a kit with various fixed prosthesis models, a short video and flashcards. A qualitative study using a validated self-administered questionnaire was randomly distributed to the outpatient in Faculty of Dentistry UiTM. The participants were divided into 2 groups; Group 1, assisted with FPEK and Group 2, assisted by verbal explanation. The participants were invited to answer a 5-points likert scale, nine items questionnaire with 2 domains: knowledge and awareness. The data were recorded in SPSS ver. 25. An Independent t-test was used for analysis and $p < 0.05$ was set to be statistically significant. **RESULT:** The response rate for this questionnaire is 81% (278 participants). Higher significant difference was observed in Group 1 compared to Group 2 ($p < 0.05$). Patient's also has higher knowledge in advantages and disadvantages of each type of prosthesis when analyzed using Independent t-test ($p = 0.00$). **CONCLUSION:** A Fixed Prosthodontic Kit is a useful education tool to provide knowledge and create awareness to patients. It facilitates dental practitioners and provides higher impact in giving informations before a decision-making of the treatment prescribed.

Evaluation Of Antimicrobial Effect Of Malaysian Propolis With Aloe Vera Against Enterococcus Faecalis To Be Used As Intracanal Medicament In Endodontics

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INTRODUCTION: In dentistry, Enterococcus faecalis is a hard-to-eradicate pathogen and mostly found in root canal endodontically treated teeth. Studies have found that, calcium hydroxide ($Ca(OH)_2$) can no longer eliminate this microorganism. Research demonstrated that Malaysian propolis (MP) possessed promising antibacterial effect, as well as Aloe vera (AV). There were no studies done to investigate MP+AV antimicrobial effect against E. faecalis as intracanal medicament. **OBJECTIVE:** To determine the antimicrobial activity of MP, AV and MP+AV in comparison with $Ca(OH)_2$ against E. faecalis as intracanal medicament. **MATERIALS AND METHODS:** Antimicrobial activity of ethanolic extract of Malaysian propolis, AV, MP+AV, $Ca(OH)_2$ and sterile distilled water were tested against E. faecalis by using antimicrobial susceptibility testing (AST), MIC and MBC. The results were analyzed by Kruskal Wallis test with Mann-Whitney post-hoc test and repeated measures ANOVA with Bonferroni post hoc test ($p < 0.05$). **RESULTS:** For agar-well diffusion method, MP+AV gave a maximum zone inhibition with diameter median (IQR) of 8.12 (0) mm followed by MP with 6.22 (0) mm, $Ca(OH)_2$ with 5.51 (0) mm, and AV with 5.06 (0) mm, (p value <0.05). MICs of MP+AV is at concentration (mean) of 2mg/ml (0.212), followed by MP with 8mg/ml (0.256), $Ca(OH)_2$ with 8mg/ml (0.098) and AV with 16 mg/ml (0.078). MBCs of MP+AV is at concentration of 4mg/ml followed by MP with 16mg/ml, $Ca(OH)_2$ with 16mg/ml and AV with 32 mg/ml. **CONCLUSION:** MP+AV consistently showed better antimicrobial activity compared to MP, AV, $Ca(OH)_2$ against E. faecalis as intracanal medicament.

The Relationship Of Facial Measurements With The Mesiodistal Width Of The Maxillary Anterior Teeth

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OBJECTIVES: The aim of this study was to determine the most reliable facial measurements which correlate well with the mesiodistal width of the maxillary anterior teeth (MDW) that could be used as guidance for anterior teeth selection in complete denture construction. The facial dimensions measured were interpupillary distance (IPD), intercanthal distance (ICD) and interalar distance (IAD). METHODS: The facial and dental measurements were obtained directly from 170 Malay subjects (85 male, 85 female) aged between 19 and 35, with morphologically normal and complete permanent maxillary anterior teeth. Facial dimensions were measured using a digital vernier caliper while the MDW were measured using a flexible ruler. The three facial dimensions were correlated with the MDW for each group. RESULTS: The means of IPD and IAD were significantly larger in male (IPD: p= 0.000, IAD: p= 0.000) but the means of ICD and MDW were not significantly different between male and female (ICD: p= 0.523, MDW: p= 0.074). No correlation was found between any of the facial dimensions and MDW for both groups (IPD; Male: r= 0.182, p= 0.108; Female: r= 0.039, p= 0.721), (ICD; Male: r= 0.156, p= 0.171; Female: r= -0.116, p= 0.291), (IAD; Male: r= 0.063, p= 0.583; Female: r= -0.134, p=0.222). CONCLUSION: IPD, ICD and IAD do not have any correlation with MDW and therefore these facial dimensions may not be used as reliable guidance in selecting the size of maxillary anterior teeth in complete denture construction for the studied population.

Engineer Your Way To Regeneration
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Tissue engineering is the use of a combination of cells, engineering and materials methods, and suitable biochemical and physicochemical factors to improve or replace biological tissues. The key to regeneration being, the interplay of stem cells, a scaffold and the presence of biologic mediators; stem cells playing a major role. Stem cells are multipotent stromal cells that differentiate and proliferate to replace damaged tissues. The Dental mesenchymal cells specifically are obtained from pulp, apical papilla, dental follicle, periodontal ligament, gingival epithelium and exfoliated deciduous teeth. These mesenchymal stem cells are capable of self-renewal, multipotency and possess stem cell marker expression. Self-renewal is ability to differentiate while maintaining its undifferentiated state. Multipotency means the ability to stimulate formation of new bone, cementum and connective tissue. Stem cell marker expression helps us to categorize it as potent mesenchymal cells. The present review poster focuses on the use of GMSCs which are most commonly used for Whole Tooth Regeneration and PDLSCs that are preferred for Periodontal regeneration.

