

5th MEDICAL RESEARCH SYMPOSIUM



(Company No. 101067-P)

الجامعة الإسلامية العالمية ماليزيا
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
يُونَيْتِسْتِي اِسْلَامْلَرْ اِنْتَارَا بِنْتَسَا مِلْدِسْتَا

Garden of Knowledge and Virtue

9 OCT 2019

22 YEARS
Est. 1997
KULLIYAH OF
MEDICINE

“EXPANDING RESEARCH COLLABORATION IN HEALTH”

ORGANISED BY: KULLIYAH OF MEDICINE

IN COLLABORATION WITH: IIUM MEDICAL CENTRE

PROGRAMME & ABSTRACT BOOK

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WELCOMING REMARKS



In the Name of Allah, the Most Beneficent, the Most Merciful.

All the praises and thanks be to Allah ﷻ The Most Beneficent, the Most Merciful. Prayers and peace be upon our Prophet, Muhammad ﷺ, his family and all of his companions.

Medical Research Symposium was established as a platform for academia and students especially from Kulliyah of Medicine to learn research from the experts and to learn how to share their research findings. The first MRS was conducted in 2015 with its theme “Turn Research into Practice”. In 2016 we had a 4 days conference in collaboration with Hospital Tengku Ampuan Afzan and US Navy during their Pacific Partnership. In 2017 we used “Research in Academia” as our theme. Last year, the theme was “Cultivating Research Culture” and this year MRS is organised with the theme “Expanding Research Collaboration in Health”.

We started by encouraging academia to do research and to share success stories of research done well; and now we wish to encourage research collaborations. Research should not be done in-silos. But this is so cliché, because it is easier said than done. To be independent is easier than interdependent. Therefore, we hope we will be able to share experience and guidance from the renown figures like Datuk Prof. Dr. Awang Bulgiba bin Awang Mahmud, Assoc. Prof. Dr. Khairidzan Mohd Kamal and Assoc. Prof. Dr. Mohamad Haniki bin Nik Mohamed on collaborating research in health.

We have more than 90 abstracts received this year with more than 150 registrants. We wish to thank every single one of the participants and may you find this symposium enriching.

I thank all the committee members for the hard work, and I also would like to thank IIUM Medical Centre for the continuous support as well as to all our sponsors. Only Allah ﷻ can repay all your deeds.

Thank you. *Wasallam*

PROFESSOR DR JAMALLUDIN AB. RAHMAN

Chairman

Medical Research Symposium 2019

International Islamic University Malaysia

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PROGRAMME

TIME	PROGRAMME
08:00	Registration
08:30	Welcoming remark Professor Dr. Azmi Md Nor Dean, Kulliyyah of Medicine International Islamic University Malaysia
08:40	Plenary I Expanding Research Collaboration in Health: From Bedside to Bench Assoc. Prof. Dr. Khairidzan Mohd Kamal Consultant Ophthalmology Surgeon, Department of Ophthalmology International Islamic University Malaysia
09:05	Keynote Research Collaborations - The Why and How Datuk Professor Dr. Awang Bulgiba bin Awang Mahmud Department of Social and Preventive Medicine University of Malaya
09:50	Plenary II Collaborative Research in Public Health: NECS Experience and Beyond Associate Professor Dr. Mohamad Haniki Bin Nik Mohamed Kulliyyah of Pharmacy International Islamic University Malaysia
10:10	Break
10:45	Symposium I Between Science and Rejectionism: The Vaccine Dilemma Dr. Asrar Abu Bakar
11:05	Alzheimer's disease: Milking a Rhino! Dr. Wael Mohamed Yousef Mohamed
11:25	Update on Foot Ankle Problem Associate Professor Dr. Aminudin Che Ahmad
11:45	Oral Presentation I
13.30	Lunch

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TIME	PROGRAMME
14.00	Oral Presentation II
	Symposium II
15:45	Research using IT Technology Professor Dr. Ramli Musa
16:05	Managing Big Data for Research Datuk Professor Dr. Awang Bulgiba bin Awang Mahmud
16:25	Collaboration on Humanitarian Work at Cox Bazaar: Opportunity for Research Professor Dr. Mohammed Muslim Uddin
16:45	Best Oral & Best Poster Award Presentation
17:00	Closing remarks Professor Dr. Jamalludin Ab. Rahman Chairman Medical Research Symposium 2019 International Islamic University Malaysia

KEYNOTE ADDRESS

Research Collaborations: The Why and How



Research collaborations, whether intra-institution, nationally or internationally is a prerequisite if one wishes to do impactful research. The University of Malaya (UM) is well-known for research collaborations and there are good reasons for this. In this talk, the speaker will speak from his experience as UM DVC (Research and Innovation) in managing and initiating international research collaborations. A case study of the growth and impact of research collaborations in a university network will be used as an example. The speaker will also touch on how IIUM can make research collaborations work.

DATUK PROFESSOR DR. AWANG BULGIBA BIN AWANG MAHMUD
Department of Social and Preventive Medicine
University of Malaya

PLENARY I

Expanding Research Collaboration in Health: From Bedside to Bench



It is quite challenging for a clinical academician, to embark and expand on the journey of research work. Failure in establishing and nurturing the research culture in medical and health locally is partly due to academic institutions' narrative on research that are usually general in nature. The application of universal research principles to all academicians without considering the challenges faced by medical academicians augment the existing difficulties. The outcome of this generalization has already manifested its long-term effects in most of local medical faculties. Integrating and transforming clinical works into research material need not only careful planning but also clear

directions and objectives.

The quest of fulfilling KPI and ranking has undersized the focus of medical and health research works in relatively new universities whom are at their infancy states in developing the research interest. Young clinicians in the academic institution may find it difficult to embark on the research work as they have to divide and prioritize their time to improve their clinical skills, polish their surgical abilities, handle the administrative works, involve in teaching and publication. Pterygium: From Bedside to Bench is an illustration of over a decade of experience and journey of a clinician in attempting to navigate his way to find a balance to achieve all these tasks and expectations through research collaboration.

ASSOCIATE PROFESSOR DR. KHAIRIDZAN MOHD KAMAL

Consultant Ophthalmology Surgeon
International Islamic University Malaysia

PLENARY II

Collaborative Research in Public Health: NECS Experience and Beyond



As scientific knowledge in a wide range of disciplines has advanced, researchers and scholars have become increasingly aware of the need to link disciplinary fields to more fully answer critical questions and/or to facilitate application of knowledge in a specific area. A critical component of a vast majority of the definitions was the degree of cooperation or interaction between members of the collaborative teams, the amount of contact between team members and the degree of sharing of information. Team members may remain loyal to their respective disciplinary languages, learn each other's' terminology, or develop and use a common language. In modes with a moderate degree of synthesis, team members will often share a research problem and interact with one another but still employ their respective disciplinary methods, conceptual frameworks, and languages. Transdisciplinarity requires the greatest synthesis of approach. In this mode, teams not only share a common question but also often share and borrow methods, create a common conceptual framework, and either learn each other's disciplinary language or create a new common language. The outcome of the collaboration may result in the solution of a discreet problem, a single or group of publications, the development of a new field and/or language, and by some in the humanities, the process of the interdisciplinary endeavor itself was the intended outcome. Transdisciplinary endeavors set out to create synthesis between disciplines and are the mode most likely to result in the development of a new field of study or language. In relation to all these, the National Electronic Cigarettes Survey (NECS) provided experts from various backgrounds, including medicine, pharmacy, behavioral science and information technology to collaboratively address the issue and inform policy-makers. This collaboration involved the scientific community in developing new knowledge through research that combines the skills and perspectives of multiple disciplines. This is parallel to the wider societal interest in holistic perspectives that do not reduce human experience to a single dimension of descriptors, and to increase awareness that a number of extremely important and productive fields of study are themselves interdisciplinary. From the design, execution and reporting of NECS, experts combined their research tools, approaches, and technologies to more powerfully address the issue of e-cig use among Malaysian adults. By engaging seemingly unrelated disciplines, traditional gaps in terminology, approach, and methodology were gradually eliminated. With roadblocks to potential collaboration removed, a true meeting of minds took place: which broadened the scope of investigation into biomedical problems, yields fresh and unexpected insights, and even give birth to new hybrid disciplines that are more analytically sophisticated.

ASSOCIATE PROFESSOR DR. MOHAMAD HANIKI NIK MOHAMED
Kulliyah of Pharmacy
International Islamic University Malaysia

SYMPOSIUM I

Between Science and Rejectionism: The Vaccine Dilemma

Dr. Asrar Abu Bakar

International Islamic University Malaysia

Parental refusal of vaccines is a growing concern for the increased occurrence of vaccine preventable diseases in children. The emergence of vaccine preventable illnesses indeed carries a threat to the community and the Ministry of Health Malaysia has made tackling vaccine refusal amongst its priority. However, the debate is still open into how these concerns should be addressed. A number of studies have looked into the reasons that parents refuse to vaccinate their children encompassing religious reasons, personal belief, safety concerns, and a desire for more information from healthcare providers. A large subset of parents admits to having concerns and questions about childhood vaccinations. Understanding parental concerns would shed light on how healthcare providers can effectively combat vaccine hesitancy or refusal through informative conversations without being judgemental and confronting. All healthcare workers should make an effort to stay up to date on the recommended vaccines and to understand why those immunizations are recommended.

Alzheimer's Disease: Milking a Rhino!

Dr. Wael Mohamed Yousef Mohamed

International Islamic University Malaysia

The aging process has a harmful effect on the brain leading to several neurodegenerative diseases such as AD, dementia and the number of people with these conditions is massively increasing. It is estimated that 44 million people affected with dementia at present and this figure is set to rise to a surprising 81 million people by 2050. In spite of considerable advancement in the field of drug discovery, there is rise in the progression of these diseases worldwide due to their associated long-term complications. Although, improvement in the area of current medicine has resulted in the advent of modern pharmaco-therapeutics, there is a demand for new drugs that modify the course of disease and complications associated with AD and other neurodegenerative diseases. Alzheimer's disease is the most prevalent form of neurodegenerative disease, which is characterized by insidious and progressive loss of cognitive functions and neurons loss particularly in the cerebral cortex (hippocampus). In spite of different initiating events in pathogenesis of AD, the shared features are oxidative stress and inflammatory response which are directly damaging the neuron. My talk will focus on reviewing all available information and data so far regarding AD in terms of underlying pathophysiological changes, recent clinical trials and available and new drugs.

Update on Foot Ankle Problem

Associate Professor Dr. Aminudin Che Ahmad
International Islamic University Malaysia

Foot and ankle pain is common in the Malaysian adult population. It affects about 24% of adult and account for nearly 10% of all orthopaedic consultations. Foot pain is associated with increased age, obesity, diabetes, depression and reduced quality of life. The management of foot or ankle pain typically involves non-surgical interventions in the first instance and there is good evidence to support the use oral analgesics, exercises, orthoses and corticosteroid injections for various musculoskeletal foot or ankle conditions, but an actual failure in non-surgical management may prompt referral to orthopaedic surgeons for opinion and intervention. Gaining insight into the important of initial assessment and non-surgical management prior to surgical referral is important, so that proper referral will only be made for needy patients only. We will highlighting the update management of foot ankle condition especially diabetic foot problem, Charcot Neuroarthropathy as well as traumatic and fracture of foot and ankle. In brief, the foot and ankle surgery service available in Malaysia also will be discussed.

SYMPOSIUM II

Research Using IT Technology

Professor Dr. Ramli Musa
International Islamic University Malaysia

In order to get an easy access and wider target population, research in this millennium requires a new approach and creativity. Research that imbued with IT could scout a bigger sample size within a short duration. IT could also act as a medium for effective public education.

By all means improving the knowledge could act as a primary prevention to health system. Based on digital monitoring, there is a clear evidence that this approach managed to capture a substantial public attention. However, one should also aware on ethical and legal implications while creating the platform through IT and social media.

Managing Big Data for Research

Datuk Professor Dr. Awang Bulgiba Bin Awang Mahmud
Department of Social and Preventive Medicine
University of Malaya

Big data is everywhere, not just in developed nations but also in developing countries.

The usual approaches of managing big data need to change as the traditional approaches are just too cumbersome and time-consuming. The problem in big data is not just the size (volume) but the complexity (variety) combined with the speed (velocity) it is collected and the trustworthiness (veracity) of the data. These 4Vs present particular challenges for researchers. The rise of artificial intelligence (AI) in the management and analysis of big data has come about as a means of coping with these issues.

However, extra caution is advised when managing and analyzing big data. Over-reliance on AI in the management of big data is also advised against as the problems which are encountered in managing normal sized data also occur in big data management.

Collaboration on Humanitarian Work at Cox Bazaar: Opportunity for Research

Professor Dr. Mohammed Muslim Uddin

Principal of Chattagram International Dental College

The world witnessed decades of discrimination, statelessness and targeted violence that the Rohingya community have faced in Rakhine State, Myanmar; which forced them into Bangladesh following violent attacks in 1978, 1991-1992, 2016 and the largest as well as fastest influx in August 2017. As of January 2019, over 900,000 stateless Rohingya refu-gees reside at Cox's Bazar.

Historically, response of Bangladesh to influx of Rohingya refugees has been humanitarian relief, assistance and repatriation. The people of Bang-ladesh continue to show exceptional hospitality in the face of human tragedy on a mas-sive scale.

Over last 2 years, the acute problems of access to water, sanitation, hygiene, meals and clothing have mostly come down to a tolerable limit. Current needs include education, employment, child care, women friendly space, rehabilitation of disabled and care of mental health. Chattagram International Medical College, with aids from some NGOs, has been serving Rohingya population through 6 medical camps and 2 mobile dental clinics.

Collaboration on humanitarian service at Cox's Bazar might be targeted to maternal health, child education, rehabilitation of women and logistic aids to the existing service centres. Rohingya community might be a good choice for collaborative research due to large number of heterogenous population as well as easy access for data collection on complex parameters. Observational study might the simplest starting point for the team; host partner might contribute by providing data, the other partner might come for-ward with logistics as well as data analysis and interpretation, both partners might con-tribute in report writing and publication.

ORAL PRESENTATIONS

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3. A Traditional and Complementary Medicine (T&Cm) Use And Its Association With Diabetic Control Among Diabetic Patient In Single-Center.	192
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7. The Effect of Low Heel Raise to Forefoot Plantar Pressure in Diabetic patients with Tight Tendon Achilles.	231

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4. Molecular characterization of gyrA, parC and qepA genes in quinolone resistant ESBL producing E. coli isolated from patients in HTAA, Kuantan.	184

5.	Detection of Mismatch Repair and Microsatellite Instability in Colorectal cancer patients.	189
6.	Prevalence and Predictors of Pediculosis Capitis among Female Primary School Children in Kuantan, Pahang.	190
7.	Evaluation of Anti-Biofilm Activity of Virgin Coconut Oil (AVCO) against Streptococcus Mutans ATCC 2157	196
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8.	Post Endoscopic Retrograde Cholangiopancreatogram (ERCP) Perforation Managed Successfully Conservatively: A Case Report	213	008
9.	Foot Care Practices and Its Associated Factors among Type 2 Diabetes Patients Attending Health Care Clinics In Kuantan.	226	009
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Non-Clinical

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2.	CLIPPERS the Brain Biter: An Adolescent's Experience of A Rare CNS Disorder.	145	022
3.	Psychological Well-Being among Nursing Students.	146	023
4.	Smartphone Addiction and Its Relationship with Psychological Health Among Clinical Years Medical Students of International Islamic University Malaysia (IIUM), Kuantan.	148	024
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7.	Neuropsychiatric Systemic Lupus Erythematosus (NPSLE)- Masquerade Diagnosis: A Case Report.	154	029
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13.	Comparison of Blood Loss Using Intra-Articular Injection of Tranexamic Acid After Total Knee Replacement.	167	035
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15.	Prevalence of Depression among Transgender Male to Female in Kuantan, Pahang.	170	037
16.	Adult Onset Intestinal Malrotation: An Often-Neglected Entity.	171	038
17.	Splenic Pseudocyst by <i>Aeromonas Salmonicida</i> In Adolescent An Isolated Occurrence. A Case Report.	172	039
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21.	The Impact of Paediatric Anaesthesia Information Leaflet in Reducing Parental and Child Anxiety in Paediatric Surgery.	181	044
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26.	Synchronous Gastrointestinal Stromal Tumor (Gist) of the Rectum and Jejunum: A Rare Case Report.	199	050
27.	The Validation of Questionnaire on End of Life Care Knowledge, Perceptions and Preferences Among End Stage Renal Disease Patients on Haemodialysis in Kuantan.	208	051

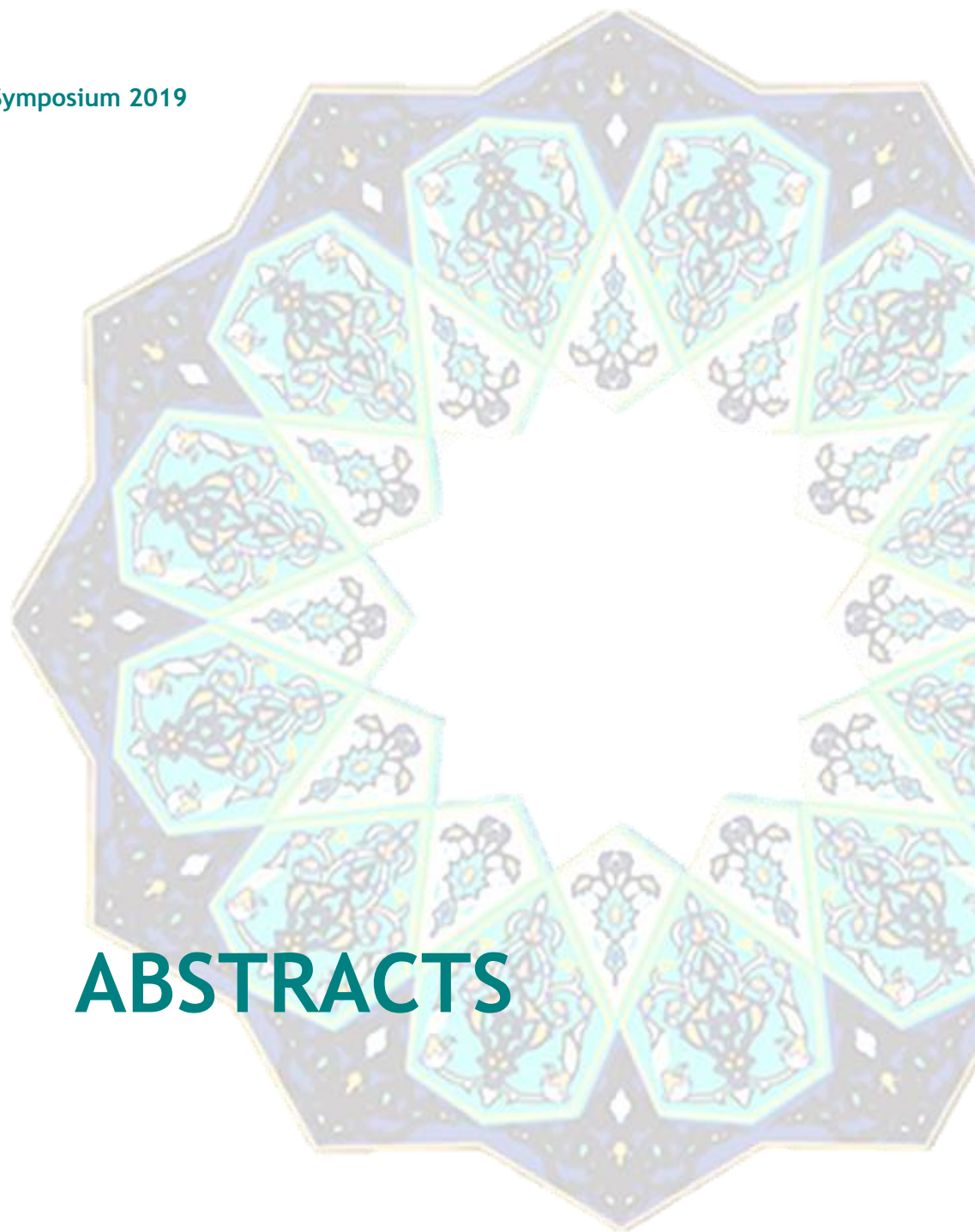
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29.	Minimally Invasive Surgery in Treatment of Traumatic Thoracolumbar Spinal Injuries: A 2-Year Experience.	211	052
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31.	MRI Evaluation of Anterolateral Ligament of the Knee: A Cross-Sectional Study in Malaysia.	215	054
32.	Transforaminal Endoscopic Discectomy: A Targeted Spinal Surgery.	216	055
33.	Persistent Left Sided Superior Vena Cava: The Perplexity Of PICC.	218	056
34.	A Rare Case of Polypoidal Cystitis in Adult Without History of Prolong Catheterization.	223	057
35.	A Case of Persistent Retroperitoneal Abscess with Large Right Perinephric Collection.	224	058
36.	Surgical Management of Paediatric Neglected Humeral Supracondylar Fracture: A Series of 3 Cases in 3 Years.	225	059
37.	Aeromonas Salmonicida Infection in a Massive Splenic Cyst: A Rare Cause of an Acute Abdomen.	228	060
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Non-Clinical

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ABSTRACTS

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PREVALENCE OF RISKS FOR OBSTRUCTIVE SLEEP APNOEA AND ITS RISK FACTORS AMONG ADULTS ATTENDING GOVERNMENT PRIMARY HEALTH CLINICS IN KUANTAN

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Presenter: Azwan Faiz Amir Hamzah

Introduction: Obstructive sleep apnoea (OSA) is a sleep related breathing disorder with recurrent episodes of apnoea or hypopnoea occurring during sleep. It is associated with increased risk of cardiovascular disease and prone to accidents. However, there is no applicable study that assess the risk for OSA at the primary care level. **Objective:** This study aims to assess the prevalence of risk for OSA and OSA symptoms and its associated risk factors among adults attending primary care clinics. **Materials and method:** This cross-sectional study was conducted among 252 adults attending four Klinik Kesihatan in Kuantan, Pahang. The inclusion criteria was adults age 30 years old and above. The exclusion criteria were a known case of Hypothyroidism, Depression and pregnancy. A self-administered validated Malay version of Berlin Questionnaire(BQ) was used to screen for high risk of OSA. The statistical analyses were done using IBM SPSS version 23.0. **Results:** Majority of the respondents were male (54%), Malay (87.7%), and married (79.4%). The prevalence of High Risk for OSA was 32.9%. Among these, 94% of them presented with snoring and 16.9% presented with excessive daytime sleepiness. Among male, Malay and married; 48%, 32.6% and 36.5% respectively was shown to be High Risk for OSA. The risk factors that were found significantly associated with High Risk of OSA includes younger age (AOR=0.951 CI=0.923-0.980); higher BMI classification with obese type 1 (AOR=2.604 CI=1.278-5.308), obese type 2 (AOR=3.882 CI=1.078-13.975) and obese type 3 (AOR=6.800 CI=1.164-39.717); higher neck circumference (AOR=1.109 CI=1.007-1.221); hypertension (AOR=2.297 CI=1.122-4.702); and hypercholesterolaemia (AOR=2.040 CI=1.050-3.965). **Conclusions:** This study shows that nearly one third of the adults attending primary health clinic are at High Risk for OSA and nearly 17% of them presented with excessive daytime sleepiness. Further study need to be carry out particularly among those of younger age, higher BMI classification, and with co-morbidities.

PERIOPERATIVE HYPERGLYCEMIA AS A RISK FACTOR FOR EARLY SURGICAL-SITE INFECTION IN STABLE TRAUMA PATIENTS IN ORTHOPAEDIC UNIT

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Presenter: Mohd Darulnizam bin Othman

Introduction: Perioperative hyperglycemia resulted from known diabetes mellitus, occult diabetes or stressed-induced hyperglycemia. It is associated with increasing risk of surgical-site infection (SSI). This research is to evaluate relationship between perioperative hyperglycemia and early SSI in stable trauma patients with orthopaedic injuries. **Materials and method:** We conducted an observational cohort study in Hospital Sultanah Nur Zahirah, Kuala Terengganu over 15 months. We included patients 18 years and older with operative orthopaedic injuries and excluded those with steroid use, multisystem injuries, critically ill or unstable and patients with perioperative infection. Demographics, medical comorbidities, body mass index, type of fracture, HbA1c level in diabetic patients and length of hospital stay were recorded. Fingerprick glucose values were obtained twice daily. Hyperglycemic index (HGI), an area under the glucose curve above the normal range divided by the length of stay, were calculated. Perioperative hyperglycemia was defined by HGI greater than 1.76. SSI was defined by gross purulence or positive intraoperative culture at reoperation within 30 days. The categorical data were analysed using chi square test while continuous data were analysed using T-test. **Results:** Total of 90 patients, 15-diabetic and 75 non-diabetic. 10 diabetic and 1 non-diabetic patients were hyperglycemic ($p = 0.001$). Perioperative hyperglycemia was associated with mean age 54.3 year old, having 1 or more co-morbidity or mean admission glucose 13.1 mmol/L ($p = 0.001$). There were 12 early SSI giving infection rate 13.3%. Early SSI was associated with HGI 1.76 and more ($p = 0.001$), patients with 1 or more co-morbidity ($p = 0.006$), mean admission glucose of 9.63 mmol/L ($p = 0.001$). **Conclusion:** Our study showed perioperative hyperglycemia in stable trauma patients with orthopaedic injuries were associated with SSI. More patients are needed to find association of other variables and more studies are required in determining the acceptable glucose level and optimal treatment of perioperative hyperglycemia in stable trauma patients.

A TRADITIONAL AND COMPLEMENTARY MEDICINE (T&CM) USE AND ITS ASSOCIATION WITH DIABETIC CONTROL AMONG DIABETIC PATIENT IN SINGLE-CENTER

Mohd Al-Baqlish, Nurain Zainab Zainal Abidin, Nur Syahirah Abdul Rahim, Nur Tasnem Binti Rusdi, Ridzuan Said

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Presenter: Nurain Zainab Zainal Abidin

Introduction: Diabetes Mellitus is a major global health concern worldwide with increasing trend as reported in the National Health Morbidity Survey 2015. Due to the fact that diabetes mellitus is a life long chronic illness and incurable, it contributes to the increased tendency of seeking Traditional Complementary Medicine (TCM). The objective of this study is to measure the prevalence of CM use among diabetic patients and its association with diabetic control. **Materials and Method:** A cross-sectional study was performed at Hospital Tengku Ampuan Afzan, between July to August 2018. 136 Type II adult diabetic patients in medical ward and diabetic clinic were interviewed regarding the use of CM, and their blood investigations results were collected from patients' medical records. A data collection form was used as the study instrument. Descriptive statistic was used to measure the prevalence while Fisher exact test and Independent t-test were used to find associations between CM usage with study background and diabetic control. **Results:** Low prevalence of Traditional Complementary Medicine use (16.9%) was found with retired group of respondents was identified to be the predominant group (p-value=0.025). Majority of patients used CM as an additional treatment for diabetes (60.9%). Friends, family members and advertisement were the main influential factors in starting and using CM. A significant difference in eGFR value was reported between inpatient and outpatient CM users with a p-value of 0.001. No positive association was observed for HbA1c level. **Conclusion:** 1 in every 6 diabetic patients in HTAA, Kuantan were using Traditional Complementary Medicine along with conventional diabetic medications in which retirees were the major group identified. eGFR was the diabetic control parameter that had been found to have a significant association with diabetic inpatients and outpatient CM users in this study.

Abstract ID: 227

Category: Clinical

ORAL

ORAL HEALTH RELATED QUALITY OF LIFE (OHRQoL) AMONG MALAYSIAN CHILDREN: A SYSTEMATIC REVIEW

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Presenter: Muhammad Zaki Ramli

Introduction: Oral caries is a major public health issue around the globe, and it is the most prevalent noncommunicable disease (NCD). Children are mostly the population affected by this disease, which affects their quality of life. Therefore, measures to quantify this aspects of quality of life should be established to investigate the current status and to develop future intervention and prevention. The objective of this article is to systematically review the studies related to children's quality of life with regard to their oral health among Malaysian population. **Materials and Method:** Scopus-indexed articles were retrieved following an advanced search with the following search string, TITLE-ABS-KEY((oral OR dental) AND (child* OR kid* OR (primary dentition)) AND (quality of life) AND Malaysia*), resulting in a final of eight shortlisted and reviewed articles based on the review objective. **Results:** A few valid and reliable instruments were tested and validated, namely Malaysian version of Early Childhood Oral Health Impact Scale (ECOHIS), Malay Child Oral Impacts on Daily Performances (Malay Child-OIDP), Malaysian version of the Oral Health Impact Profile questionnaire (OHIP-14), and the most commonly used child oral-health-related quality-of-life (OHRQoL). However, Dental Aesthetic Index (DAI) score did not predict the effect of malocclusion on the OHRQoL. Oral caries was highly prevalent among Malaysian Orang Asli children. Oral health did not only have an impact on quality of life in Malaysian preschool children, but also on their caregivers. A health-promoting school model namely the Doktor Muda Programme for primary schools in Malaysia showed some positive impacts on children's oral health related quality of life. **Conclusion:** Further research among Malaysian children population with regard to their oral health related quality of life should be continued for the benefits of communities at large.

COMPLIANCE OF HOUR-1 SEPSIS CARE BUNDLE IN PATIENTS WITH SURGICAL INFECTION REQUIRING SURGERY IN HOSPITAL TENGKU AMPUAN AFZAN

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Presenter: Dhayalan Ganisan

Introduction: Sepsis is life-threatening organ dysfunction caused by a dysregulated host response to infection. According to Sepsis 3 definition, an increase of 2 or more in the qSOFA score should create a suspicion of sepsis and organ dysfunction. It is a dire condition as studies show; patients with a qSOFA score of ≥ 2 have a mortality rate of $\geq 0\%$. The Surviving Sepsis Campaign guidelines have depicted an Hour-1 Sepsis Bundle in managing patients with sepsis which has proven to reduce morbidity and mortality. The objective of this study was to analyze the demographic data of patients presenting with surgical sepsis requiring surgery and compliance to the Hour-1 Sepsis Bundle, concurrently the mortality rate of these patients. **Materials and Method:** A retrospective epidemiological study was done from the 1st of October to the 31st of December 2018. Patients included in the study were all patients with evidence of surgical infection requiring emergency surgery and patients presenting with trauma were excluded. This number of patients was then scrutinized into patients with evidence of sepsis, subsequently the compliance to the Hour-1 Sepsis Bundle. **Results:** The analysis showed that 23 of the 156 patients with surgical infection requiring surgery were in sepsis. Of this, 5 patients succumbed during the same admission. Results also showed patients who developed sepsis in their 5th decade of life are more susceptible to death. In accordance with the Hour-1 Sepsis Bundle, compliance to measuring lactate level was 70%, obtaining blood culture was 47.8%, administration of antibiotics was 82.6% and rapid administration of crystalloid was 0%. All three patients requiring vasopressors were started on vasopressors within the hour. **Conclusion:** Compliance to the Hour-1 Sepsis Bundle in whole was unsatisfactory. This was noticeably apparent especially to fluid resuscitation where it was not delivered as recommended by the Sepsis Bundle.

Abstract ID: 230

Category: Clinical

ORAL

INFECTED PSEUDOANEURYSM IN A TERTIARY CENTRE: A RETROSPECTIVE AUDIT

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Presenter: DS Sanjay

Introduction: Infected pseudoaneurysms among intravenous drug abusers are a serious clinical condition that carries significant morbidity and mortality. The management of such cases has been controversial on deciding the need of revascularisation following simple ligation and local debridement. In this audit, we present the results of simple ligation and local debridement of our patients with infected pseudoaneurysm. **Materials and methods:** We conducted a retrospective review from 2013 to 2018 on 15 of our patients who are intravenous drug abusers that underwent simple ligation and local debridement for an infected pseudoaneurysm. **Results:** All 15 patients underwent simple ligation and local debridement. They were all male patients, and majority of the patients were between group ages of 30-40 years old at 66.7%. The oldest patient was 63 years old. All the patients self-injected the affected site for a minimum duration of 36 months. 73% of the patients had femoral pseudoaneurysm, making it the most common affected site in our audit. The remaining patients had axillary and radial pseudoaneurysm and none of our patients had brachial pseudoaneurysms. Majority of our patients were underlying Hepatitis C at 46.7%, 2 of our patients were HIV positive and only one had Hepatitis B. The remaining 5 patients' statuses were unknown. In accessing the complications, two patients had re-bleeding after the procedure and were eventually discharged well and were uneventful. One patient required amputation as he developed a gangrenous limb within the same admission after ligation and excision of the infected pseudoaneurysm. There were two deaths due to sepsis with multiorgan failure. 10 patients were discharged well without any complications after surgery. **Conclusion:** Infected pseudoaneurysms can be safely managed with simple ligation and local debridement without revascularisation as they pose acceptable complication rates.

THE EFFECT OF LOW HEEL RAISE TO FOREFOOT PLANTAR PRESSURE IN DIABETIC PATIENTS WITH TIGHT TENDON ACHILLES

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Presenter: Salmah Anim Abu Hassan

Introduction: The purposes of this study were to investigate the effects of raising the heel to the forefoot plantar pressure (PP) in diabetic patients with or without limited ankle dorsiflexion due to tight tendon Achilles (TA). **Materials and methods:** Plantar pressure recordings and gait tests were performed in the two groups of subjects with diabetes (tight TA, n=17; normal TA, n=13) with the heel raised from 1 cm to 3 cm. **Results:** There were no significant forefoot pressure difference between both intervention groups ($p < 0.05$). Plantar pressure reduction was seen in the medial (10-30%) and lateral metatarsal heads (20-50%) as well as the heel (2-38%) when heel raise was increased from 1 to 3 cm. However, reciprocal pressure increase was seen at hallux (11-76%), toes (1-200%) and midfoot (22-100%) with increased heel height. **Conclusion:** Heel elevation up to 2 cm is recommended for footwear prescription for to diabetic patients. A higher heel raise may may cause plantar pressure elevation to the hallux which is one of the high risk regions for plantar ulceration in diabetics.

KNOWLEDGE, ATTITUDE AND PRACTICE OF MALAYSIAN MEDICAL DOCTORS ON SMOKING CESSATION GUIDELINES.

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Introduction: Prevalence of active smokers in Malaysia is remaining high (22.8%) despite the wide availability of quit-smoking services. Rather than look at the patients' factors alone, the possible negative factors from health care providers should also be explored. Therefore, knowledge, attitude and practice of the healthcare professional on smoking cessation intervention needs to be assessed, especially among the primary care doctors. This can be done during national conference gathering all doctors from Malaysia. **Materials and Method:** A cross-sectional study was conducted among medical doctors attending First East Coast Symposium on Specialized Care at Primary Care Level at Grand DarulMakmur, Kuantan on 1st to 2nd December 2019, using validated questionnaire of Knowledge, Attitude and Practice of Medical Doctors on Smoking Cessation Guidelines; consisting 17 questions to determine the KAP score. The difference between the median KAP scores between age, gender, ethnicity, religion, profession, location of clinic, availability of specialist at clinic, numbers of smokers seen and presence of smoking cessation training were assessed using Independent sample T-test and One-way ANOVA. **Results:** A total of 131 primary care doctors involved in the study. Majority were female (80.9%), Malay (96.2%), medical officers (74.8%), government doctors (90%) and haven't undergone any kind of smoking cessation training (65.5%). The higher KAP score were statistically associated ($p < 0.05$) with history of attending training program (mean 35.7 score) and in charge of quit smoking clinic (mean 35.4 score). No significant difference of score between government (mean 32.0 score) and private doctors (mean 29.9 score). **Conclusions :** Majority of the involved primary care doctors had low KAP score. Being a family medicine specialist, in charge in stop smoking clinic and have attended smoking cessation training program were significantly associated with high KAP score. Therefore, more smoking cessation training should be provided for doctors.