The Effects Of Combination Therapy Of Virgin Coconut Oil And Palm Oil Tocotrienol-Rich Fraction On Bone Biomechanical Strength In The Ovariectomised Rat Model Of Osteoporosis

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OBJECTIVE: The study aimed to determine the bone effect of combined therapy of virgin coconut oil (VCO) and palm oil tocotrienol-rich fraction (TRF) on biomechanical bone strength parameters of the ovariectomised rat model fed with high fat diet and heated palm oil. MATERIALS AND METHODS: Thirty-six right femora of female Sprague-Dawley rats were obtained from the previous study at Universiti Kebangsaan Malaysia (UKM). The bone samples were divided into six groups with six femora in each group: Sham-operated (SHAM), ovariectomised control (OVX), ovariectomised and given Premarin 64.5µg/kg (OVX+P), ovariectomised and given VCO 1.43ml/kg (OVX+V), ovariectomised and given TRF 30mg/kg (OVX+T) and ovariectomised and given combined therapy of VCO and TRF (OVX+VT); for 24 weeks of treatment. The right femora were wrapped completely in Phosphate Buffered Solution (PBS)-soaked gauze and aluminum foil and kept in the freezer (-80ºC). In the present study, the right femora were thawed at room temperature (25ºC) for two hours. The femora were analyzed for three-point bending test using Shimadzu, AG-X 500N machine controlled by proprietary software (Trapezium X Version 1.00, Shimadzu). RESULTS: The data was tested for normality using the Kolmogorov-Smirnov test. The results showed that the data were normally distributed. The statistical tests used were the analysis of variance (ANOVA), followed by Tukey's HSD test. The Young modulus value of OVX+VT group was significantly higher than OVX+V and OVX+T groups (p< 0.05). CONCLUSION: Combined supplementation of VCO and TRF have offered better bone protective effects than single supplementation with VCO or TRF in preventing bone loss of osteoporotic rat model.

Evaluation Of Peri-Implant Soft And Hard Tissues Around Dental Implants Placed At The Faculty Of Dentistry, Universiti Teknologi MARA (UiTM)

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OBJECTIVE: This study is carried out to assess the soft and hard tissue conditions around dental implant cases at the Faculty of Dentistry Universiti Teknologi MARA (UiTM). METHOD: Patients with dental implants of more than 6 months in function were recalled for clinical and radiographic evaluation. Probing pocket depth, suppuration, bleeding, recession and plaque index were clinically evaluated. Periapical radiograph (IOPA) were also taken. The data from the findings were statistically evaluated using SPSS program. RESULT: 14.3% of implants placed in consider healthy, 4.8% implants have clinical stability and 81% have Peri-implant mucositis and none of the participants have Peri - implantitis and severe Peri- implantitis. CONCLUSION: Within the limitation of this study, it's concluded that the status of peri-implant tissues is mainly affected by gender, systemic disease, smoking status, oral hygiene and years of implants. However, age showed weak association.

The Efficacy Of The Maxillofacial Suturing Kit In Assessing Undergraduate Skill Performance

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OBJECTIVES: To evaluate the impact of the maxillofacial suturing kit on undergraduates' competence and confidence level on performing basic suturing. MATERIALS AND METHODS: This pilot study was both qualitative and quantitative research based on five point and two point rating scale questionnaire, also two point rating scale evaluation form. The study sample included 45 students from Year 4 Bachelor of Dental Surgery (BDS) (2018/2019). Prior to the distribution of suturing kits, a questionnaire was given out to subjects, assessing their baseline knowledge and confidence in suturing. The students then performed suturing exercises under specialist's supervision for 10 minutes and were evaluated. Then the students were given the suturing kit with instructions to utilize it for one week after which the students were asked to complete a post exposure questionnaire. Then, a post exposure suturing exercise and evaluation was conducted. The study data was entered using SPSS (Version 25) and analysed using paired T-test analysis. RESULT: A significant improvement between pre (5.82) and post (16.51) intervention score was observed (P<0.001) showing that students' competency in performing basic sutures improved after exposure to the kit. An increase in students' confidence in suturing was also seen where the pre-intervention score (19.18) increased to 25.82 post intervention (P<0.001). CONCLUSION: Increased undergraduates' knowledge, competence and confidence level is observed with the exposure to the maxillofacial suturing kit.

Internet Addiction - Perils Of World Wide Web

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The Internet opens up new worlds accessible to anyone with a computer and an Internet server. It can provide the user with a new means of communication, entertainment, shopping and answers to the most rhetorical questions. With proliferation of smartphones, any information needed is available at our fingerprints. The growth of internet in the last decade has been phenomenal worldwide. The number of mobile connections in use in India grew by 2.2 billion in 5 years, signifying the increasing impact of technology in lives of millions of people. Just like two sides of a coin, technology too has its pernicious influences on students. Student population easily fall prey to many of the deleterious effects of technological advancements. Internet addiction is getting increasingly common among millennials, harming their social, emotional and physical health. Nomophobia, an abbreviation for "No-mobile-phone-phobia" was introduced in 2010. It implies looking at the phone screen frequently, keeping the device in reach while sleeping, which is referred to as 'ringxiety'. Individuals might also be addicted to social media sites such as Facebook, and internet gaming. This compulsive behavior might be a critical factor in adoption of sedentary lifestyles which negatively influences eating habits, sleep cycles and exercise routine. Indifference to oral health may manifest through irregular brushing habits, halitosis, gingival and periodontal diseases. The present review attempts to explore various aspects of this technological phenomenon among students. Inputs from multiple stakeholders have to be gleaned to combat the damaging influences of internet addiction.