FACTORS ASSOCIATED WITH QUALITY OF LIFE IN HUNTINGTON'S DISEASE

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Introduction: Huntington's disease (HD) is an inherited progressive neurodegenerative disorder which affects motor function, cognition and the psychological state of HD patients. Its triad of unique symptoms compared to other neurodegenerative disorders might give rise to a higher level of burden for their carers. The aim of this study was to explore factors associated with the quality of life in patients with HD. **Materials and Method:** Eighty-one HD patients and their carers participated in this study. Cognitive impairment was assessed with the Neuropsychiatry Unit Cognitive Assessment Tool (NUCOG), motor disturbances was scored using the Unified Huntington's Disease Rating Scale (UHDRS) motor scale, psychological status of both patient and carer were assessed using the Depression Anxiety Stress scale (DASS21), behavior of the patient was assessed using Revised Cambridge Behavioural Inventory (CBI-r) and patient's quality of life was assessed with WHOQOL-BREF questionnaire. **Results:** Patients' psychological conditions, motor disturbances and behavior of the patient are correlated with low QOL in HD patient. **Conclusion:** Other than regular motor symptoms, psychological and behaviour of HD assessment should be assessed regularly to ensure the patients having good quality of life.

SYSTOLIC TIME INTERVAL (STI) IN HYPOTHYROID PATIENTS RECEIVING HIGH DOSE L-THYROXINE

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Introduction: Systolic Time Interval (STI) is a simple, noninvasive and precise technique to assess left ventricular (LV) function. It measures aortic Pre-Ejection Period (PEP) over Left Ventricular Ejection Time (LVET) from echocardiogram. Thyrotoxicosis will enhance LV function and cause reduction of STI. This study was performed to measure the changes of STI after administration of high dose L-thyroxine and to determine the correlation between high dose L-thyroxine administration and STI. **Materials and Method:** A Total of 22 patients were screened. Those with cardiac diseases and high Framingham risk score were excluded. Nine patients were started on high dose L-thyroxine (7x their usual dose) once a week during the month of Ramadan. Thyroid hormones (T₃, T₄, TSH) and STI (PEP/LVET) were measured at baseline and within 24 hrs after high dose L-thyroxine ingestion. **Results:** All patients have normal thyroid hormones level and normal cardiac function at baseline. The median dose (mcg) of L-thyroxine was 600 (437.5, 700) while the median level of fT₄ (pmol/L) was 17.43 (12.38, 20.8). Despite the significant increment of fT₄ after L-thyroxine ingestion [baseline 13.21 (8.19, 14.63) vs high dose 17.43 (12.38, 22.55) p; 0.011] there was no significant change in STI [baseline 0.3 (0.2, 0.4) vs high dose 0.28 (0.26, 0.45) p; 0.513]. There was no correlation found between the dose of L-thyroxine and STI (r=0.244, p; 0.526). **Conclusion:** Administration of high dose L-thyroxine did not significantly alter STI despite significant increment of fT₄ level unlike the naturally occurring thyrotoxicosis. Therefore 'exogenous' administration of high dose L-thyroxine is cardiac safe.

BACK TO THE NATURE: EFFECTS OF NON-PHARMACOLOGICAL MODALITIES IN MECHANICALLY VENTILATED NEONATES

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Introduction: Neonates refers to the first 28 days of life, they are vulnerable to physiological changes. About 15% of neonates get admitted to NICU and a significant number of them end up in ventilation. This study assessed the beneficial role of non-pharmacological modalities on recovery with a better outcome of ventilated babies in NICU. **Material and Methods:** The study is a quantitative cross-sectional study for 9 months of NICU at IIUMMC. The study will include top conditions warranting neonatal intensive care unit (NICU) admissions and ventilation as preterm, respiratory distress, neonatal sepsis, HIE, and others. They are divided into two(2)groups; the first group will keep the standard practice and assigned as a control group. The second group will afford all or most of a package of non-pharmacological and sensory stimuli like a kangaroo, feeding, non-nutritive sucking, swaddling, skin-to-skin contact, sensory saturation, soft massage, away irritant odour, Normal visual experience during daytime and dime light at night-time. decrease sound pollution, and voice stimulation assessing soft music or recitation of the Qur'an according to family preference. We will assess stabilizing vital signs, behavioural assessment, extubating timing, Short term outcome. **Results:** Adding non-pharmacological modalities could reduce the dose requirements for sedation and analgesics and has a positive effect on the neurodevelopmental outcome. **Conclusion:** non-pharmacological strategies besides other modalities improved short-term outcomes and the recovery of ventilated babies. The importance of coming back to nature, the effect of special senses and sensory stimulation on neonatal recovery, and ease extubation.

SATISFACTION, ANXIETY, DEPRESSION AND STRESS AMONG FAMILY MEMBERS OF PATIENTS IN MALAYSIAN INTENSIVE CARE UNIT

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Introduction: Family satisfaction has been identified as a quality indicator in critical care area. The impact of family satisfaction level was also found to be associated with symptoms of psychological distress such as anxiety, depression and stress among family members. We evaluated the satisfaction level and prevalence, risk factor and correlation of psychological distress symptoms with the satisfaction level among family members in Malaysian Intensive Care Unit (ICU) . **Materials and Method:** This is a cross-sectional, multicentre study conducted in ICU at Hospital Sultanah Aminah Johor Bahru and International Islamic University Medical Centre. Family members were enrolled 3 days after ICU admission, and they completed a modified version of Critical Care Family Needs Inventory (CCFNI) and the Depression, Anxiety and Stress Scales (DASS) . **Results:** A total of 176 family members were enrolled in this study. We found 116 (66%) of the family members scores ≥ 3 denoting satisfaction with the mean CCFNI score was 3.11 (SD=0.3). Prevalence of depression, anxiety and stress were of 30.1%, 41.4% and 28.9% respectively. Risk factor for psychological distress symptoms were female sex, spousal relationship, lower education, median income less than RM 4000, staying with patient and younger patient age. Negative correlation between depression, anxiety and stress with CCFNI score were found ($p < 0.05$) but with low correlation coefficient ($r = -0.178$ to -0.209). Family members without symptoms of psychological distress were more satisfied (higher CCFNI score) with ICU care compared to those with symptoms of psychological distress ($p < 0.05$). **Conclusion:** Family members of ICU patient were satisfied with the care provided in the ICU. High rates of psychological distress symptoms in this study and its correlation with the satisfaction level highlight the need to identify and implement preventive and management strategies for family members to improve the overall ICU care.

ADVANCED SACRAL CHORDOMA: A MULTIDISCIPLINARY TEAM APPROACH

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Introduction: Sacral chordomas are rare, low-grade and slow growing malignant bone tumours arising from the sacral bone. They are locally aggressive with the tendency to metastasize to the lungs. Surgical resection remains the mainstay of treatment of sacral chordomas. However, most patients presented late with large tumours and intra-abdominal extension making en bloc resection highly challenging. Besides that, surgical resection poses risk of injury to the surrounding structures such as major blood vessels, bladder, ureters and rectum due to their proximity to the tumour. Therefore, multidisciplinary team approach is vital in anticipating possible complications and preventing surgical morbidity. We present a case of advanced sacral chordoma which has been successfully resected with the assistance of pre-operative selective arterial embolization as a pre-emptive therapy. **Case report:** A 58-year-old lady presented with a large sacral chordoma (17.17 cm x 27.3 cm x 30.5 cm) with sacral erosion, infiltration to gluteus maximus, medius and minimus muscles and lung metastasis. A decision to perform a surgical resection was made to alleviate the pain secondary to sacral nerve compression. Anticipating massive bleeding intra-operatively, pre-operative arterial embolization was performed involving one branch of right internal iliac artery as well as five branches of left internal and external iliac arteries using endovascular coils. The tumour was resected with partial sacrectomy from S2 and below. Intra-operatively, 6 pints of packed cells were transfused with estimated blood loss of 4 litres. The patient recovered well after the surgery. She was pain-free post-operatively with no lower limb neurological deficit. **Conclusion:** Surgical resection remains the treatment of choice for sacral chordoma. Pre-operative selective arterial embolization can reduce intra-operative bleeding and avoid a potentially convoluted surgery.

PREVALENCE OF BREAST CANCER AND ITS ASSOCIATED FACTORS FOR RECURRENCE IN HOSPITAL TENGKU AMPUAN AFZAN 2008 -2012

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Introduction: Breast cancer is the commonest malignancy in Malaysian women. Cancer recurrence has been a detrimental factor towards survival with peak of recurrence recorded in first 2 years of diagnoses. Identifying the prognostic factors towards recurrence is important to management and prolonging survival. **Materials and method:** We have retrospectively analyzed 179 patients women with breast cancer based on 5 years single centre database with minimum follow up of 2 years. The demographic and clinicopathological characteristics were determined using descriptive statistics. Survival were calculated based on Kaplan- Meier method and multivariate analysis by Cox proportional hazards was performed to evaluate the potential factors affecting breast cancer recurrence. **Results:** Mean follow up was 42 months, with mean age 52 years and 60.9% presented in Stage II disease. Overall recurrence was 41.9% with local recurrence 2.1%, regional recurrence 12.3% and distant recurrence 27.4%. 50% of our patients developed recurrence at 25 months. In univariate analysis, time to first presentation was significantly correlated with recurrence. However, in multivariate analysis; tumor size, lymph node positivity and lymphovascular invasion were independently associated with recurrence. **Conclusion:** Even though local data on breast cancer recurrence is sparse, it does correlate with the international data. Thus, optimizing our care in breast cancer.

POST ENDOSCOPIC RETROGRADE CHOLANGIOPANCREA-TOGRAM (ERCP) PERFORATION MANAGED SUCCESSFULLY CONSERVATIVELY: A CASE REPORT

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Introduction: We aim to report an uncommon case of post ERCP perforation that effectively managed conservatively in non-hepatobiliary surgery centre. **Case report:** A 46-year-old man diagnosed to have obstructive jaundice secondary to distal common bile duct (CBD) stone. He underwent ERCP at a private centre, sphincterotomy was performed, but, the operator had failed to insert the stent and complicated with post ERCP perforation evidenced by contrast extravasation beyond 1/3rd of the CBD and referred to our centre. Patient was subjected for re ERCP. There were difficulties in cannulating the CBD and stent was inserted. Cholangiogram revealed contrast leak around the pancreatic duct and bifurcation of hepatic duct. There was no evidence of CBD stone. Computed Tomography (CT) of the abdomen revealed extensive subcutaneous emphysema on the right side of the abdomen to right inguinal region, extensive retroperitoneal free air and pneumoperitoneum, but there were no free fluid or contrast extravasation. The patient subjected for non-operative management (NOM) for the complication and kept fasting with total parenteral nutrition and intravenous antibiotic. He recovered well with the opted management. Patient was programmed with Gastrograffin study after 10 days that showed no evidence of contrast leak to suggest free bowel injury. He was allowed orally after that and was discharged well after 15 days with stent in situ. During follow up, he was well, and the stent removed after 3 months. Patient planned for laparoscopic cholecystectomy and on table cholangiogram. **Conclusion:** Post ERCP perforation is uncommon but lethal. Early recognition of the complication is crucial hence appropriate management can be arranged to avoid death. To date, surgery is not the only choice available to manage this complication.

FOOT CARE PRACTICES AND ITS ASSOCIATED FACTORS AMONG TYPE 2 DIABETES PATIENTS ATTENDING HEALTH CARE CLINICS IN KUANTAN

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Introduction: Diabetes patients are predisposed to several micro as well as macrovascular complications. One most important and debilitating complication of diabetes are foot problems. However, it is preventable by simple intervention such as foot screening and foot care education to detect early problem so that early intervention can be done. This study aims to assess foot care practice among Type 2 diabetes patient attending primary health clinics in Kuantan. **Materials and method:** This was a cross-sectional study conducted at four primary health clinics in Kuantan involving 450 study participants who were selected by using convenient sampling method. Level of awareness and practice towards diabetic foot care was assessed using validated self-administered questionnaire. Multiple logistic regressions were performed to identify factors associated with foot care practice among the respondents. **Results:** Mean age of respondents involved was 56.36 (SD±10.9) years. About 59.6 % of respondents had poor foot care practice. Multivariate logistic regression analysis identified that, increasing age (aOR 0.97, 95% CI: 0.955-0.993) and good awareness towards foot problem (aOR 0.43, 95%CI: 0.289-0.643) were associated with good foot care practice. However, Malay patients (aOR 1.81, 95% CI: 1.002-3.271) and obese patients (aOR 1.9, 95% CI: 1.225-2.976) were associated with poor foot care practice after controlling other variables. Other factors such as education level, diabetes control as well as overweight did not show any significant association with foot care practice. **Conclusion:** Based on the result, majority of respondents had poor foot care practice. Poor awareness was associated with poor foot care practice. It can be concluded that sustainable patient education and compliance towards foot care practice at primary care level should be emphasized more to ensure good foot care practice implementation.

SACRAL MARJOLIN'S ULCER: A CASE OF DELAYED DIAGNOSIS IN A PARAPLEGIC PATIENT

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Marjolin's ulcer is a rare and aggressive malignancy ulcerating squamous cell carcinoma of the skin presenting in a previously injured or chronically inflamed area. However, the diagnosis may be delayed particularly in chronic sacral sores due the insidious onset and low index of suspicion, resulting in suboptimal management and poor outcome. A 42-year-old Malay gentleman sustained complete spinal cord injury in 1998 and consequently paraplegic. Five years prior to presentation in 2019, he noted a small ulceration at the sacral area. Despite regular dressing and multiple hospitalization for wound debridement, the wound condition worsened and involved gluteus and right thigh, associated with loss of weight and appetite. The patient also had rectocutaneous fistula and subsequently underwent diversion colostomy. Upon presentation at our hospital, he was in septic shock requiring prolonged inotropic support. Local examination revealed a 20x40cm sacral and gluteal sores with copious purulent discharge and presence of slough intermixed with granulation tissue and irregular looking mass. Diagnosis of septic shock secondary to infected Marjolin's ulcer was made. Four quadrant biopsies were taken, and the histopathological examination revealed well-differentiated squamous cell carcinoma. CT thorax, abdomen and pelvis revealed multiple calcified lung nodule, local spread of squamous cell carcinoma and invasion into whole rectum, posterior part of bladder, prostate gland, and posterior part of penis. In view of the extensive local disease and lung metastases, patient opted for palliative treatment. The sepsis was unresolved and the wound remained infected, the patient succumbed and died due to the sepsis. A high index of suspicion and prompt oncologic management is required in managing chronic non-healing ulcer. An early referral to oncologic centre will improve the prognosis of patients with Marjolin's ulcer. Late diagnosis and superimposed infection will ultimately result in very poor outcome.

EFFECTIVENESS OF SMARTPHONE APPLICATION IN IMPROVING KNOWLEDGE ON UNDER-FIVE CHILDHOOD IMMUNIZATION SCHEDULE AMONGST PARENTS IN SELECTED NURSERIES

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Presenter: Mohammad Farhan Rusli

Introduction: Knowledge on under-five childhood immunization has been identified as a key factor in determining understanding and compliance to the schedule. Understanding the current levels of knowledge and introducing a health intervention to improve the level will benefit the population to be healthier and reduce morbidity. **Materials and Method:** A quasi-experimental study was conducted in nurseries in Putrajaya and Cyberjaya, Malaysia from January 2016 to January 2018. 98 respondents from Putrajaya were given the technology based intervention and 98 from Cyberjaya were the wait-listed control group. Respondents answered a validated, self-administered questionnaire at baseline, immediate post-intervention and 3 months post-intervention that were specifically targeted to examine their levels of knowledge on under five childhood intervention. **Results:** Data was analysed using Statistical Package for Social Science (SPSS) Version 23. The level of knowledge at baseline was 58.9% for the intervention group and 61.7% for the control group with no significant difference between both groups ($p = 0.651$). Immediate post intervention showed a significant difference ($p < 0.001$) between the intervention group (97.7%) and control group (54.9%). As for 3 months post-intervention the intervention group was 95.5% and the control was at 85.1% ($p < 0.001$). **Conclusion:** The level of knowledge improved after receiving the health intervention module and was effective in the increasing of knowledge among the respondents. However, there are still gaps in research that must be addressed in future studies to help further improve knowledge on under-five childhood immunization schedule.

EFFECTS OF CHRONIC ORGANIC ARSENIC EXPOSURE ON RATS KIDNEY - LIGHT MICROSCOPY AND ELECTRON MICROSCOPY STUDY

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Presenter: Wan Muhamad Salahudin Wan Salleh

Introduction: Monosodium methylarsonate (MSMA) is an organic arsenical pesticide widely used in agriculture. Humans are exposed to arsenic through drinking water and anthropogenic activities. Exposure to inorganic arsenic has been linked with multiple health problems. However, studies focusing on chronic organic arsenic exposure and its adverse effects on kidney were limited. The purpose of current study was to determine the effects of chronic organic arsenic exposure in rats kidney by light and electron microscopy. **Materials and Method:** Thirty-six male Sprague-Dawley rats were divided into six groups (n=6); three control and three treatment group respectively. All the control group was given distilled water via oral gavage. The treatment group was given oral gavage of MSMA at 42.10 mg/kg body weight (BW) which is equivalent 1/30 LD50 of MSMA . The control and treatment groups were sacrificed at two month, four month and six months interval. Both kidneys harvested for light microscopy and electron microscopy study. **Results:** Showed progressive changes. The changes initially focal and became diffused involving glomerular; such as glomerular hypercellularity, glomerular shrinkage and dilated Bowman's space. Meanwhile, in proximal tubules, showed diminished brush borders, detachment of nucleus and basement membrane thickening. Electron microscopy showed flattened cell bodies of podocytes, effacement and fusion of podocytes foot processes, thickening of glomerular basement membrane, and discontinuity of brush border. The control and two-months treated group appeared to be normal. **Conclusion:** Chronic organic arsenic (MSMA) exposure induced chronic kidney injury.