Customizing Geriatric Oral Care: An Inter-Disciplinary Approach

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The recent advancements in health care facilities has lead to increased average life expectancy of elderly population and providing advanced oral health care to the geriatric population will help them lead a more hassle free and comfortable life. Missing, mobile and attrited teeth are some common problems faced by them and an inter-disciplinary approach helps us in delivering an optimum level of care. This poster will highlight the various multi-disciplinary approaches which help us tackle the oral health care issues affecting the geriatric population

Phaging Our Way Through Antibiotic Resistance

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World Health Organization (WHO) predicted recently in 2016 that Antimicrobial Resistance (AMR) has the potential to be even more deadly than cancer, to kill as many as 10 million people a year by the year 2050. Dentists are among the major prescribers of antibiotics, estimated at about 7-11% of total prescriptions, hence contributing majorly to AMR. Having come face to face with this harsh reality, interest is now being shifted to the original phage therapy, which was pretty much side-lined with the industrialization of antibiotics industry in 1940s. Phages can be used as an adjunct therapy, and in some cases can be the only treatment option against bacterial pathogens which have developed resistance to some or all clinically approved antibiotics. In dentistry, bacteriophages have huge potential, from the treatment of dental carries and endodontic lesions to periodontal infections and periimplantitis. All of this is however still under research. In 2016, use of phage therapy for the successful treatment of an individual suffering from a severe Acinetobacter baumannii infection for whom none of the antibiotics seemed to work paved way for further research into the extent to which phage therapy can be used to battle against AMR. This poster gives insight as to how phages are a potential solution to the global antibiotic resistance problem. In the not-too-distant future, with Phage Therapy, we will be able to greatly reduce our reliance on broad spectrum antibiotics and focus on personalized infection management.

Abstracts

Postgraduate E-Poster Presentation

Management Of Extensive External Root Resorption Leading To Root Perforation: A Case Report

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BACKGROUND: Resorption is a clastic cellular activity of hard tissue which is both physiological and pathological. Timely management of the affected tooth can slow down the resorptive lesion and increase the prognosis of the survival of the tooth. In the cases of invasive external inflammatory root resorption, a multidisciplinary approach is needed to restore the root surface and its surrounding tissues. This case report describes the periodontal surgical management of extensive external root resorption post root canal treatment MTA placement in addition to Concentrated Growth Factors (CGF). **CLINICAL CASE:** A 30-year-old man presented with recurrent external root resorption post root canal treatment with gingival recession Miller Class II on tooth 23. A Cone Beam CT imaging (CBCT) showed multiple recurrent root resorption at both cervical and apical part of the root. This case report presenting the result of Coronally Repositioned flap surgery supplemented with CGF, following retrograde filling with MTA and Glass Ionomer Cement to reduce the extension of gingival recession following root resorption. The result of the studies shows promising clinical healing of gingiva towards GIC and MTA after periodontal flap surgery. **CONCLUSION:** A predictable outcome achieved from a coronally repositioning flap surgery with the supplement of connective tissue graft (CTG) and Concentrated Growth Factors (CGF) on the tooth with extensive external inflammatory root resorption. A sandwich technique had been used to restore the dentine defect using MTA and resin glass ionomer.

Management Of Rotated Central Incisor: A Case Report

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INTRODUCTION: The presence of supernumerary teeth can give rise to multiple complications such as impacted teeth, resorption of the adjacent root, displacement of teeth, rotation and crowding. Severely rotated teeth may complicate orthodontic treatment mechanics and will lengthen treatment time. We describe the orthodontic treatment of a severely rotated upper central incisor secondary to the presence of a supernumerary tooth. **CLINICAL CASE:** An 18-year-old Malay male presented with Class I malocclusion on a Class 1 skeletal pattern with an averaged vertical proportion. It was complicated by the presence of supernumerary tooth between upper central incisors, 90 rotation of labially positioned upper left central incisor, moderate crowding of upper arch, lingually displaced upper left lateral incisor, and midline discrepancy. He had the orthodontic treatment done with pre-adjusted edgewise MBT prescription 0.022" x 0.028" inch bracket slot. Couple force and segmented arch techniques were carried out to correct the position of the severely rotated. A controlled light force was emphasized during the procedure to avoid uncontrolled tipping and trauma to the tooth. **CONCLUSION:** In orthodontic management of severely rotated teeth, few techniques can be used based upon the severity of the problems. The couple force and segmented arch techniques that were used in this case helped in successfully correcting the position of his upper left central incisor. These techniques are clinically feasible and relatively simple to be carried out in routine orthodontic practice. Our patient was satisfied with the aesthetic results obtained.

A Hollow Obturator Design To Minimise Weight In Maxillectomy Patient: A Case Report

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INTRODUCTION: Prosthetic rehabilitation of edentulous patients with large maxillectomy defects present a significant challenge for the clinician. Retention is severely compromised in these patients due to absence of teeth and the weight of the prosthesis creates greater displacement force to the obturator. Thus, hollow feature is incorporated into the prosthesis to minimize heaviness. **CASE DESCRIPTION:** This case report describes the fabrication techniques of a definitive obturator in an edentulous Class 2b Brown's Classification of Maxillectomy Defect patient. He had unretentive obturator with open hollow at the defect area. Its extension was made minimal to compensate the bulkiness. Therefore, a definitive obturator was fabricated to maximize the flange extension on the lateral wall of the defect. The increased volume and weight of the obturator is reduced with the hollow design features. The closed hollow segment was contained at the area of the alveolar ridge of the prosthesis with the defect portion made open hollow. Both open and closed hollow bulb were designated into the obturator using a single flask and one-time processing method. **CONCLUSION:** The technique has resulted a retentive lightweight obturator which satisfied patient's functional needs. It was also found to be less time-consuming and more simplified compared to the conventional double-processing method and may be utilized to address large maxillary defects rehabilitation.

Removal Of Failed Dental Implant With Application Of Concentrated Growth Factor (CGF): Case Report

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INTRODUCTION: High survival rates of dental implants were reported, even after 10 years of follow up treatment. Nevertheless, complications and failure do occur and may need to be removed. Besides that, the use of autogenous blood products in dental surgery has increased due to its advantages especially in soft tissue healing. **CLINICAL CASE:** The case demonstrated the utilization of concentrated growth factors (CGF) which uses the patient's blood following conservative removal of failure dental implant. Uneventful healing was showed without any episodes of infections and clinical symptoms. **CONCLUSION:** This explantation procedure, together with the use of CGF, allows for the prevention of normal bone resorption and accelerated soft tissue healing. It is biological in nature as it is from the patient's own blood which reduces chances of infection and greater acceptance by the tissues.

Fibrotic Encapsulation Of Quadhelix In Palatal Mucosa: A Case Report

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INTRODUCTION: Orthodontic appliances can inflict iatrogenic trauma to the oral mucosa as they are retained intraorally for a long period of time. Expansion appliance such as quadhelix is used to expand the width of the maxillary arch and posterior crossbite correction. It is fixed to the upper first permanent molars with bands and contains helices of wire lying over the palatal mucosa. We describe a case of encapsulation of a quadhelix into the palatal mucosa and its management. CLIN-ICAL CASE: An 18-year-old Malay male presented with Class III malocclusion on a Class 3 skeletal pattern that was complicated with retained upper right deciduous canine, buccally erupted upper right permanent canine and bilateral posterior crossbite. A quadhelix appliance was prescribed to the patient to improve his bilateral posterior crossbite prior to fixed appliance treatment. After four months of active expansion, the quadhelix was found to be encapsulated firmly in the palatal mucosa and requires surgical removal. CONCLUSION: The activation of a quadhelix as expansion appliance should be monitored closely to ensure the components does not impinge the palatal mucosa. Necessary precaution should be taken to avoid possible adverse effects from orthodontic appliances and managed properly if any complication arises.

Management Of Aggressive Periodontitis By Adjunctive Antibiotic And Full Mouth Disinfection - A Case Report

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INTRODUCTION: Rapid periodontal destruction is generally seen in cases of generalized aggressive periodontitis and precursor to early tooth loss if not diagnosed early and treated appropriately. With particular diagnostic features the disease is distinguishable. This case reports on an atypical form of generalized aggressive periodontitis on a 30 years old male patient. MANAGEMENT: Clinical presentation and patterns of destruction may vary between patients. Successful management of the disease is perplexing particularly if diagnosed at established stage, but not impossible with the current therapeutic choices for the disease. In this case a vast array of treatment employed in the management of this patient consisted of thorough instructions in plaque control techniques, scaling and root planing and full mouth disinfectant protocol, as well as combined antibiotic therapy yield a favorable result as well.

Endocrown: Stepwise Clinical Preparation And Restoration Using CAD - CAM Composite And Pressed Lithium Disilicate Materials

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ABSTRACT: Restoration of endodontically treated teeth (ETT) has been widely discussed in the literature. In addition to providing a coronal seal, it is important that the restoration conserves as much possible the tooth structure and contributes to the resistance of the tooth in the long run. With judicious preparation and restoration, the endocrown, a post-less monoblock crown-core restoration complies with these restorative tenets for ETT. The aim of this case report is to describe in a stepwise manner the rehabilitation of extensively damaged molar teeth using i) Computer Aided Design-Computer Aided Manufacture (CAD-CAM) composite and ii) pressed lithium disilicate materials. Particular attention will be focused on the surface treatment procedures when using these materials to provide clinicians with a quick, aesthetic and predictable alternative treatment option of restoring the ETT.