MECHANISMS OF COLORECTAL CANCER CELL GROWTH AND METASTASIS INHIBITION BY CARP-1 FUNCTIONAL MIMETIC-4

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Presenter: Abdelkader Elbadawy Ashour

Introduction: Colorectal cancer (CRC) constitutes one of the most aggressive malignancies worldwide and in Malaysia. Due to high recurrence rate and toxic side effects associated with radiation and chemotherapies, new agents are urgently needed. CARP-1 is a peri-nuclear phospho-protein which plays a dynamic role in regulating cell growth and apoptosis. CARP-1 functional mimetics (CFMs) are a class of compounds that stimulate CARP-1. CFM-4, a lead compound, was shown to suppress growth and metastasis of various cancers, other than CRC. We hypothesized that CFM-4 inhibits proliferation and metastasis in CRC. **Materials and method:** CFM-4 anti-cancer effects on CRC cells were investigated using MTT assay, Annexin V/Propidium iodide (PI) apoptosis assay, cell cycle analysis, quantitative real-time PCR (qRT-PCR) and Western blotting. Antimetastatic activities were assessed by migration, colony formation and invasion assays. **Results:** CFM-4 inhibited CRC cell proliferation and was much more potent than the classical anti-CRC 5-fluorouracil. These effects were shown to be mediated at least in part by stimulating apoptosis, as indicated in our Annexin V/PI assay results. Cell cycle analysis showed that CFM-4 induced G2/M phase arrest. Molecularly, qRT-PCR results revealed that CFM-4 promoted intrinsic apoptosis by upregulating expression of caspase-8 and -9, p53, PUMA and Noxa, and stimulated extrinsic apoptosis by enhancing expression of death receptors (DR4 and DR5). CFM-4 upregulated NF- κ B signaling inhibitor A20-binding inhibitor protein and the PI3K negative regulator PTEN. Western blot analysis results revealed that CFM-4 enhanced expression of CARP-1, caspase-8 and executioner caspase-3. Metastatic properties of the CRC cells were reduced by CFM-4 through blocking their capabilities to form colonies, migrate and invade through the matrix-coated membranes. **Conclusion:** The potent antitumor and anti-metastatic properties of CFM-4 against CRC are due to collective pro-apoptotic, anti-proliferative and anti-metastatic activities. Together our data warrants further investigations of CFM-4 as potential anti-tumor agent for CRC malignancy and metastasis.

MOLECULAR CHARACTERIZATION OF GYRA, PARC AND QEPA GENES IN QUINOLONE RESISTANT ESBL PRODUCING E.COLI ISOLATED FROM PATIENTS IN HTAA ,KUANTAN

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Presenter: Rahmatullah Sirat

Introduction: Quinolone resistance and extended spectrum beta lactamase production has increased in E.coli and considered a serious problem worldwide. It is worth to monitor resistance mechanism in E.coli to provide guidance for optimizing antimicrobial treatments, control and spread of resistance. The objective of this study was to molecularly characterize gyrA, parC genes and plasmid mediated qepA efflux pump gene, in QR-ESBL E. coli isolates obtained from patients in HTAA, Kuantan. The antibiotic susceptibility profile was also studied. **Materials and Method:** 32 QR-ESBL and six quinolone-susceptible E. coli isolates from September 30 November, 2018) included in the study. The isolates were reconfirmed with known phenotypic tests and antibiotic susceptibility test was performed. PCR and DNA sequencing were performed for the identification of mutations in quinolone resistance determining region. **Result:** Resistance to ampicillin, tetracycline, nalidixic acid was (100%) followed by cefotaxime (96.9%), ciprofloxacin (78.1%) trimethoprim sulfamethoxazole (75%), ceftazidime (56.3%), cefepime (43.8%) and gentamycin (25%). None of the isolates was resistant to piperacillin-tazobactam, amikacin, imipenem, meropenem, ertapenem, and colistin. PCR successfully amplified the gyrA and parC genes, however, qepA gene was not detected by PCR in the isolates. Majority of the isolates had point mutation in (QRDR) of GyrA at codons 83 and 87 and in ParC at codons 80 and 84. Two isolates had mutations outside of QRDR at codons 144 and 167 in ParC. Strong positive correlation was found between MIC levels of ciprofloxacin and the number of resistance mutations. Sequencing of 6 (QS-ESBL) E. coli revealed absence of resistance mutations. **Conclusion:** Quinolone resistance in the isolates was mainly due to mutations in gyrA, ParC genes. Acquisition of multidrug resistance genes through innate gene mutations and mobile genetic elements contribute to the emergence of (MDR). This study reinforces the importance of being vigilant in utilizing molecular techniques to monitor for emergence of resistance genes in different locations.

DETECTION OF MISMATCH REPAIR AND MICROSATELLITE INSTABILITY IN COLORECTAL CANCER PATIENTS

Muhammad Ishaque Faizee

International Islamic University of Malaysia

Presenter: Muhammad Ishaque Faizee

Introduction: Colorectal cancer is the third most common cancer worldwide. Microsatellite instability (MSI) contributes to be one of the main mechanisms in colorectal cancer. Individuals with MSI tumors have loss of expression of one or more Mismatch Repair proteins. MSI tumors have better survival rate than microsatellite stable (MSS) tumors, poor response to 5FU-based adjuvant chemotherapy and relatively successful immunotherapy in metastatic MSI tumors. Immunohistochemistry recognizes altered gene by recognizing loss of its protein product. Based on the presence or absence of Mismatch repair proteins, groups are classified into Mismatch repair proficient (MMR-p) and Mismatch repair deficient (MMR-d). **Aim:** To investigate the immunohistochemical profile of Mismatch repair proteins namely: hMLH1, hMSH2, hMSH6, and hPMS2 in surgically resected colorectal cancer specimens. **Materials and Method:** A total of 76 cases were selected from the Histopathology Department of HTAA to determine MMR protein expression status. Cases were either MMR-p or MMR-d. **Results:** Of the specimens which were properly immunostained, seventeen out of seventy-six cases (22.37%) showed loss of one or more MMR proteins expression and thus were MMR-d. MLH1, MSH2, MSH6 and PMS2 protein expression was detected as 85.53% (65/76), 81.6% (62/76), 88.16% (67/76), and 76.32% (58/76), respectively. **Conclusion:** Mismatch repair proteins profile should be done using immunohistochemistry in local laboratories on these selected cases before referring for the expensive molecular test.

PREVALENCE AND PREDICTORS OF PEDICULOSIS CAPITIS AMONG FEMALE PRIMARY SCHOOL CHILDREN IN KUANTAN, PAHANG

Nur Aqilah Yunos, Nor Faiza Mohd Tohit, Razman Mohd Rus

Kulliyyah of Medicine, International Islamic University Malaysia

Presenter: Nur Aqilah Yunos

Introduction: Pediculosis capitis has been a worldwide concern among the vulnerable population of primary school children due to the physical, economical and psychological consequences that it brings to both the children and their caretakers. It is observed that there were only limited studies conducted in Malaysia and no previous study was done in Kuantan despite the health concern that it bears. Since both local and worldwide studies show that Pediculosis capitis is more prevalent among female as compared to male school children, thus, this study aims to investigate the prevalence and predictors of Pediculosis capitis among female primary school children in Kuantan. **Materials and method:** An analytical cross-sectional study using cluster random sampling was carried out in Kuantan, Pahang, Malaysia. A self-administered validated questionnaire was used to collect the data among female primary school children from standard one to six. Hair and scalp examination was performed to identify presence of Pediculosis capitis infestation. Multivariate logistic regression was used to control for potential confounding and determine the predictors **Results:** 10 schools participated in the study with total number of 636 female students as respondents. The overall prevalence of Pediculosis capitis among female primary school children was 17.6% (n=112). Multivariate logistic regression analysis showed that Indian (OR = 5.634, 95% CI = 3.157-10.055), history of contact with infested person (OR = 2.822, 95% CI = 1.619-3.691) and those who had number of family members more than four (OR = 0.065, 95% CI = 0.008-0.550) were predictors for Pediculosis capitis **Conclusion:** The prevalence of Pediculosis capitis among female primary school children in Kuantan, Pahang is endemic (17.6%) and predictors are Indian, history of contact with infested person and having family members of more than 4. Hence, there is a need for health intervention to reduce the burden of Pediculosis capitis infestation.

Abstract ID: 196

Category: Non-clinical

ORAL

EVALUATION OF ANTI-BIOFILM ACTIVITY OF VIRGIN COCONUT OIL (AVCO) AGAINST STREPTOCOCCUS MUTANS ATCC 2157

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International Islamic University Malaysia

Presenter: Umami Aqilah Haron

Introduction: Dental caries has remained a major oral health problem worldwide. *Streptococcus mutans* is considered as a vital cariogenic agent in the oral cavity. It can synthesise soluble and insoluble glucans from sucrose by glucosyltransferases enzymes and develops stable biofilm on the tooth surface. In the previous study, the fatty acids profile of activated virgin coconut oil (AVCO) have been described, and it includes the excellent antimicrobial activity of the oil. The current study aims to evaluate the antibiofilm effect of AVCO against the *Streptococcus mutans* ATCC 2157 biofilm in vitro. **Materials and method:** The minimum biofilm inhibition concentration (MBIC) and the minimum biofilm eradication concentration (MBEC) for antibiofilm activity were determined by serial dilution method, and biofilm thickness on *S. mutans* was quantified by confocal laser scanning microscopy (CLSM). **Results:** At the concentration of 15.63 mg/ml of AVCO, it successfully inhibits the development of *S. mutans* ATCC 21575 biofilm and AVCO (62.52 mg/ml) eradicate biofilm that was formed by the bacteria. The z-stack images obtained from CLSM allows the construction of 3-D biofilm structure and a significant difference in the thickness of *S. mutans* ATCC 21575 biofilm pre and post-treatment with AVCO were observed. **Conclusion:** AVCO showed good potential as anticaries where it possesses the ability to inhibits and eradicate *S. mutans* ATCC 21575 biofilm. A future study to evaluates the interaction of individuals fatty acids present in AVCO against proteins that relate to biofilm formation of *S. mutans* can be performed utilising the molecular docking tools.

PREDICTING WORKPLACE FECAL OCCULT BLOOD TEST SCREENING UPTAKE USING GENERALIZED ESTIMATING EQUATIONS: A SENSITIVITY ANALYSES

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Presenter: Edre Mohammad Aidid

Introduction: Many studies have shown the effectiveness of educational modules on increasing colorectal cancer screening uptake at individual level but not adjusted for potential clustering effect such as workplace. Longitudinal studies on workplace colorectal cancer screening require a series of analysis under different conditions due to heterogeneity of workplace population. To achieve this, a sensitivity analysis based on Generalized Estimating Equations was conducted to determine the robustness of the predictive performance of health education module in increasing screening uptake. **Materials and Method:** A parallel, single blind, cluster randomized trial was conducted among 15 organizations in Kuantan, Pahang. Intervention group received a complex Health Education Module comprising of group education, practical session on fecal occult blood test usage and WhatsApp group follow-up, while control group received standard colorectal cancer screening brochure. Sensitivity analyses using intention to treat analysis with interaction term, compatibility term, behavioral intention term and key assumption term were performed. Data were imputed and analysed using generalized estimating equation with IBM SPSS version 23. Pooled adjusted odds ratio was calculated using random effect model with inverse variance weighting using RevMan version 3.5. **Results:** A total of 166 participants from 15 organizations were recruited in the study. Intervention and control group were comparable at baseline ($P > 0.05$). Health Education Module given in intervention group significantly increased the uptake of FOBT by nearly 5 times compared to control group in sensitivity analyses (pooled adjusted OR= 4.60, 95% CI= 2.65-7.99, $I^2 = 47\%$, $P < 0.001$). **Conclusions:** Health Education Module was robust in facilitating fecal occult blood test uptake in different predictive models. Health Education Module should be implemented as a workplace health promotion program to improve colorectal cancer screening for early detection and prompt treatment.

ORAL HEALTH RELATED QUALITY OF LIFE AMONG ADULT PATIENTS ATTENDING PERIODONTAL CLINIC IN KULIYAH OF DENTISTRY IIUM KUANTAN

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Introduction: There was lack of local study assessing the oral health related quality of life (OHRQOL) of patients with periodontal diseases. Hence, this study aims to assess the OHRQOL and its associated factors in adult patients who were diagnosed with gingivitis and periodontitis. **Material and method:** This was a cross sectional study conducted from May to December 2018 among 100 participants attended Periodontal Clinic, Kulliyah of Dentistry of International Islamic University of Malaysia (IIUM) using purposive sampling methods. Clinical parameters of participants were recorded by a single examiner then followed by a self-administered questionnaire using the validated short version of Oral Health Impact Profile(S-OHIP) (Malay) to assess the OHRQOL and its associated factors. The OHRQOL of participants were reported using mean and standard deviation. The factors associated with OHRQOL were determined using independent t-test and Spearman correlation test. **Results:** The mean score for S-OHIP was 14.73 ± 9.24 . Participants with periodontitis have higher S-OHIP score compared to those with gingivitis. There were significant association between OHRQOL and underlying diabetes mellitus, self-perceived oral health status and self-perceived oral health satisfaction with p value < 0.05. This shows that those with underlying diabetes mellitus have higher S-OHIP score indicated poorer OHRQOL. Meanwhile, those who perceived they have either good or very good oral hygiene and satisfied with their oral health have lower S-OHIP score indicated better OHRQOL. **Conclusion:** This study found that periodontal diseases have significant association with the OHRQOL. Therefore, reinforcement of oral health education by the dentists is crucial.

Non-communicable disease risk factors among Orang Asli in Tasik Chini, Pahang.

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Introduction: The health status of Orang Asli (OA) in Malaysia often lag behind other races with under-nutrition and communicable diseases remain significant. While there is an upward trend of non-communicable diseases (NCD) in this country due to modernisation of lifestyle, how this change affecting OA is a public health interest. **Materials and method:** A community based survey was conducted involving 225 OA from Jakun tribe aged above 18 years living in three villages around Tasik Chini, Pahang in 2017. **Results:** There were low prevalence of overweight and high blood pressure (18.8% and 14.2%). Random blood sugar 5.6 mmol/L was found in 23.4% but only five villagers (0.02%) were eventually diagnosed with diabetes mellitus. Majority (63.7%) of OA in the three villages smoke products of tobacco. **Conclusion:** The NCD risk among this fringe OA community is still insignificant as shown by low prevalence of overweight, high blood pressure, and diabetes even when compared to national figures for other Bumiputera in Malaysia (30%, 18.6%, and 10.7% respectively). However, the prevalence of smoking was strikingly higher than 2015 national figure for other Bumiputera (25.8%). This is contributed by high rate of smoking among women and established cultural practice. The findings highlighted the need for customization in smoking intervention for OA.

PREVALENCE OF PEDICULOSIS AND ITS PREDICTORS AMONG URBAN PRIMARY SCHOOL CHILDREN IN KUANTAN, PAHANG

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Introduction: Pediculosis capitis among primary school children is always known as the problem of the lower socio-economic class and rural communities . It carries significant consequences to the school children and caregivers. Limited studies have been conducted among the urban populations. Thus, this study aims to investigate the prevalence and predictors of Pediculosis capitis among Urban primary school children in Kuantan. **Materials and method:** An analytical cross-sectional study using cluster random sampling was carried out in Kuantan, Pahang, Malaysia. A self-administered validated questionnaire was issued to the participants with purpose to collect socio-demographic data related to age, gender and factors that associated with head lice infestations among primary school children from standard one to six. It was then followed by hair and scalp examination by a well-trained examiners to check the infestation status. The results were analyzed using the chi-squared test and logistic regression analysis. **Results:** A total of 1347 students from 5 schools were included in this study. Majority of them were males (53.6%), Malays (61.0%), household income between RM1000-RM2999 (32.1%). The overall prevalence was 9.1% (n=122). Multivariate analysis showed that predictors for pediculosis capitis were female gender (OR= 6.02, 95% CI= 2.97-12.21), Indian ethnicity (OR= 5.55 , 95% CI=3.26-9.45), sibling of more than 5 (OR= 2.72 , 95% CI=1.04-7.12) and contact with infested person (OR= 2.42 , 95% CI=1.58-3.71). **Conclusion:** The prevalence of Pediculosis capitis among urban primary school children in Kuantan, Pahang is endemic (9.1%) and predictors are female genders, Indian ethnicity, having siblings of more than 5 and contact with infested person. Hence, preventive measures are necessary to reduce the transmission of head lice among school children.