Facial Anthropometry And 2D Photography: A Pilot Study

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INTRODUCTION: The acquisition of facial anthropometric data can be achieved by direct and indirect methods. Despite that Caliper is the most accurate tool for the direct method, it is time consuming and uncomfortable to the subjects. For indirect method, 3D cameras and scanners also give accurate reading. However, they are costly and not readily available. Therefore, DSLR camera could be an alternative indirect tool of which not many has explored the option. **OBJECTIVE:** To investigate the accuracy of DSLR camera as an indirect tool for acquisitioning of facial anthropometric data at different setting with fixed focal length at 55mm. **METHODOLOGY:** This is a cross-sectional study involving 19 participants of Malaysian Malay origin. 14 landmarks were identified, and 12 linear distances were measured directly by digital caliper; and indirectly by DSLR camera. 4 photos were taken by DSLR camera at different aperture/distance-to-subject settings (f/6.3@1.5meters, f/6.3@2meters, f/11@1.5meters, f/11@2meters) with a fixed focal length at 55mm. Photos were uploaded to Adobe Photoshop and same linear distances measured in pixels, then converted to millimetres. Accuracy of indirect versus direct was calculated and analysed using Paired sample t-test. RESULTS: DSLR-camera showed variable accuracy with different settings compared to direct method. When setting the aperture at f/6.3 with 2 meters distance to subject, all distances showed statistically insignificant difference (p<.05) except (ex-ex,en-exR,en-exL). **CONCLUSION:** DSLR-camera acquisitioned 9 out of 12 distances accurately when set on f/6.3 at 55mm with distance of 2 meters to subject. Other settings showed more discrepancy compared to direct method.

Impact Of Non-Surgical Versus Surgical Management Of Chronic Periodontitis On Patient's Quality Of Life- A Pilot Study

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INTRODUCTION: Patient-centred assessments are essentially important as clinical parameters measurements in the management of chronic periodontitis. Oral health-related quality of life (QoL) has been established as an important tool to appraise the outcome of care. With regards to the efficacy of periodontal treatment from patient's perspective, QoL can be applied. **AIM:** To evaluate the impact of non-surgical periodontal treatment and periodontal surgery on residual pockets with regards to oral health-related QoL of patients with moderate to advance chronic periodontitis. **MATERIAL AND METHODS:** Study participants were recruited from moderate to advance periodontitis patients. After initial periodontal therapy, participants received either scaling and re-root debridement or periodontal surgery. Oral Health Impact Profile (OHIP) was used to assess participant's oral health-related QoL at each time point of periodontal review (6-8 weeks after initial therapy) and post-operative review which is 1 week after non-surgical or surgical procedures. **RESULTS:** Preliminary analysis of 6 patients completed OHIP assessment after non-surgical and surgical procedure. There was no significant difference found between the nonsurgical and surgical group in the OHIP score at periodontal review and after treatment with $p>0.05$. The total mean OHIP score for nonsurgical group at periodontal review is 36.3 (4.4) and after treatment is 41.0 (6.1); with $p>0.05$. The total mean OHIP for the surgical group at periodontal review is 34.0 (4.3) and after surgery is 38.6 (2.1); with $p > 0.05$. **CONCLUSIONS:** This study demonstrated that there were no significant differences in oral health-related QoL between both non-surgical and surgical group.

Assessment Of Pain Levels In Patients With Orthodontic Mini - Screw Implants Using A Pain Diary - A Pilot Study

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BACKGROUND: Orthodontic mini implant (MI) is used to reinforce anchorage in orthodontic treatment. This study aims to evaluate the pain levels and patients' perception and satisfaction in subjects with or without the MI cover. **METHODOLOGY:** In this pilot study, 5 subjects were recruited and allocated into three different groups randomly. The three groups are: Control (C), Silicone (SF) and Composite (CR). All subjects were given a Pain diary which includes a pain scale (Numeric Rating Scale) scaled from 0 to 10 and also two modified questionnaires (Likert 5-point scale) regarding the MI and modified oral health impact profile (S-OHIP-14) that was validated by a panel of experts. Subjects were followed through from T0 (immediately after MI placement), T1 (1 hour), T12 (12hours), T24 (24hours), TD3 (3 days), TD7(7 days), TD14 (14 days) and TD30 (Day 30). **RESULT:** Preliminary results showed that the control group had the highest mean pain score of 4 at TD7 and the pain lasted throughout the entire study. However, the SF and CR group experienced pain only at the beginning of the study, which diminishes by TD7. The SF group had the lowest mean pain score of 0.5 (TD7) throughout the study. Subjects understood the questionnaires and were able to answer with minimal comments. All 5 subjects recommended the use of MI. **CONCLUSION:** From this study, subjects receiving intervention had lower mean pain score compared to the control group. The questionnaires were valid and can be used readily to assess pain associated with the MI head.

The Effect Of Poly Lactic-Co-Glycolic Acid (PLGA) Scaffold With Concentrated Growth Factor (CGF) On Biological Behaviour Of Human Osteoblast Cells: A Pilot Study

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INTRODUCTION: Extraction tooth socket undergoes physiological alveolar bone resorption following tooth extraction that may cause difficulty in future implant placement. The use of grafting materials such as PLGA microspheres during socket preservation helps in preserving or minimizing the alveolar bone resorption. Meanwhile, additional use of platelet concentrate product such as CGF further enhance healing process. However there is still limited finding on the role of PLGA microspheres as a vehicle for delivery of growth factors from CGF on bone regeneration. Therefore, the objective of this pilot study is to investigate the effect of PLGA scaffold with CGF on the biological behaviour of MG 63 human osteoblast tumour cells line for bone regeneration. **METHODS:** 10ml blood was collected from a volunteered patient and centrifuged to obtain the CGF. CGF was then centrifuged together with the PLGA microspheres to form a scaffold. MG 63 human osteoblast tumour cells line were cultured and incubated with i) CGF+ PLGA scaffold and ii) CGF alone for 24, 48 and 72 hours and their proliferation was assessed by MTS assay. Results: The application of CGF with PLGA microspheres showed higher percentage of osteoblast cell proliferation compared to when the cells were treated with CGF alone at 24, 48 and 72 hours. **CONCLUSION:** The use of PLGA scaffold with CGF is able to induce human osteoblast cells proliferation and regenerative activity that facilitates bone regeneration. However, proper study with adequate sample size should be conducted in the future for proper statistical analysis.

The Effect Of Thickness On Masking Ability Of Translucent Monolithic Zirconia Ceramic – A Pilot Study

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INTRODUCTION: The minimum thickness required for a translucent monolithic zirconia restoration to mask discoloured substrates is still unclear. This in-vitro study aimed to assess the effect of translucent monolithic zirconia thickness on its masking ability, and to determine the minimum thickness required to achieve clinical and ideal colour differences threshold. **MATERIALS AND METHODS:** 27 zirconia disc specimens, in 9 thickness groups (0.4, 0.6, 0.8, 1, 1.2, 1.4, 1.8 and 2mm) were fabricated. A white (control) and D4 shade composite resin substrates were prepared. The specimens were placed onto the substrates for spectrophotometric analysis and L*, a*, and b* values were measured. E were calculated to determine the colour differences between the tested groups and control, and then were compared with an acceptable clinical threshold (E = 5.5) and an ideal threshold (E = 2.6). Pearson correlation and linear regression analysis were performed. Result: The mean and standard deviation for the thickness group of 0.4, 0.6, 0.8, 1, 1.2, 1.4, 1.8 and 2mm were 13.43 (±0.34), 11.82 (±0.36), 9.29 (±0.15), 7.64 (±0.39), 6.35 (±0.14), 5.49 (±0.26), 4.62 (±0.07), 3.63 (±0.13) and 3.07 (±0.03) respectively. A significant negative linear correlation was found between thickness and E value ($p < 0.001$) which for 1mm increase in thickness, the E value will be decrease for 6.46 unit (E = 15.01 + (-6.46(thickness)). **CONCLUSION:** Masking ability increased as the zirconia thickness increased. Tested zirconia had an acceptable clinical masking ability with a minimum thickness of 1.2 mm, but none of the specimens achieved ideal threshold.

Steps-By-Steps Approach To Aesthetic Crown Lengthening: Periodontal Point Of View

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INTRODUCTION: Aesthetic consideration has become a primary concern in patients regardless the patient is periodontally healthy or a periodontally diseased. Patient with an aesthetic concern usually in need of crown lengthening surgery due to various causes. These causes are subgingival caries, violation of biological width due to restorative margin placed close to the alveolar crest, developmental problem and to increase the retention of a restoration due to insufficient crown height. **CASE:** A patient indicated for direct composite restoration with insufficient clinical crown height on the anterior maxilla region was selected for this case presentation. Based on thorough clinical examination, treatment plan was proposed for aesthetic surgical crown lengthening to facilitate direct composite restorations on the upper anterior teeth. These includes collection of data (chief complaint, medical, dental, social status, extraoral and intraoral conditions), making a diagnosis, treatment planning (diagnostic wax-up, interdisciplinary approach, fabrication of surgical splint or freehand approach crown lengthening surgery, designing flap design, fabrication and issue of permanent restoration and lastly is the maintenance care. **CONCLUSION:** This case report provides the clinician with the steps by steps approach from the periodontal point of view for surgical crown lengthening in aesthetically driven patient to increase the clinical crown height prior to direct composite restoration.

Evaluation Of Root Resorption In Relation To Adjunctive Orthodontic Treatment With Micro-Osteoperforations: A Randomized Clinical Trial

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OBJECTIVES: The aim of this study was to investigate the effect of micro-osteoperforations (MOPs) on orthodontically induced inflammatory root resorption (OIIRR) during the initial alignment phase of fixed appliance treatment. **METHODS:** Twenty patients (18 females, 2 males: mean age, 23.5 years ($\pm$ 3.34) with moderate crowding of upper labial segment undergoing extraction based fixed-appliance treatment were randomly allocated to adjunctive treatment of micro-osteoperforations group (n=10) or control group with fixed appliances only (n=10). OIIRR was measured blindly from long-cone periapical radiographs taken at the start of treatment and at sixth month. Root length was measured from the cemento-enamel junction (CEJ) midpoint to the root apex and the crown length was measured from the center of the incisal edge to the midpoint of the CEJ. A correction factor for the enlargement difference was used to calculate OIIRR. **RESULTS:** Mean overall OIIRR measured in MOPs group was 0.05mm $\pm$0.45 and 0.12 mm $\pm$ 0.71 in control group. There was no statistical difference of OIIRR between the both groups (p-value= 0.79). Overall grading indicated 48% of the teeth were suffering mild root resorption and only 5% of moderate root resorption. **CONCLUSION:** Accelerating orthodontic tooth movement with micro-osteoperforations during alignment phase does not exacerbate OIIRR when compared to control group.

Clinical Evaluation Factors Affecting The Effectiveness Of Green Denture Adhesive

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BACKGROUND: Green denture adhesive is a new formulation for denture adhesive which incorporates 15% of tapioca starch as its filler. In vitro testing results revealed that this product has superior properties than the existing commercial denture adhesive. Therefore, the purpose of this study was to compare the clinical efficacy of green denture adhesive with Polident® in new complete denture wearer. **MATERIALS AND METHODS:** Twelve edentulous subjects with new complete dentures were involved in this study. The efficacy of denture adhesives was measured in the form of resistance to dislodgement using the tension gauge device. The baseline measurement without the denture adhesives were taken first and followed by the application of Green denture adhesive and Polident® denture adhesive that was randomly assigned in crossover experimental design. The assessment was made at several time interval (T1, T2, T3, T4) with the subjects fasting and not fasting. Data were statistically analysed using repeated measure ANOVA. **RESULT:** Both denture adhesives produced a statistically significant ($p < 0.05$) improvement retention of complete dentures after 2 hours of fasting and followed by gradual decline of retention when the subject consumed hot water. The retention of complete denture with Green denture adhesive was more affected compared to the Polident® but it was not statistically significant. **CONCLUSION:** The usage of denture adhesives improved the retention performance in new complete denture wearer. Green denture adhesive was more affected by the hot water presence, however there was no difference in the clinical outcome between novel Green denture adhesive and Polident®.