ISSUES ON PURIFICATION OF SURGICAL INSTRUMENTS PRACTICE FROM NAJASAH (NAJIS) OF A DOG

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Introduction: From Quran, dogs were mentioned several times in different perspectives. Surah al-Maidah , informs that a hunting dog's catch is lawful to be eaten. An authentic hadith about a prostitute who gave water to a dog and her sins were forgiven and was promised heaven. **Case report:** MrJ, 35 years old gentleman, sustained 3cm x 2cm over left leg following a dog bite. Patient underwent emergency operation and appropriate antibiotic given. After operation, the nurse had washed entire surgical instruments with taharah soap, washed it again six times with water and followed by enzymatic detergent before sending for autoclaving. **Discussion:** The status of dog impurities and how to clean it derived from hadith narrated by Abu Hurairah: 'Rasulullah PBUH said: *'Cleaning a utensil that has been licked by a dog is by washing it seven times and one of the washing cycle is mixed with soil'*. Majority Muslims in Malaysia follow Shafi'i sect, where dog's saliva and all its body are considered ritually mughallazah. Thus, if touched, they are required to cleanse the body part that came into contact with a specific Islamic ritual as mentioned. Up to date, there is no official guideline from KKM or JAKIM related to this. Surgical instruments used for the operation related to dog bite injury were not in direct contact with the dog. This practice imposes unnecessary steps for staffs. Apart from that, there are no study done on the effect of commercially manufactured soil-based soap to surgical instruments. The information regarding content also unclear. Surgical instruments are sensitive and expensive, thus improper handling can expedite damage to the instruments. **Conclusion:** KKM and JAKIM are recommended to produce SOP regarding this issue. Effort should be done to produce medical grade soil-based cleansing agent. Study should be done to evaluate the safety to surgical instruments.

COMPARISON OF IMMEDIATE EFFECTS ON USAGE OF DUAL POLYMER ARTIFICIAL TEARS ON CHANGES IN TEAR FILM CHARACTERISTICS

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Introduction: This study aimed to evaluate the short-term efficacy of artificial tears (AT) instillation on tear film quality and quantity utilising two dual polymer artificial tears; Systane Hydration preservative (SH) and non-preservative (SHUD) in 60 minutes observation period compared to normal saline. **Materials and methods:** One hundred eyes of 50 participants involved in this prospective, double-masked randomised study. Viscosity and pH of both AT were evaluated using Rheometer and digital pH-meter respectively prior to tear film characteristics assessment. Tear break-up time (TBUT) and tear meniscus height (TMH) were measured at baseline, 5, 15 and 60 minutes after instillation. Tear ferning pattern (TFP) were compared between baseline and 60 minutes after instillation. One-way analysis of variance (ANOVA) was used to evaluate the effects of both AT instillation. Independent T-test was employed to compare between the two groups (SH vs SHUD) for each specific time-interval. P-value of 0.05 was set as the level of significance. **Results:** The viscosity of SH and SHUD was 0.0267Pa.s and 0.03273Pa.s respectively with pH of 7.85 for SH and 7.74 for SHUD. Both AT showed significant increment in TBUT between baseline and 15 minutes (SH: 5.82 ± 1.063 , $p = 0.01$; SHUD: 6.02 ± 0.979 , $p < 0.001$), and 60 minutes (SH: 6.22 ± 0.616 , $p < 0.001$; SHUD: 6.34 ± 0.658 , $p < 0.001$). SHUD demonstrated significant increment in TMH at every measurement taken (0.1996 ± 0.02449 , $p < 0.001$ at 5min, 0.2038 ± 0.02276 , $p < 0.001$ at 15min and 0.2068 ± 0.02094 , $p < 0.001$ at 60min). Likewise, in SH group, significant increment in TMH at 15 minutes (0.1994 ± 0.02325 , $p < 0.001$) and 60 minutes (0.2012 ± 0.02379 , $p < 0.001$) were noted. With regards to TFP, both groups revealed improvement in TF grading (both, $p < 0.001$) at 60 minutes. No significant improvement was noted in control group. **Conclusion:** Both SH and SHUD improved tear film characteristics at 60 minutes following instillation. However, SHUD is more effective as faster improvements were noted in all intended parameters.

RELIABILITY MEASUREMENT OF CORNEAL WAVEFRONT ABERRATIONS USING CORNEAL VIDEOKERATOGRAPH ATLAS 9000

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Introduction: Accurate corneal wavefront aberration measurements are essential in determining patient's suitability, vision outcomes and patient satisfaction in laser refractive surgeries. This study aimed to evaluate the reliability measurement of higher-order aberration (HOA) using corneal videokeratograph Atlas 9000. **Materials and method:** 38 eyes of 19 participants were recruited in this study. Comprehensive eye examination was done to ensure all participants eligibility, and any conditions in which obstruct the central cornea were excluded. Corneal wavefront aberrations were measured based on Zernike polynomials. In assessing repeatability, three repetitive measurements in five minutes in a single session were taken by 2 experience examiners. For reproducibility measurement, similar approach was done with the time-interval between measurements was set at one week. Bland-Altman, limits of agreement (LoA) and intraclass correlation coefficients (ICCs) were used to evaluate the reliability measurement. **Results:** Bland-Altman and LoA findings revealed no significant differences for both repeatability and reproducibility measurement. For repeatability testing, the mean differences for vertical trefoil, oblique trefoil and spherical aberration were -0.096 ± 0.493 , 0.001 ± 0.048 , 0.008 ± 0.035 , 0.004 ± 0.029 , 0.010 ± 0.053 with LoA of 1.930, 0.188, 0.138, 0.114, and 0.208 respectively. Intraclass correlation coefficient (ICC) excellent reliability of 0.841 for all parameters. Likewise, reproducibility testing showed similar findings with the mean difference were -0.018 ± 0.091 , 0.016 ± 0.061 , -0.0004 ± 0.036 , -0.002 ± 0.042 , 0.003 ± 0.026 , with LoA of 0.356, 0.24, 0.141, 0.164, and 0.102 respectively. Intraclass correlation coefficient (ICC) shows excellent reliability of more than 0.9 for all parameters. LoA of less than 1.0 were observed in all measurements (except for repeatability of vertical trefoil) indicates high consistency of the measurements. **Conclusions:** Corneal videokeratograph Atlas 9000 provides excellent HOA measurement reliability.

THE EFFECT OF PROBIOTICS ON THE DEVELOPMENT OF ORAL CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: The prevalence of oral cancer has been reported annually along with high mortality rate. Probiotics have been suggested to possess anti-cancer properties, however the role of these microorganisms on oral cancer is remain unclear. The objective of the present study is to identify the mechanisms exerted by probiotics on oral carcinogenesis by using systematic review and meta analysis with the hypothesis that probiotics inhibit oral carcinogenesis. **Materials and method:** Comprehensive literature search was conducted on PubMed, Scopus and Web of Science electronic database from January 2019 until April 2019. Main keywords that were used are “probiotic” AND “oral cancer”. Articles that were published in English language were included in this review. Articles were selected independently by three authors and inspected independently by another researcher. The titles and abstracts of the studies were screened to identify studies that meet the inclusion criteria. Full text articles of the remaining studies were assessed to determine the availability to be included in the review. Meta-analysis was conducted by using RevMan 5 software, and the result was graphically plotted on the forest plot. This review was done according to the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA-P) 2015 guidelines. **Results:** After thorough screening of the full text articles, seven papers were eligible to be included in the systematic review. The included articles were mainly discussed on the association of probiotics and oral cancer. Two from the seven papers were selected to be analyse for quantitative synthesis (meta-analysis). The present study also showed that, *Lactobacillus salivarius* REN produces protective effect from developing neoplastic tongue lesions with odd ratio < 1. **Conclusion:** Probiotics were found to confer positive effect as an inhibitory agent against the oral carcinogenesis thus supported the hypothesis of the present study that probiotics can inhibit oral carcinogenesis.

GENOME COMPARISON OF ACTINOMYCES NAESLUNDII WITH KNOWN PROBIOTICS

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Introduction: Actinomyces naeslundii is an oral microbiome that has been suggested to involve in actinomycosis particularly in immunocompromised patients. However, studies have also shown that the bacterium can inhibit the colonisation of Candida albicans and cariogenic bacterium, Streptococcus mutans. Even though various studies have been conducted to characterise A. naeslundii, however, the role of the bacterium in the oral cavity either to induce pathogenicity or to improve oral health remain unclear. The objective of this study is to determine the role of A. naeslundii in the oral cavity using bioinformatic tools with the hypothesis that A. naeslundii possesses genome similarity to oral probiotics. **Materials and method:** The study was conducted by data mining of the genomic sequences of A. naeslundii NCTC10301 from GenBank. Following that, genomic comparison was performed with 25 species of well-known probiotics. MAUVE version 2.3.1 was used to find similarities between A. naeslundii with the known probiotics through identification of potential relevance probiotic properties in A. naeslundii. Phylogenetic tree was constructed using PHYLIP package to identify evolutionary relationship of A. naeslundii with the known probiotics. The 16s rRNA sequences of A. naeslundii and known probiotics were harvested from GenBank using BLAST. Finally, the functions of all A. naeslundii genes that shared similarity with known probiotics were identified using INTERPRO. **Result:** Genome comparison analysis of the present study showed that A. naeslundii genome exhibited high similarity to Bifidobacterium species such as B. animalis subsp. lactis, B. bifidum, B. longum and B. breve. In addition, phylogenetic tree analysis showed that Bacillus species, B. subtilis and B. cereus, appeared to clade together with A. naeslundii, with bootstrap value of 98%. **Conclusion:** A. naeslundii had high similarity with probiotic Bifidobacterium species thus supported the hypothesis of the present study that A. naeslundii possesses genome similarity to oral probiotic.

THE EFFECT OF ORAL PROBIOTIC STREPTOCOCCUS SALIVARIUS K12 ON CANDIDA ALBICANS BIOFILM FORMATION

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Introduction: Oral cancer is the sixth most common cancer worldwide with *Candida albicans* infection being one of the aetiological factors for the disease. Meanwhile, *Streptococcus salivarius* K12 is an oral probiotic that is beneficial to the oral cavity. The objective of the present study is to determine the effect of *S. salivarius* K12 on *C. albicans* biofilm-forming ability with the hypothesis that *S. salivarius* K12 inhibits biofilm formation of *C. albicans*. **Materials and method:** To assess the effect of *S. salivarius* K12 on *C. albicans* biofilm formation, *S. salivarius* K12, lab strain *C. albicans* MYA-4901 and clinical isolates from oral cancer, ALC2 and ALC3 were grown in both nutrient broth (NB) and RPMI. In a mono-species biofilm, 10^5 of *C. albicans* cells and 10^6 of *S. salivarius* K12 cells were grown separately in a 96-well plate. In contrast, both microorganisms were combined for polymicrobial biofilms with similar cell numbers as in mono-species. The biofilms were incubated for 72 hours at 37°C and the media were replenished every 24 hours. Finally, the crystal violet assay was conducted, and the optical density was measured at OD_{620nm}. **Results:** Polymicrobial biofilms of *C. albicans* (MYA-4901 and ALC3) with *S. salivarius* K12 when grown in NB, exhibited a decrease by $64.5 \pm 25.8\%$ and $83.7 \pm 5.4\%$, respectively when compared to the expected biofilms which were predominated by yeast form. Furthermore, polymicrobial biofilms of *C. albicans* (ALC2 and ALC3) with *S. salivarius* K12 showed a decrease by $62.5 \pm 25.6\%$ and $55.9 \pm 17.1\%$, respectively when compared to the expected biofilms when grown in RPMI that were predominated by hyphal form. **Conclusion:** *S. salivarius* K12 inhibited polymicrobial biofilms formation of *C. albicans* yeast and hyphal forms, thus supported the hypothesis that *S. salivarius* K12 inhibits biofilm formation of *C. albicans*.

ASSOCIATION BETWEEN SOCIAL-COGNITIVE FACTORS AND SEXUAL INTENTION TOWARDS PRE-MARITAL SEX ACTIVITY AMONG SCHOOL-GOING LATE ADOLESCENTS IN KUANTAN, PAHANG

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Introduction: The Theory of Planned Behavior (TPB) is determined by four main domains of social-cognitive factors; attitudes, social-norms, self-efficacy and sexual intention. This study aim to identify the socio-demographic and socio-cognitive factors associated with sexual intention towards premarital sex among school-going late adolescent. **Materials and method:** Cross-sectional study was conducted in nine government secondary schools in Kuantan district between January-July 2018. A total of 466 self-administered validated Youth Sexual Intention Questionnaires(YSI-Q) data are collected among unmarried students aged 18-19-year-old. Statistical analyses were done using IBM SPSS version 22.0. **Results:** Out of 466 participants, 67.4%, 68.2%, 64.4% are Malays, Females and Muslims. Simple logistic regression showed for every one unit increase in permissive attitude, social-norms and self-efficacy scores, there were 1.424, 1.303 and 1.215 times increase risk of having sexual intention, with p -value of 0.001 each and 95% CI of odds ratio(OR) 1.268-1.600, 1.191-1.425 and 1.066-1.386 respectively. Multivariate logistic regression showed that female had lower risk of having sexual intention(p =0.001, OR=0.163, CI=0.058-0.462). Non-Malays and ever-smoker students had higher risk compared to Malay and non-smoker towards having sexual intention with p =0.001 (OR=5.110,CI=1.881-13.886) and p =0.019 (OR=3.288, CI=1.218-8.875) respectively. For every unit increase in permissive attitude score, there was 1.236 times increase risk of having sexual intention with p=0.002 (95%CI, OR=1.084-1.410). **Conclusion:** The study showed the risk of having sexual intention was higher among males, non-Malay, ever-smoker students; and those with higher permissive attitude scores. Peer education intervention programs are necessity for school-going students to improve the permissive attitude in averting risk behavior that may lead to sexual intention towards pre-marital sex activity. The study should be expanded to adolescent who are no longer in school or in suburban areas.

IDENTIFICATION OF CELIAC TRUNK VARIATIONS USING MULTI-DETECTOR COMPUTED TOMOGRAPHIC ANGIOGRAPHY

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Introduction: Variation in celiac trunk is common and has importance in preoperative planning to reduce the risk of accidental vascular injuries during surgical and radiological intervention. Our aim was to measure the prevalence of coeliac trunk types and describe its different variations using MDCT angiography among patients in Hospital Tengku Ampuan Afzan (HTAA), Kuantan. **Materials and method:** A retrospective cross sectional study was conducted. Computed Tomographic Angiography (CTA) images were retrieved from July till December 2017. Images were reconstructed in 3D Volume Rendering (VR) format using workstation and reviewed for the normal and anatomical variations of the celiac trunk. The variations were classified using Uflacker's classification. The results were calculated using IBM SPSS statistic version 22. **Results:** A total of 140 cases were found, from which 23 were excluded. Mean age was 57.3 years and male/female percentage was 65.8/34.2. Anatomical variation of the CT was found in 54 (46.2%) cases. The most common variation was the origin of inferior phrenic artery (IPA) from the CT in 21 (17.9%) cases followed by celiac-colic trunk in 15 (12.8%) cases. However, 31 (26.5%) cases displayed variations not described in Uflacker's classification. They include celiaco-phrenic trunk, coexistence of IPA with other Uflacker's variations, Buhler arc, accessory hepatic artery from the CT and coexistence of celiac-colic trunk with gastro-splenic and hepato-splenic trunk in one case each. **Conclusion:** Accurate knowledge and identification of anatomical variations in CT is crucial before undergoing any surgical or invasive imaging procedure. This can help surgeons and interventional radiologists to prevent accidental vascular injuries and perform a safe procedure.

CLIPPERS THE BRAIN BITER: AN ADOLESCENT'S EXPERIENCE

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Introduction: Chronic Lymphocytic Inflammation with Pontine Perivascular Enhancement Responsive to Steroids is a rare inflammatory Central Nervous System disorder prominently affecting the brainstem. We present an adolescent's reflection on this condition complicated with Epstein-Barr virus induced CNS Lymphoma. **Case report:** A 16-year-old boy presented about 5 years ago with a balance problem. He was diagnosed by MRI after ongoing debate whether this is juvenile multiple sclerosis. He initially responded to methylprednisolone but developed acute deterioration requiring 8 cycles of Infliximab and Methylprednisolone. He then confirmed cerebellar lymphoma 2 years later hence commenced on chemotherapy and radiotherapy after posterior fossa decompression. He gradually loses his motor skills, left hemiparesis and spasticity. He needs tracheostomy and gastrostomy due to poor bulbar function. Now, he is fully dependent and requires chest physiotherapy and suctioning and cystostomy for urinary incontinence. He has multiple PICU admissions due to recurrent aspiration, acute cerebellar oedema and post posterior fossa decompression. He worries about family breakdown as mum is his sole carer and having regular nightmare. He changed school to meet his care demands and unsure how to adapt to new environment. Social experience makes him anxious due to lack of understanding about his condition. He is evidently having low self-esteem and confidence. **Discussion:** Children palliative care team has been involved since diagnosis to support him and family. He is understandably depressed and clinical psychologist input bear minimal impact. He is fully aware of the current situation and his wish to rap Eminem's songs like he used to do it before. **Conclusion:** Early aggressive treatment in CLIPPERS aim to prevent neuroaxonal loss. However, due to bellicose nature of the condition, the prognosis is relatively poor. Managing adolescent expectation after gradual deterioration is challenging especially, he is aware that achieving 'normality' is impossible as the treatment advancement still in limbo.

PSYCHOLOGICAL WELL-BEING AMONG NURSING STUDENTS

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Introduction: Nursing students are subjected to a variety of stressors during their study. Severe and prolonged stressors may affect the psychological well-being in the form of depression, anxiety and stress which may affect students' academic performance, physical health and quality of life. Therefore, this study aimed to determine the rate and severity of depression, anxiety and stress symptoms and also to assess the relationship between these symptoms with stressors faced by the students. **Materials and method:** A sample of 174 nursing students from International Islamic University Malaysia participated in this study. Depression Anxiety, Stress Scale (DASS-21) was used to assess the psychological well-being by determining the prevalence and severity of depression, anxiety and stress (DAS) symptoms. The sources of stressors were identified by giving the students a list of the most possible source of stressors which were chosen depending on previous studies, and then the severity of stressors and their relationship with these symptoms were assessed. **Results:** The overall prevalence of depression, anxiety and stress symptoms was 51.7%, 81.6% and 43.1% respectively but it was found that 13.2%, 44.3% and 10.3% of nursing students have clinically significant depression, anxiety and stress respectively. No significant differences between the gender and age of students in relation to DAS symptoms. Regarding the source of stressors, the top five stressors decided by the students were fear of failing, examination and grades, study pressure and obligations, fear of unemployment after graduation and academic overload. **Conclusion:** Depression, anxiety and stress symptoms are present among nursing students which require early intervention. Academic factors can be considered as sources of stressors that may precipitate emotional disturbances among the nursing students.