Anti-Microbial Effect Of Malaysian Coconut Oil Against *Aggregatibacter actinomycetcmcomitans*

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INTRODUCTION: Periodontal disease is related with high levels of periodontopathogenic microorganisms such as *Aggregatibacter actinomycetemcomitans* (Aa). Many agents were used to inhibit its growth towards achieving healthy periodontium. This study aimed to determine the anti-microbial effect of coconut oil and compare the effectiveness between fermented and non-fermented oils against Aa (ATCC 43718). **METHOD:** Malaysian coconut oil provided from AZIMPRO. Antimicrobial Susceptibility Testing (AST) was carried out to test for anti-bacterial susceptibility to both types of coconut oil using the agar well diffusion method. The culture media used was brain heart infusion agar and broth. Broth serial microdilution test were used to determine the Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC). The negative control used was DMSO and positive control was chlorhexidine. Fermented and non-fermented coconut oil were compared for which have greater anti-bacterial effect. Scanning Electron Microscopy (SEM) was also conducted. **RESULT:** The highest mean zone of inhibition was chlorhexidine, followed by non-fermented coconut oil and the lowest was fermented coconut oil (35.0 mm, 14.56 mm and 13.56 mm respectively). No significant difference found between both types of coconut oil (P value >0.05). Both fermented and non-fermented of coconut oil showed anti-microbial effect against the bacteria (MIC 6.25% and 3.125%, MBC 50% and 3.125% respectively). SEM shows alterations of Aa configuration after treated to the coconut oil. **CONCLUSION:** This finding exhibit the growth of Aa was inhibited with similar effectiveness by fermented and non-fermented coconut oil, suggested that coconut oil has antimicrobial effect against Aa.

Longevity Of Metal Bracket Bonded On Acrylic Teeth And The Impact On Quality Of Life Of Orthodontics Patients

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AIM: To access the longevity of metal bracket bonded on acrylic teeth using different surface preparations. METHODS: Orthodontic patients aged between 18 and 35 years who had at least one tooth missing, which required space idealization for any prosthesis, will be recruited. Patients receiving the prosthesis will be randomized to the four different surface preparation groups. Group 1: Transbond XT adhesive; Group 2: sandblasting surface; Group 3: surface abrasion; and group 4: Triad gel adhesive. Subsequently, the prepared tooth will be ligated to the arch-wire. The primary outcome of this study will be to quantify the period between bond up and attachment failure within the different groups of surface preparation at each monthly review. The secondary outcome will be to measure the impact on the oral health-related quality of life (OHRQoL) using the visual analogue scale (VAS) and OHIP-14 questionnaire. The sample will be monitored for six months on a monthly basis. EXPECTED OUTCOMES: There will be differences in attachment failure between the different surface preparations. The level of patients' adaptation towards acrylic teeth will improve throughout the period. Patients' OHRQoL will be improve in terms of aesthetic and function.

Accuracy Of Gingival Thickness Measurement Using CBCT Scan

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INTRODUCTION: In clinical practice, a patient's full assessment including the process of identifying and evaluating the patient's gingival biotype is considered to be an important factor influencing the treatment outcome. Gingival biotype involves a specific description of gingival morphology and thickness of soft tissue surrounding the tooth, classifying them into thick and thin gingiva. The aim of this study is to assess the accuracy of Gingival Thickness Measurement technique using CBCT Scan. METHOD AND MATERIAL: In this study, an attached putty index to a skull cadaver of a thickness around 1mm simulating the facial gingiva was measured clinically using a caliper, at the center of each anterior tooth. Subsequently, a CBCT scan was taken to measure the attached putty index, simulating the gingiva, using Gutta Percha as a reference fixed in place. Clinical measurements of the putty index simulating the gingiva were compared with the measurements obtained from the CBCT scan. Result: A high degree of reliability was found between the clinical and radiographic measurement of gingival thickness. The average measure ICC was 0.629 with a 95% confidence interval from 0.143 to 0.875. CONCLUSION: There is a good agreement according to Hallgren 2012 between clinical and CBCT scan results for the measurement of gingival biotype.