SMARTPHONE ADDICTION AND ITS RELATIONSHIP WITH PSYCHOLOGICAL HEALTH AMONG CLINICAL YEARS MEDICAL STUDENTS OF INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA (IIUM), KUANTAN

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Introduction: Smartphones has now become a common and almost essential tool in our daily living activities. Students are among those who uses smartphones regularly which could lead to addiction if overused. This study aims to measure the prevalence of smartphone addiction and its relationship with psychological health among clinical year medical students in International Islamic University Malaysia (IIUM), Kuantan. **Materials and method:** A total of 203 Medical students in their clinical years were recruited via quota sampling method. The students filled in a four part online-based questionnaire consisted of questions on sociodemographic characteristics, smartphone usage information, Smartphone addiction scale-short version (SAS-SV) and WHOQOL-BREF. Data was analysed using IBM SPSS Statistics. **Result:** The prevalence of smartphone addiction among clinical year Medical students in IIUM was 51%. Bivariate analysis showed that majority of students chose social networking as their primary purpose of smartphone usage and this is significantly associated with smartphone addiction (p-value: 0.037). Following multiple logistic regression analysis, students who had chosen games as their primary purpose of smartphone usage are 88% less likely to be related with smartphone addiction (p-value: 0.009, 95% CI: 0.025-0.595) compared to those who used it for academic performance tasks. Students who are not addicted to smartphones reported significantly better psychological quality of life compared to those who are addicted (p-value < 0.001). **Conclusion:** Half of IIUM's Medical students in clinical years have smartphone addiction and those with smartphone addiction was found to have poor psychological health. Immediate intervention such as creating awareness in the campus is important in curbing this problem.

ACQUIRED PLATELET DYSFUNCTION WITH EOSINOPHILIA (APDE): CONTEMPLATING PHYSICAL ABUSE

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Introduction: APDE is an acquired, transient bleeding disorder characterised by normal platelet counts with eosinophilia. It was previously known as 'nonthrombocytopenic purpura with eosinophilia'. We report a case of a 3-year-old boy with prolonged history of spontaneous unexplained bruising which was initially investigated by SCAN team for non-accidental injury (NAI). **Case report:** A 3-year-old boy attended clinic with a 4-month history of recurrent bruising. Parents were unsure of preceded illness, but he remained well with no history of trauma. He has unremarkable medical history and father is a thalassaemia carrier. Upon assessment in clinic, he was subsequently referred for suspected NAI and SCAN team led to a police report with a plan to review in 2-months. Parents later decided to bring the child for further medical assessments which revealed multiple bruises over both thighs, back of shoulder, loin and trunk with varying sizes and ages. They were all non-tender on palpation with no recognisable shapes or patterns. Blood results showed normal liver functions with slightly prolonged APTT 39.8 secs. He has normal platelet count with significant eosinophilia $2.2 \times 10^9/L$ and occasional reactive lymphocytes. Reflecting this result, plan for platelet functions and von Willebrand tests were made. However, due to costs, we decided to treat the child with anti-helminthic agent for possible parasitic infestation. He had 3 days course of albendazole and no further bruises appeared after 5 days of completing treatment. **Discussion:** The clinical presentation of APDE can mimic Idiopathic Thrombocytopenic Purpura in many ways yet normal platelet counts often leads to a delay in diagnosis. Reassuringly, the course of APDE is benign and no treatment is often required. **Conclusion:** Investigations however are costly, therefore treatment with anti-helminthic agent would be an alternative option in providing assurance to family and medical practitioners dealing with suspected cases.

GENERAL PARESIS IN A CHILD WITH UNUSUAL PRESENTATION

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Introduction: Acute onset quadriparesis can be a manifestation of a variety of neurological, metabolic or autoimmune conditions. Rarely, it could be one of many clinical presentations of juvenile dermatomyositis which belongs to the group of idiopathic inflammatory myopathies of childhood. We report the case of a 9-year old girl who presented with global myopathy over a two-month period. **Case report:** A 9-year-old girl referred with a 2 months history of generalised muscular pain and weakness. There were no significant history of preceded illness, trauma or excessive strenuous exercises. She had no other systemic complaints such as fever or skin rash. Past medical history was unremarkable except for recurrent tonsillitis. Physical examination revealed a child with normal alertness and behaviour. She has notable generalised swelling of all four limbs. Her neurological examination revealed normal tone however her power was definitely reduced in all four limbs (Graded 3/5). She demonstrated signs of proximal myopathy. Subsequent investigations revealed high Creatinine Kinase (CK) levels of 6470U/L, ESR 84mm/hr with deranged transaminases and positive serum mycoplasma and CMV IgM. Her MRI brain and spine along with lumbar puncture results were normal. She was referred to tertiary centre for further evaluation as her weakness progressed. An MRI muscle demonstrated marked inflammation in all four limbs including paravertebral muscles. Her muscle biopsy showed inflammatory myopathy leading to a diagnosis of juvenile dermatomyositis (JDM). She is now showing sustained clinical improvements following a course of immunoglobulin and corticosteroids therapy. **Discussion:** The diagnosis of JDM is generally considered in patients with rash-associated muscle weakness. Essentially, it involves assessment of muscle, skin, lung and cardiac involvement on top of baseline list of investigations that has been outline by Single Hub and Access point for pediatric Rheumatology in Europe (SHARE). This case reflects that JDM is possible despite non-existent of skin involvement.

THE SPINE CRASHER: A CHALLENGING DIAGNOSIS

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Introduction: Spinal tuberculosis in children is an established preventable disease in developing countries. Complications are devastating due to its aptitude to cause bone destruction, spinal deformity and paraplegia. **Case report:** We present an eight-month old girl with isolated gross motor regression and evolving spastic paraplegia. It highlights the challenge we encountered due to delay in garnering the pertinent investigation. She presented to clinic with history of legs weakness and loss of rolling after a period of prolonged febrile illness. Both parents are medical practitioners. Mother had history of SVT during pregnancy in spite on anti-arrhythmic treatments. Her father is a thalassaemia carrier. A thorough examination revealed gross motor delay and upper motor neuron signs. She had raised inflammatory markers, anaemia and thrombocytosis with persistent low-grade temperature. CT brain with contrast showed meningeal enhancement. Full septic work up revealed the CSF result reflecting partially treated meningitis. She was treated with third generation cephalosporin and acyclovir. Mother claimed exposure to TB patients hence Mantoux test was recommended which came positive. Her chest x-ray, sputum culture, CSF culture and NAA studies came non-conclusive for pulmonary tuberculosis. MRI for brain and spine showed features of tuberculous spondylo-discitis of T4-T5 vertebrae with associated subligamentous paravertebral spread and epidural extension causing spinal cord compression and T3-T6 hydro-syringomyelia. After multidisciplinary team discussion, patient started on intensive antituberculosis regimen with good initial response. **Discussion:** Clinically lower limbs power improved with good antigravity movement. Laboratory and radiological investigations have improved inflammatory markers and dropping trend thrombocytosis, and spinal gibbous stay stationary with improvement in plain radiology. She is under regular follow up awaiting serial MRI. **Conclusion:** The challenge in diagnosis of extra pulmonary tuberculosis in infants is getting them excluded early. High index of suspicion along with radiological investigation is vital to aid the diagnosis and establishment of treatment to expect a good outcome.

ACUTE MYOCARDITIS IN A YOUNG INFANT: WHEN TO INVESTIGATE CLINICAL SUSPICION

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Introduction: In Malaysia, a course of vaccination DTaP/IPV/Hib was introduced in 2008, replacing the 2006 DwPT-HBV/Hib+OPV vaccines. Severe systemic adverse reactions after diphtheria, tetanus and pertussis vaccination are uncommon. Cardiac complications are rarely reported and is most probably implicated to the pertussis component. We describe a rare case of acute myocarditis that developed 60 hours after DTaP/IPV/Hib vaccination. **Case report:** A 2-month old infant presented to emergency department after her first diphtheria, tetanus and pertussis vaccination due to severe respiratory distress and cyanosis. She had her BCG and two Hepatitis B vaccinations previously with no major side effects. Parents reported that she was feverish for 48 hours post vaccination with no other associated symptoms. Prior to presentation, she went floppy and was immediately brought to hospital. On arrival, she was tachypnoeic and cyanotic with hypoperfusion and hypotensive. She was also noted to have hepatomegaly. She was grunting and her level of consciousness deteriorated. She was immediately intubated and her first blood gas showed profound metabolic acidosis with pH 6.6, base excess -24mmol/L, lactate 14mmol/L and bicarbonate 4mmol/L. She required fluid boluses and inotrope infusion was commenced. She received antibiotics and sodium bicarbonate to correct her acidosis. Her echocardiography showed global hypokinesia, CK 3018 and positive Troponin. She was treated with immunoglobulin for myocarditis and on high frequency oscillation for 4 days before being extubated on day 11 of admission. All her viral serology and cultures came back negative. **Discussion:** Cardiac complications after diphtheria, tetanus and pertussis and other vaccinations are exceptionally uncommon. This patient developed sudden onset cardiogenic deterioration after an expected fever-like illness post vaccination. Given her viral screening and cultures were negative, this make acute myocarditis post vaccination a remote possibility. We concur that evaluation of cardiac state should be considered in recently vaccinated infants who manifest with cyanosis, hypoperfusion and drowsiness.

NEUROPSYCHIATRIC SYSTEMIC LUPUS ERYTHEMATOSUS (NPSLE) - MASQUERADE DIAGNOSIS : A CASE REPORT

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Introduction: Diagnostic challenge is seen in Systemic Lupus Erythematosus (SLE) due to insidious onset, unpredictable course, broad spectrum of clinical presentation that mimic other diseases manifestation and possibility not fulfilling the classification criteria at the earlier course of the disease. **Case report:** We highlighted a case of a man, lived with diagnosis of Schizophrenia for almost 15 years subsequently revealed him suffered from neuropsychiatric lupus as he fulfilled the SLE classification criteria. His initial presentation was altered sensorium treated as acute psychosis - the tip of an iceberg to the underlying disease. His multiple admissions to psychiatric ward were believed contributed by episode of lupus flare. Necessary investigation is important to exclude another medical condition before make a diagnosis of Schizophrenia using DSM-V criteria. The misdiagnosis has significantly impaired his social life and untreated disease had leads to morbidity and severe organ damage. This case emphasizes on the crucial aspect of assessing patient as a whole, follow-up the progression and re-evaluates patient's condition for a new hint. Even though there is no cure yet for SLE, correct and early diagnosis is able to guide for individualized treatment and thus helping in good disease control that warrant better outcome

PSORIASIS - A REPORT OF DISEASE MIMICRY

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Introduction: Psoriasis is a chronic, noncontagious, multifactorial inflammatory skin condition that has several subtypes. Therefore, prior to actual diagnosis, it may mimics other similar illnesses. In acute condition, it typically presents with erythroderma macules associated with pain and itchiness rather than hypopigmented and numbness lesions that supposedly occurs in post-treatment or post-acute phase, rather than as initial presentation. **Case report:** We report a case of 18-year-old girl, who presented with nonspecific localized hypopigmented rash over her forehead and scalp associated with numbness for three weeks duration. She had no itchiness or rashes elsewhere. She had no history of atopy or recent exposure to new cosmetics. She had no joint pain or hair loss. She had no recent contact with anyone with similar lesion. No significant similar history among family members. Clinically, there is reduced in both soft touch and pin-prick sensation over affected areas. We refer this case to dermatologist with possibility of leprosy in view of her reduced sensation over the lesion. To our surprise, the skin biopsy revealed supportive points towards psoriasis. She responds well towards coal tar and topical corticosteroids - the first line treatment of psoriasis. Her numbness has also resolved. This case highlights that psoriasis do presents with localized numbness in which its diagnosis should be take into consideration before confining the disease towards leprosy only.

THE USE OF ACTIVE MELIOIDOSIS DETECT TM IN EARLY DIAGNOSIS OF MELIOIDOSIS IN HOSPITAL TENGGU AMPUAN AFZAN AND HOSPITAL SULTANAH NURZAHIRAH

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Introduction: Melioidosis is endemic in Malaysia and an important cause of sepsis. Current gold standard for diagnosis is by culture method, but its long procedure will delay the treatment leading to hospital-related mortality. Thus, a good rapid test is needed to reduce its mortality burden. Recently, Active Melioidosis Detect (AMD) have been shown to be useful. **Objectives:** (1) To measure the sensitivity and specificity of AMD. (2) To study the sensitivity and specificity of early morning urine AMD compared to spot urine AMD. **Materials and method:** A prospective cross-sectional study of clinically suspected melioidosis patients in HTAA and HSNZ from April until December 2018. Blood and urine samples were tested with AMD. Test results were analysed for sensitivity, specificity, positive predictive value and negative predictive value. **Results:** A total of 89 patients were included in this study. The mean age is 52 years old, and 56.3% were male gender. 64% of patients have diabetes mellitus. 11 patients have positive blood culture for *Burkholderia pseudomallei*, 4 of them were tested positive for AMD. 3 of them presented with septic shock (3.4%), however none died. The sensitivity of the AMD was 36.4% ([95% CI 12.4 to 68.4]) and the specificity was 66.7% ([95% CI 46.0 to 82.8]) in all samples, with positive predictive value of 30.7% and negative predictive value of 72%. Blood samples have lower sensitivity of 9.1% ([95% CI 4.8 to 42.9]) with high specificity of 100% ([95% CI 84.5 to 100]). Urine spot samples have higher sensitivity compared to serum and morning urine, with 36.4% ([95% CI 12.4 to 68.4]) and specificity of 88.9% ([95% CI 69.7 to 97.1]). **Conclusion:** From this pilot study, this test requires further evaluation before incorporating as point of care assay.

B CELL LYMPHOMA OF THORACIC VERTEBRAE: A GREAT MIMICKER

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Introduction: Non Hodgkin lymphoma (NHL) is a malignant neoplasm affecting multiple systems in which extranodal NHL represents 10-20% of all NHL. **Case report:** This is a case of 45-year-old female with no known medical illness who presented with progressive numbness of bilateral lower limbs since March 2016 which subsequently progress to loss of motor power since November 2016. She initially was diagnosed as tuberculous (TB) spondylitis which then turned out to be B cell lymphoma of the thoracic vertebra. The diagnosis was confirmed on histopathological examination (HPE) after patient underwent laminectomy of T3-T7 vertebra bodies and excision biopsy with removal of the caseous material. Due to a lack of specific findings, the diagnosis of vertebral NHL is often missed or delayed. It warrants attention that NHL of thoracic vertebra may be misdiagnosed as TB spondylitis due to their similarities and sometimes the imaging features may simulate and overlap each other. The main treatment for vertebral NHL is chemotherapy, radiotherapy or both. Surgery maybe necessary if patient has story of neurological deficits. However patient was treated conservatively as she refused chemotherapy.

THE PREVALENCE OF DEPRESSION AMONG SECONDARY SCHOOL STUDENTS OF KUANTAN, PAHANG, MALAYSIA.

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Introduction: Depression is a curable debilitating illness that becomes a leading cause of morbidity and mortality globally. The prevalence of depression is under-recognized among adolescents. The study is conducted to determine the prevalence of depression among secondary school students of Kuantan Malaysia. **Materials and method:** We conduct a quantitative cross-sectional study. A population of 414 students from two urban schools, two rural schools, and one international school will participate in the study. The assessment tool used is the Malaysian version of Depression, Anxiety and Stress Scale 21 (DASS 21). Data will be analyzed using SPSS version 21 (SPSS IBM, New York, USA). Factors associated with depressive symptoms will be analyzed using multi Variate logistic regression analysis. **Results:** Prevalence of depression in Kuantan, Malaysia will be compared to the same international trends. **Conclusion:** Our study can determine and compare the prevalence of depression in different categories. Education and early interventions of depressed adolescents will add extra value of the project

INCREASING NEONATAL HEALTHCARE PRODUCTIVITY USING CLINICAL REASONING COACHING TOOLS

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Introduction: Productivity in medical field has inherent value in terms of improving our lives, which can expand our economies. Productivity in medicine has many aspects including improving clinical diagnostic skills, safety, and quality and quantity care. This study will assess whether early exposure to structured clinical reasoning coaching tools would improve their clinical decision making and productivity. Research question: Does clinical reasoning coaching tools Increase neonatal healthcare productivity? **Materials and method:** Medical practitioners recently joined neonatal units will participate over 2 years in an innovative series of clinical reasoning coaching sessions blended with virtual patients. Practitioners will be exposed to many teaching methods during the neonatal training that includes lectures, bedside teaching sessions and small group discussions beside website continuous contact for learning and chairing skills. Teaching series scope should cover resuscitating sick neonates, handling ventilators either conventional or high frequency, practicing common neonatal procedures, dealing with common neonatal scenarios, infection control policy and, effective communication skills The evaluation sessions will be introduced at the beginning of their training, during the course and at the end of the clerkship to assess their improving productivity, using diagnostic thinking inventory(DTI). Selection of the medical practitioners will be based on either on stratified random sampling or cohort control depending on the funding and logistic. All items will be analysed advanced statistical analysis methods. **Results:** The coaching tool may yield dramatic impact, allowing the innovators to be more productive. Suggesting widely utilize it for nurses, undergraduate and postgraduate medical Subspecialty. **Conclusion:** The research hypothesis is assuming that DTI scores and productivity will be higher after the coaching sessions as rated by the candidate's performance.

COMPARISON OF BLOOD LOSS USING INTRA-ARTICULAR INJECTION OF TRANEXAMIC ACID AFTER TOTAL KNEE REPLACEMENT

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Introduction: Total knee replacement (TKR) is one of the most common surgeries in orthopedic field. Up to 1/3 of the patients require blood transfusion post-operative. Allogenic transfusion has many side effects. Tranexamic acid (TXA) is a synthetic antifibrinolytic agent. We explore the usage of TXA in reducing blood loss and transfusion rate by injecting it into the knee joint during surgery. **Materials and method:** This is a retrospective study done in Hospital Tengku Ampuan Rahimah, Klang. Medical records of patient undergoing TKR between 1 January 2018 till 31 December 2018 were reviewed. Study sample was calculated as 90 patients and divided into 2 groups, one receiving TXA (study) and the other not receiving TXA (control). Post-operative hemoglobin levels and transfusion rate was recorded. **Results:** 45 patients in study group (17 male, 28 female) had a mean age of 65.4 years old and 45 patients in control group (24 male, 21 female) had a mean age of 64.2 years old. Mean post-operative hemoglobin drop in study group was 1.08 g/dL vs 1.86 g/dL in control group. Repeated measure ANOVA determined a p value of 0.001 which shows a significant correlation. Total transfusion rate in study group was 1 vs 9 in the control group. Using chi-square test, the p-value was 0.007 which again shows a statistically significant result. **Conclusion:** Intra-articular injection of TXA following TKR reduces blood loss and the need for blood transfusion without increasing any complication. This prevents many patients from undergoing a potentially hazardous blood transfusion. A routine usage of intra-articular TXA in patients undergoing TKR is recommended. However a large and well designed RCT is required to investigate the risk and benefits of TXA.

SEXUAL DYSFUNCTION AMONG POST PARTUM WOMEN AND ITS ASSOCIATED RISK FACTORS IN PRIMARY CARE CLINICS IN KUANTAN, PAHANG

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Introduction: Childbirth is one of the recognized risk factors for female sexual dysfunction (FSD). Despite high prevalence of female sexual dysfunction worldwide, there is very limited data concerning sexual dysfunction in postpartum women. The aim of our study is to determine the prevalence of FSD and its subtypes among postpartum women in primary health clinics in Kuantan, Pahang. **Materials and method:** This cross-sectional study was conducted at 9 primary health clinics located at urban and suburban areas in Kuantan, Pahang from February to June 2018. A validated Malay version of Female Sexual Function Index (MVFSFI) was used to assess FSD. A total of 372 women who have given livebirth within 6 weeks to 6 months were invited to participate in this study. **Results:** The prevalence of FSD among postpartum women in the primary care population was 35.5%. The most common reported sexual dysfunction was lubrication disorder (85.6%), followed by desire disorder (69.7%), pain disorder (62.9%), arousal disorder (11.0%), orgasmic disorder (9.7%) and satisfaction disorder (7.3%). Our results showed that level of education (aOR= 1.71 95% CI 1.04, 2.84) and use of contraception (aOR= 0.58 95% CI 0.36, 0.95) were associated with postpartum sexual dysfunction. **Conclusion:** The prevalence of FSD among postpartum women in primary care clinics in Kuantan, Pahang was high. Thus, it is important for the healthcare providers to address this issue during postpartum consultation at primary care level.

PREVALENCE OF DEPRESSION AMONG TRANSGENDER MALE TO FEMALE IN KUANTAN, PAHANG

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Introduction: Transgender is an umbrella term for persons whose gender identity, gender expression or behaviour does not conform to that typically associated with the sex to which they were assigned at birth. Transgender individuals are particularly vulnerable to mental health concerns and psychological distress. **Objective:** This study aims to assess the prevalence of depression and associated risk factors among transgender male to female in Kuantan, Pahang. **Material and method:** This was a cross-sectional study conducted among 96 transgender male to female in Kuantan, Pahang. A convenient type of sampling was used as a mean of data collection. A self-administered validated Malay version of Beck Depression Inventory(BDI) was used to screen for depression. **Result:** Majority of the respondent were Malay (82.3%), Muslim (99%), unmarried (93.8%) and monthly income <RM2300 (91.7%). Prevalence of depression among transgender male to female in Kuantan is 37.5%. There is no significant association between sociodemographic data of participants and depression. **Conclusion:** This study shows that almost one third of transgender male to female are at risk of depression. Therefore, screening for mental health assessment is recommended so that important measures can be taken to prevent depression among this high-risk group.

ADULT ONSET INTESTINAL MALROTATION: AN OFTEN NEGLECTED ENTITY

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Introduction: Intestinal malrotation is a consequent of deviation from the normal 270 degrees counter-clockwise rotation of the midgut during embryogenesis. It is a typically paediatric disease that manifest itself in the first month of life, usually as midgut volvulus. However adult manifestation of intestinal malrotation is not unheard of, albeit rare. **Case report:** his is a case report of 46 year old man with chronic abdominal pain who was subsequently diagnosed with intestinal malrotation. He was initially referred for barium enema following an incomplete colonoscopy. The suspicion of intestinal malrotation arose during barium enema, as the large bowel loops were all located on the left side. He subsequently had a plain CT following the barium enema, which confirmed the suspicion. In view of this finding, the patient was offered Ladd's procedure by the surgical team. The patient duly declined and opted for conservative watchful waiting instead.

Abstract ID: 172

Category: Clinical

POSTER

SPLENIC PSEUDOCYST BY AEROMONAS SALMONICIDA IN ADOLESCENT AN ISOLATED OCCURRENCE. A CASE REPORT.

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Introduction: *Aeromonas Salmonicida* is a rare type of the causative agent for splenic pseudocyst. We are reporting a case of splenic pseudocyst treated with deroofing of the cyst wall. An adolescent presented to us with a history of abdominal pain, fever, and loose stool for 3 days and was investigated. Computed tomography showed huge cystic mass arising from the inferior pole of the spleen. The adolescent underwent laparotomy, drainage of splenic cyst, and deroofing of cyst wall. The culture of *Aeromonas Salmonicida* was growth in the cyst content. To the best of our knowledge, this is the first case of such nature.

OUTCOME OF DIFFERENTIATED THYROID CARCINOMA AT TWO CENTRES IN KUANTAN, PAHANG

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Introduction: Differentiated thyroid carcinoma (DTC) is the commonest thyroid malignancy. Several studies had shown that the outcome of DTC depend on the patient's age at time of diagnosis, tumor characteristics and initial treatment. The aim of this study was to describe the outcome of DTC and its associated factors among patients diagnosed at Hospital Tengku Ampuan Afzan (HTAA) and International Islamic University Malaysia Medical Center (IIUMMC) Kuantan, Pahang. **Materials and method:** A retrospective cohort study was carried out among all DTC patients in HTAA and IIUMMC from July 2018 to September 2018. Case report form was used for data collection and it consists of four sections that include sociodemography, disease characteristics, treatment modalities and outcome. Descriptive statistics was used to describe the types of DTC, sociodemographic characteristics, disease characteristics, treatment modalities and the outcome, while chi-square test was used to explore the factors that were associated with the outcome. **Result:** In DTC, majority were diagnosed with papillary carcinoma (93.5%) than medullary carcinoma (6.5%). Three-quarter of the patients had residual disease at 6 months and the disease persistent in more than half of the patients at 12 months. At two-years follow-up, most of the patients (56.5%) were in disease-free state followed by persistent (26.1%) and residual disease (17.4%). However, there were no significant factors that affect the outcome of the patients. **Conclusion:** The two-year outcome post-treatment in this study revealed most of the patients were in remission.

ACHILLES TENDON RUPTURE : DOUBLE THE TROUBLE

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Introduction: Achilles tendon is the strongest tendon in the body . Achilles tendon rupture is a debilitating ankle injury especially among the athletes. We would like to highlight an unusual case of acute dual-level injuries of the Achilles tendon. **Case report:** A 30-year-old footballer presented with left ankle injury during a football tournament. Examination revealed tenderness at posterior left heel, palpable gap at Achilles tendon region and positive Thompson test. Radiological assessment showed dual-level injuries of the Achilles tendon - proximally was a rupture at musculotendinous junction and distally was an avulsion calcaneal fracture. We performed a mini-open approach Achilles tendon reconstruction for this patient. First, we reconstructed the distal avulsion calcaneal fracture using double row anchor sutures technique. Next, we repaired the proximal ruptured Achilles tendon using percutaneous Achilles reconstruction system (PARS) from Arthrex. Post-operatively, patient was put on functional rehabilitation protocol. At present, patient recovers well and regains back the Achilles tendon function. In conclusion, segmental Achilles tendon injury is rare and its surgical treatment can be challenging and must be well-planned.

ARTHROSCOPIC TREATMENT OF SNAPPING SCAPULA SYNDROME: A CASE REPORT

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Introduction: Snapping scapula syndrome is a condition with audible and palpable grating localized to the superomedial angle of the scapula associated with pain. The etiology is likely secondary to anomalous tissue between scapula and chest wall (e.g. bursitis, hooked superomedial angle scapula, Luschka tubercle, malunited rib/scapula fracture and osteochondroma). **Case report:** We present a case of a 17-year-old gentleman, with chronic pain over bilateral upper scapula associated with grating sound upon shoulders movement. Examination revealed significant audible crepitus on bilateral scapula without restriction of shoulders motion. MRI showed no abnormal finding. An attempt for conservative approach including physical therapy and steroid/local anaesthesia injection has been unsuccessful. We subsequently performed an arthroscopic bursectomy and superomedial angle scapula decompression on the right scapula. There were inflamed bursa with fibrotic tissue and prominent superomedial angle of scapula observed during the surgery. Post-operatively, the symptom over right scapula completely resolved with good patient satisfaction. At present, patient is scheduled for the similar surgery on the remaining symptomatic left scapula. In conclusion, arthroscopic scapulothoracic bursectomy with superomedial angle scapula decompression is a reliable treatment for snapping scapula syndrome with predictably high rates of pain relief, patient satisfaction as well as improvement in functional outcomes.

THE IMPACT OF PAEDIATRIC ANAESTHESIA INFORMATION LEAFLET IN REDUCING PARENTAL AND CHILD ANXIETY IN PAEDIATRIC SURGERY

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Introduction: The process of anaesthesia is one of the most important anxiety precipitating factors for both parent and child who is going for operation. Parental anxiety may adversely affect the children during perioperative period. Studies have shown that anxious parents would want to be provided with more information prior to their child's surgery. We examined the effects of additional paediatric information leaflet on parents and children in reducing pre-operation anxiety. **Materials and methods:** This was a randomized controlled trial involving 70 parent-child dyads in Hospital Raja Perempuan Zainab II (HRPZ II), Kelantan. Inclusion criteria were child aged 3 to 12 years old who underwent elective surgery. Parents were assigned to intervention and control groups. The former received the information leaflet and the later received standard preparation.. Parents were compared on their anxiety level using Depression Anxiety Stress Scales 21 (DASS-21) (anxiety domain) in the holding area. Children were compared on their emotional state level before induction of anaesthesia using Children's Emotional Manifestation Scale (CEMS). **Results:** The number of parents who were anxious was similar in both groups (11 (31%) vs. 7 (21%), $p = .34$). There were no differences in the children's anxiety state between interventional and control groups as depicted by the CEMS score (7.5 (6.0-9.75) vs. 8.0 (7.0-15.0), $p = .12$). **Conclusion:** Parent-child dyads in HRPZ II did not show improvement in the anxiety level with the inclusion of paediatric anaesthesia information leaflet. Further study is needed with larger number of participants involving other selected tertiary hospitals in Malaysia.

Abstract ID: 182

Category: Clinical

POSTER

BILIARY STENT MIGRATION CAUSING SIMULTANEOUS DUODENAL AND DISTAL ILEAL PERFORATION: A RARE COMPLICATION.

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Introduction: Endoscopic retrograde cholangiogram pancreatography (ERCP) and biliary stenting is a minimally invasive procedure widely utilised to relieve biliary obstruction. Although not common, it is related with several possible complications. Stent migration causing duodenal perforation is 1 of its rare complications as being described in several previous case reports. However up to date there is no case report on migrated stent with subsequent duodenal and distal ileal perforation as will be discussed here. Importance of radiological examinations and its related findings in diagnosing this very rare complication will be described in this article.

ISOLATED AXILLARY NERVE INJURY FOLLOWING A BLUNT TRAUMA

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Introduction: Axillary nerve supplies deltoid muscle long head of triceps and teres minor in the arm and supply regimental patch area over the inferior part of shoulder. Anterior dislocation of shoulder, iatrogenic injury to the nerve during shoulder injection and brachial plexus injury can cause axillary nerve injury. **Case report:** We report a rare case of isolated axillary nerve injury in a 20 year old lady. She was admitted following a low speed fall from motorcycle and sustain abrasion wound over the right side of the face and shoulder. There was no direct or tractional injury to the shoulder during the incidence. During admission she complaint of progressive right shoulder weakness with MRC power of 2 and sensory loss over regimental patch area. On examination there was no tenderness to the shoulder area or neck and she was unable to abduct her right shoulder with full passive range of motion. Patient was subjected to nerve conduction study four months later and revealed slower sensory conduction and deltoid muscle amplitude decreased compared the left side . At 7 months post trauma she is recovering with deltoid power of 4 after multiple physiotherapy session. Isolated axillary nerve injury following a blunt trauma is a rare condition with multiple reported cases showed poor recovery .One should wait for regeneration of nerves to complete before offering any surgical intervention to the patient. As in our case, patient showed remarkable improvement after seven months with conservative management thus avoiding the complication of surgery.

COLON CANCER IN PATIENTS YOUNGER THAN AGE 50 IN KUANTAN: CASE SERIES

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Introduction: Colorectal cancer (CRC) is the second most common cancer in Malaysia. In general, patients aged > 65 years comprise the majority of the population with CRC. However, recent reports indicate its increasing incidence in younger populations. We describe 4 cases of early onset colorectal cancer in Kuantan. **Materials and method:** This is a descriptive study of a small series of patients. Data between 2018 and 2019 were obtained from medical charts. **Results:** We diagnosed four patients under the age of 50 with colon cancer (75% male), the median age was 36 (23-47), with no comorbidities. None of the patient had family history of colorectal cancer. The majority of our patients presented with complication of tumour (2 perforation, 1 obstruction) required emergency surgeries. Only one patient presented with with rectal bleeding and was found to have tumor of the rectosigmoid junction. Two patients had tumor at descending colon and one at the splenic flexure. From this case series, we found there were one patient for every stage of colorectal cancer. Carcinoembryonic (CEA) levels were elevated at baseline in only two patients. **Conclusion:** Incidence of colon cancer rises among young patients in Kuantan. Further studies are needed to clarify the clinical and biological characteristics of colon cancer, improve its treatment strategies, and promote better outcomes in young patients.

UPPER TRACT TRANSITIONAL CARCINOMA: AN ARRAY OF IMAGING CONUNDRUM

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Case report: We report a 38-year-old gentleman who presented with painless haematuria for 6-months duration. Contrast-enhanced CT renal revealed a large, calcified intrapelvic mass with calyceal extension confined within the right kidney with moderate pelvicalyceal dilatation but no evidence of synchronous lesion elsewhere. Histopathological analysis showed high grade urothelial carcinoma of the renal pelvis with invasion of the renal parenchyma. Upper tract urothelial carcinoma (UTUC) which was once thought similar to urothelial carcinoma of the bladder (UCB), is increasingly being recognized as a different entity. However, heterogenous array of imaging manifestations of UTUC is also increasingly being encountered and pose diagnostic challenges though UTUC is not as prevalent as UCB which is easier to diagnose. Despite distinctive features against renal cell carcinoma (RCC), UTUC may mimic numerous other renal pathology especially the benign ones hence imaging plays a pivotal role to ascertain the diagnosis. This disease is usually treated with radical nephroureterectomy with superadded neoadjuvant chemotherapy for high risk cases. Less invasive endoscopic resection is also offered in certain cases but stringent surveillance of the whole urinary tract as well as post-operative follow-up are mandatory.

SYNCHRONOUS GASTROINTESTINAL STROMAL TUMOR (GIST) OF THE RECTUM AND JEJUNUM: A RARE CASE REPORT

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Introduction: GIST are rare tumor and uncommon to occur in rectum where it accounts about 5% of all GIST [1] and rarer to develop simultaneously. Several surgical options are available, large tumours with aggressive features have been commonly treated with abdominoperineal resection. This is the first reported case of synchronous GIST of the rectum and jejunum. **Case report:** 66 year old man who presented with rectal bleeding and altered bowel habit. Colonoscopy revealed submucosal tumor on anterior wall of the rectum. Computerized Tomography (CT) of abdomen and Magnetic Resonance Imaging (MRI) of pelvis demonstrated a mass of approximately 88 AP x 88 W x 89mm CC in size on the anterior wall of the rectum at a distance of 2.3 cm from the anal verge, without any invasion to the prostate or evidence of metastasis, Histological examination of the biopsy sample via the rectum showed spindle cell neoplasm suggestive of GIST. An abdominoperineal resection was performed with wedge resection of small bowel lesion who discovered intraoperatively as yellow mass measuring 1.5 cm in its diameter involving the serosa. Histopathological examination of the sample confirmed the diagnosis of GIST of both rectal and small bowel specimen with positive CD117 on immunohistochemical assessment. Patient recovered post operatively. **Discussion:** Incidence of GIST as overall are about 1/100000 per year and commonly found in stomach (60-70%), small intestine (20-25%) but rarely occur in rectum (5%). Because of the low incidence of rectal GISTs, cases of simultaneous development of a GIST in rectum and jejunum are scarce. Simple coincidence could be the reasonable explanation in our case. For rectal GIST, surgical procedures may be considered, including abdomino-perineal resection. **Conclusion:** Simultaneous GISTs in the rectum and jejunum is extremely rare. Resection is the treatment of choice, suspicious lesions discovered during operation should be biopsied or removed as GIST could appear synchronously.