Shape Visualization Of Dental Inclination In Orthodontic Malocclusion Through Geometric Morphometric Analysis

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OBJECTIVE: The purpose of this study was to determine the shape of dental inclination between Class I malocclusion and bimaxillary protrusive Malay patients using geometric morphometric analysis obtained from lateral cephalometric radiographs. MATERIALS AND METHODS: A sample of 64 Malay subjects with Class I malocclusion were compared with a matched sample of 64 subjects with bimaxillary protrusion. All subjects were in the age range of 18-40 years old. Pre-treatment orthodontic lateral cephalometric radiograph were traced and digitized. Thirteen landmarks of each radiograph were incorporated and converted into coordinates using TPSUtil software. The plots were then exported to MorphoJ Software for multiple geometric morphometric analysis which includes Procrustes ANOVA to superimpose shape of dental inclination between the groups, followed by Discriminant Function Analysis (DFA) and cross validation to classify the groups accordingly. All the landmarks were computed into wireframe and transformation grid graphs to illustrate and visualize the shape. RESULTS: The results showed that there was a statistically significant difference (p<0.001) in shape of dental inclination between the groups. Cross validation of these groups demonstrated 98% accuracy in identifying their dental malocclusion. The grid graphs illustrated the shape of dental inclination of the bimaxillary protrusion group as being significantly more proclined when compared to Class I malocclusion. CONCLUSION: This study concludes that the dissimilarities in dental inclination are identifiable in Class I malocclusion and bimaxillary protrusion and the shape differences can be visualized using geometric morphometric analysis. It is recommended that geometric morphometric analysis be incorporated into routine orthodontic cephalometric analysis.

Prescale Film For Occlusal Force Analysis

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INTRODUCTION: The aim of this study is to devise an optimised design of pressure sensitive sheet, Prescale film (Fujifilm Corp. Kuala Lumpur, Malaysia) for occlusal force study. MATERIALS AND METHODS: The optimization of Prescale film for occlusal force analysis commenced with the calibration and design of this sheet. The calibration was initiated with and without PE sleeve using Universal Pressure Testing Machine (Pressure ranged from 15MPa-45MPa). For the second stage, film was prepared into arch form, and covered with PE sleeve to improve the hygiene and infection control. Total number of 10 dentate patients aged between 27 until 44 year-olds were recruited in this study. They were advised to bite on these two groups of films (Group A: with PE sleeve; Group B: without PE sleeve). Then, the films were calibrated by Pressure Distribution Mapping System FPD-8010E software (Fujifilm Corp., Tokyo, Japan) for force analysis. The mean value was documented and Wilcoxon signed-rank test and Levene test were used for statistical analysis. RESULTS: There was no significance difference found between Prescale film with and without PE sleeve during calibration stage (P>0.05). Occlusal forces were ranging from 191.0N to 625.0N and 197.0N to 609.0N in Group A and B respectively. There was no significance difference found between both groups (P=0.706). CONCLUSION: The results suggested that Prescale film with PE sleeve is suitable to form the basis of in-vivo clinical occlusal forces study.

Clinical Evaluation Of Dose Variation On Diagnostic Image Quality In Digital Orthodontic Radiographic Assessments

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BACKGROUND AND OBJECTIVE: Dental panoramic tomographs (DPT) and lateral cephalograhs (LC) are routinely taken to aid orthodontic diagnosis and treatment planning. This predisposes patients to radiation exposure which may cause cell damage and increase the risk of oral carcinoma. Ideally, radiation exposure should be kept minimal without compromising the diagnostic value of the images. Currently, the standard x-ray doses are provided by the manufacturers and its efficacy has never been proven. This study aims to evaluate the quality and diagnostic values of images taken with DPT and LC using different radiographic parameters. **METHODOLOGY:** 51 DPT and 21 LC images were taken using different radiation parameters of a dried human skull with full dentition by manipulating the tube current (mA) and tube potential (kV) of two different radiograph machines available at Radiology Department, UiTM Sg. Buloh and UiTM Puncak Perdana. Two observers rated the images for specific anatomical landmarks using linear measurements for DPT and angular measurements for LC. All data were analyzed using Pearson's Correlation Test of SPSS IBM Version 23. Interobserver agreement in assessment of anatomical landmarks was quantified by kappa statistics. **RESULTS:** The results demonstrated that there was no significant correlation (p<0.05) between radiation doses and detection of anatomical landmarks using both modalities. **CONCLUSION:** Radiographs obtained using different radiation doses have no difference in diagnostic performance. Thus, dose reduction of radiation dosage should be considered when taking orthodontic radiographic records.

Esmarch Procedure For Recurrent Unilateral TMJ Ankylosis

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INTRODUCTION: Ankylosis of the temporomandibular joint (TMJ) happens due to fusion of the condyle to the glenoid fossa, leading to problems in phonation, mastication, facial disfigurement and psychological stress. No single method available for the management of TMJ ankylosis gives consistently successful results, with trismus and re-ankylosis being frequently reported complications. This case presents management of recurrent unilateral TMJ Ankylosis, which had undergone two conservative corrective surgeries previously. **CASE:** 14 year old male who reported to our unit with the chief complaint of difficulty in mouth opening since 4 years. On clinical and radio graphical examination, he was diagnosed to have unilateral ankylosis of left TMJ which was operated using Esmarch procedure with bilateral coronoidectomy done under general anaesthesia. The most frequently reported procedures done for TMJ ankylosis include gap arthroplasty, interpositional arthroplasty, excision and joint reconstruction with autogenous or alloplastic materials. For relapse cases, the Esmarch procedure can be used by creating an osteotomy gap at a lower level near the angle of the mandible. Then the masseter and internal pterygoid muscles are separated from the bone to their most anterior limits of attachment. Ankylotic mass of bone is removed up to the superior border of ramus, and the exposed masseter and medial pterygoid muscles are approximated with sutures. **CONCLUSION:** Following the surgery and rigorous physiotherapy his pre-surgical mouth opening of 8mm improved drastically to 40mm in 3 months follow up along with improvement in phonetics and mastication.

Acknowledgement

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