THE VALIDATION OF QUESTIONNAIRE ON END OF LIFE CARE KNOWLEDGE, PERCEPTIONS AND PREFERENCES AMONG END STAGE RENAL DISEASE PATIENTS ON HAEMODIALYSIS IN KUANTAN

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Introduction: There has been an increasing awareness on the end of life care for end stage renal disease (ESRD) patients and patients' factors have been identified as pivotal elements in directing its implementation. Questionnaire has been a useful tool by researchers to assess on patients' knowledge, perceptions and preferences on end of life care. However, up to date, there is no validated questionnaire developed in Malaysia for such purposes. Thus, this study aims to develop and validate questionnaires on end of life care knowledge, perceptions and preferences among ESRD patients in Kuantan. **Materials and method:** A cross-sectional study among haemodialysis (HD) patients aged 18 and above from 14 out-patient HD centres was performed. This study was divided into 4 phases i) developing the questionnaire involving related specialists and pre testing, ii) improving and editing the questionnaire and redistribution to 50 respondents for the pilot study, iii) factor analysis and iv) internal consistency reliability testing of the questionnaire. **Results:** The result of Factor analysis with Varimax rotation performed identified 3 domains for the 41 items, with 10 to 20 items in each domain. All the 41 analyzed items had a good factor loading of more than 0.4 with the lowest value of 0.421 and were nicely fit into 3 respective domains; knowledge, perception and preference. Internal consistency reliability analysis performed indicates that Cronbach's α was between 0.5 to 0.7 for all factors which were higher than the level set for this study which is 0.5. **Conclusion:** The questionnaire is successfully validated and considered as a useful tool to be used. Nonetheless, improvement will still be necessary from time to time to ensure its relevance especially if it is to be used by different populations or countries of different background than Malaysia.

MINIMALLY INVASIVE SURGERY IN TREATMENT OF TRAUMATIC THORACOLUMBAR SPINAL INJURIES: A 2-YEAR EXPERIENCE

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Introduction: Majority of the traumatic spine injuries are located at the thoracolumbar region. They can be compression fractures, burst fractures, flexion-extension injuries (Chance fractures), dislocations, or any of the combination. Surgery is indicated for patients with thoracolumbar injury classification scoring (TLICS) of 4 or more. Traditionally, surgical approaches for thoracolumbar spinal injuries involve open surgery, instrumentation with/without decompression. In our previous study, open surgery for traumatic thoracolumbar injuries and history of blood transfusion have been found to be associated with higher risk of deep surgical site infection requiring surgical debridement. With the advent of modern implants and equipments, minimally invasive surgery (MIS) has been made possible for spine surgeries. We report our two-year experience in utilizing MIS to treat traumatic thoracolumbar spinal injuries. **Materials and method:** Patients who underwent spinal surgeries at Hospital Tengku Ampuan Afzan, Kuantan from July 2017 to July 2019 were screened for suitability to be included in this study. Only patients who underwent spinal minimally invasive surgeries have been included in this study. Patients who underwent open spinal surgeries were excluded. **Results:** A total of 8 patients were included in this study. There were 3 burst fractures and 5 chance fractures. All patients underwent a minimum of 4-level posterior spinal instrumented fusion with MIS techniques and 2 patients had laminectomy at the injured level for decompression. All but one patient did not require blood transfusion and there was no incidence of surgical site infection among these patients. **Conclusion:** Minimally invasive surgery (MIS) is a better option compared to open surgery in treating traumatic thoracolumbar spinal injuries. By minimizing the surgical incision, we are able to reduce blood loss and avoid deep surgical site infection.

Metachronous Osteosarcoma: A Rare Case Report

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Introduction: Osteosarcoma is a common primary sarcoma of the bone, constituting approximately 0.07% of all neoplasms. Rarely, some patients with osteosarcoma have multiple skeletal sites involvement, either synchronous or metachronous. Metachronous osteosarcoma is a rare form of osteosarcoma in which osteosarcomatous lesions occur distant from the primary osteosarcoma site more than 6 months after the initial treatment without pulmonary manifestation. **Case Report:** We present a case of metachronous osteosarcoma in a 16-year-old female who was initially treated for non-metastatic osteosarcoma of the left distal femur with neoadjuvant chemotherapy, wide excision, endoprosthesis and followed by adjuvant chemotherapy. Serial follow-up did not show evidence of distant metastasis. Nevertheless, she presented 3 years later with a progressively enlarging left proximal forearm mass and re-staging revealed an osteosarcoma of the same histological type. She underwent combination of chemo- and radio- therapy but subsequently succumbed to the disease due to lung metastasis. **Conclusion:** With the advent of diagnostic and therapeutic techniques, the 5-year survival rate of non-metastatic osteosarcoma ranges around 60-70%. Albeit it is rare, a metachronous osteosarcoma can present difficult challenges to the treating physician.

MRI EVALUATION OF ANTEROLATERAL LIGAMENT OF THE KNEE: A CROSS-SECTIONAL STUDY IN MALAYSIA

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Introduction: Anterolateral ligament (ALL) of the knee has been demonstrated to be an important secondary restrainer in providing rotational stability to the knee. ALL stabilizes the internal tibial rotation with increasing knee flexion. ALL injuries with concomitant anterior cruciate ligament (ACL) injuries have a higher grade of pivot shift. Magnetic resonant (MR) studies on ALL have been performed but there is no such data among the Malaysian population. We aim to investigate the reproducibility of ALL identification on 1.5T MRI and the association with other ligamentous injuries. **Materials and method:** Magnetic resonant imaging of the knees with suspected ligamentous injuries from 1st January 2017 to 30th June 2017 were reviewed for suitability of this study. Post-operative MRI and MRI of patients with suspected tumour at the knee region were excluded. 1.5T MRI (Siemens Medical Solution) was used for assessment of all the knees. All MRIs were double read and approved by a consultant radiologist. **Results:** A total of 36 knee MR images were obtained from 31 patients during the study period. 5 patients were excluded (3 for suspected tumour and 2 for post-operative). Mean age of the patients was 29.44. All three components of ALL were identified in 20 MRIs (55.6%): femoral component (75%); meniscal (69.4%) and tibial (58.3%). There were 11 knees identified to have ALL injury, which was associated with ACL injury. **Discussion:** ALLs are best visualized on coronal views (PD, PD FS and T2) with lateral inferior genicular artery as a guide to locate the bifurcation of meniscal and tibial components. Delineation of ALLs from other surrounding structures such as lateral collateral ligaments, iliotibial band and popliteus tendon was done in both coronal and axial views. **Conclusion:** ALLs of the knees are delineated in more than half of the MR images. There is an association between ALL injuries and ACL injuries.

TRANSFORAMINAL ENDOSCOPIC DISCECTOMY: A TARGETED SPINAL SURGERY

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Introduction: Open discectomy has been the gold standard of care for cases of Prolapsed intervertebral Disc. Tissue dissection is unavoidable in order to access the pathologic disc material. From skin incision, subcutaneous fat tissue, paraspinal muscles, ligamentum flavum, epidural fat, dura and nerve roots has to be encounter before reaching the disc material. With the in out transforaminal endoscopic technique only skin and subcutaneous tissue need to be bridge before reaching the disc material. This technique is also known as a targeted surgical technique. Minimal tissue injury is caused via this technique. **Case report:** We present 3 case series of prolapsed intervertebral disc which was treated with transforaminal endoscopic technique. Case 1: 49 year old presented with one year history of low back pain and left lower limb sciatica. Straight leg raising sign was positive. MRI showed 2 level disc bulge at L4L5, L5S1 with annular tear at L5S1. Case 2: 26 year old lady presented with 6 months history of low back pain and left lower limb sciatica. Straight leg raising sign was positive. MRI showed extruded disc at L4L5. Case 3: 28 year old lady presented with 8 months history of low back pain and left lower limb sciatica. Straight leg raising sign was positive. MRI showed extruded disc at L5S1 with annular tear. **Results:** All three patients underwent transformational discectomy. Case 1 and 2 were done under monitored anaesthesia control (MAC) and case 3 was done under epidural. All three patients had satisfactory pain relief with complete resolve of straight leg raising (SLR) test. The 1st patient had longer recovery period possibly because of its chronicity of symptoms. **Conclusion:** Early recovery is expected hence early return to work can be accomplish. In the future this might be the gold standard of treating prolapsed intervertebral disc.

PERSISTENT LEFT SIDED SUPERIOR VENA CAVA: THE PERPLEXITY OF PICC

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Introduction: Persistent left superior vena cava is a rare anatomic anomaly, found only about 0.3-0.5% of the general population. On top of that, about 12% of patient has associated congenital cardiac anomaly. Typically, this anomaly is found as an incidental finding as patient is generally asymptomatic. However, it is important to recognize such anomaly in order to avoid complication during placement of central venous catheter. **Case report:** We herein report a case of an incidental finding of persistent left sided superior vena cava (SVC) upon insertion of peripherally inserted central catheter (PICC). Initial difficulty and perplexity during insertion of PICC with the tip of catheter keep pointing towards the left side of the heart leads us to proceed with central venogram that confirmed such anomaly.

A RARE CASE OF POLYPOIDAL CYSTITIS IN ADULT WITHOUT HISTORY OF PROLONG CATHETERIZATION

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Introduction: Polypoidal cystitis is a rare lesion of the bladder mucosa characterized by benign exophytic inflammation, epithelial proliferation and development of polypoid mass without evidence of neoplasm histologically. Polypoid cystitis is rarely seen in patient without prolonged use of indwelling catheter. Other cases of polypoidal cystitis are associated with post-radiation, post chemotherapy bladder reaction, colovesicular fistula are extremely rare. **Case Report:** 66 year old Malay male, underlying hypertension and Benign Prostatic Hyperplasia (BPH) on treatment, complaining of difficulty in urination, straining on voiding for the past 6 months and on and off hematuria for the past 2 months. He denied any history of CBD insertion or prolonged catheterization. Blood investigations are normal. X-Ray KUB showed unremarkable. Ultrasound KUB revealed Prostatomegaly, no evidence of renal or ureteric calculi or evidence of obstructive uropathy, no obvious bladder mass. Cystoscopy Examination (CE) showed enlarged occlusive prostate and noted bladder growth at base of bladder. The growth is malignant looking however no active bleeding seen. No bladder stone seen. Patient subsequently underwent Trans-Urethral Resection of Bladder Tumor (TURBT) and Trans-Urethral Resection of Prostate (TURP) in same setting. Intra-operatively was uneventful. Histopathological Examination (HPE) from TURBT specimens showed in favour of Polypoidal Cystitis and TURP revealed Nodular Hyperplasia. **Discussion:** Polypoidal Cystitis is a form of chronic cystitis characterized by exophytic inflammatory lesion of bladder mucosa. The polypoidal mass is mimicking neoplasm. At the initial evaluation, it may be confused with transitional cell carcinoma of the urinary bladder, especially in patient without an indwelling catheter. The most common aetiology of this condition is long-standing indwelling catheterization. There is also reported that any factors that irritate the bladder mucosa may result in Polypoidal Cystitis. In our patient, there was no history of such other causes, including prolonged catheterization, fistula, urinary calculi or radiation therapy.

A CASE OF PERSISTENT RETROPERITONEAL ABSCESS WITH LARGE RIGHT PERINEPHRIC COLLECTION

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Introduction: Retroperitoneal abscess is a rare condition which is difficult to diagnose and treat because of its insidious onset and nonspecific clinical manifestations. **Case Report:** 55 years old male, underlying DM, Hypertension, Gouty arthritis. Referred to us for right Hypochondriac pain with persistent fever for past 2 days duration. Abdominal examination showed soft, tender over right side of abdomen, localized guarding. An abdominal CT scan showed right pyonephrosis complicated by a large right perirenal collection. Right Nephrostomy was performed. 1 week later, patient had fever and persistent right sided abdominal pain with increasing septic parameters. CT abdomen performed and showed Right pyonephrosis complicated by a large right perinephric abscess extending into the pelvic and inguinal region. Right Perinephric drainage performed. Patient developed worsening sepsis, repeated CT abdomen revealed residual multiloculated right perinephric collection. Open retroperitoneal drainage was performed, noted retroperitoneal abscess, caecum right kidney and peritoneal, slough, unhealthy tissue and necrotic debris over right psoas muscles. 1 week after surgery, patient still not improving, repeated CT Abdomen showed features of D2 ischemia with focal retroperitoneal perforation causing large and recurrent right perinephric inflammation with increasing intraabdominal free fluid and enlarging right perinephric collection. Laparotomy done showed 1L clear ascites intraperitoneally, no pus collection seen. Cocoon inflammatory mass involving hepatic flexure and duodenum to the retroperitoneum, hepatic flexure appeared normal with no intraluminal mass. Right retroperitoneal exploration done, noted adhesion between hepatic flexure to Gerota's fascia, pus ~30ml at upper part of Gerota's fascia. Repeated CT abdomen showed slightly larger right paracolic gutter collection with similar right perinephric collection. **Discussion:** Retroperitoneal abscess is very rare. Retroperitoneal abscess may result from a variety of causes, such as pyelonephritis, pancreatitis, retroperitoneal appendicitis, diverticulitis, peptic ulcer disease, perforated cancer, inflammatory bowel disease, spinal infection, trauma, and post instrumentation. For our patient, the exact aetiology of retroperitoneal collection and peri renal collection are still unknown.

SURGICAL MANAGEMENT OF PAEDIATRIC NEGLECTED HUMERAL SUPRACONDYLAR FRACTURE: A SERIES OF 3 CASES IN 3 YEARS

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Introduction: Supracondylar fracture of the humerus is common among paediatric population. In our country, it is not uncommon for patients to present late to the hospital after an injury. Devnani reported a case series of 28 children who sustained supracondylar humerus fracture and presented late (mean 5.6 days) to the hospital. We report our experience in managing 3 patients who presented late (range 15 days to 8 months) with neglected supracondylar humerus fracture in 3 years. **Case report:** Case 1: A right hand-dominant 5-year-old boy sustained a fall 8 months prior to presentation to the hospital. He was treated with traditional methods immediately after the injury. He presented with malunion of left humeral supracondylar fracture with varus deformity and limited left elbow range of movements. An open reduction (lateral approach) and corrective osteotomy were performed and 2 lateral K-wires were inserted. Case 2: A 10-year-old boy with right hand dominance sustained a closed left supracondylar humerus fracture Gartland 3 after a fall. His parents initially refused any surgical intervention. However, they finally agreed for surgery on day 15 post-trauma. An open reduction (posterior approach) and callus removal were done and 2 crossed K-wires were inserted. Case 3: A right hand-dominant 5-year-old girl had history of fall 1 month prior to presentation to the hospital. She was treated with traditional methods initially. She presented with malunion of the left supracondylar humerus fracture with limited range of motion of her left elbow. An open reduction (posterior approach) and corrective osteotomy were performed and 2 crossed K-wires were inserted. **Discussion:** Two patients underwent open reduction via the posterior approach and 1 patient via the lateral approach. Only one patient required callus removal while 2 patients required osteoclasis. All patients recovered without complication and there was improved range of movement of the elbows. **Conclusion:** Surgical intervention is the treatment of choice in managing neglected supracondylar humerus fracture.

AEROMONAS SALMONICIDA INFECTION IN A MASSIVE SPLENIC CYST: A RARE CAUSE OF AN ACUTE ABDOMEN

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Introduction: Cysts of the spleen are most frequently primary or secondary. If it contained an epithelial lining it is referred to as epithelial or epidermoid cysts. Other common cause is post-traumatic pseudocysts. Non parasitic cause of infective splenic cyst are rare especially those caused by bacterial infection. They may present as symptoms related to their size with gastric compression or pain, an abdominal mass, rupture, or infection with abscess. **Case report:** We present a case of massive splenic cyst in a 13 year old boy presenting with acute abdominal pain, this was successfully treated with deroofing of the cyst wall while preserving the function of the spleen. Cultures subsequently grew *Aeromonas Salmonicida*. The patient was discharged home well. Issues of diagnosis and dilemma in treatment while preserving the spleen in an adolescent will be discussed.

SYNCHRONOUS ESOPHAGEAL AND RENAL MALIGNANCIES WITH UNEXPECTED SITE OF METASTASIS. A CASE REPORT

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Introduction: Esophageal cancer is the fifth most common cancer in Asia. Synchronous malignancies with an esophageal malignancies is not uncommon however synchronous esophageal malignancy and renal cell carcinoma is rare. **Case Report:** A 70 years old non smoker man with comorbid of hypertension and diabetes mellitus presented with multiple episode of hemoptysis and pleuritic chest pain within one day duration. He also complaint of worsening dysphagia to solid food for 1 month duration with constitutional symptoms. Otherwise he does not have any other symptoms. Clinically he was pale and cachexic, otherwise all systemic examination was unremarkable. His blood investigation reveal low hemoglobin level of 9.9g/L with normal coagulation and renal profile. He underwent Oesophagoduodenoscopy which showed a tumor narrowing the lumen of the lower esophagus. Biopsy of the tumor revealed esophageal adenocarcinoma. CT thorax, abdomen and pelvis showed smooth circumferential wall thickening of the distal part of the esophagus near the gastroesophageal junction. Incidentally, there were heterogenous enhancing lobulated mass seen at the lower pole of left kidney with no obstructive uropathy features. Otherwise, others solid organ were normal. A left renal mass biopsy performed revealed renal cell carcinoma. An oncologist opinion was gathered for initiation of palliative chemotherapy however he developed symptomatic malignant pleural effusion which need a drainage. HRCT Thorax revealed multiple bilateral intrapulmonary nodule. He also complaint of a new right upper eyelid mass that increasing in size with contact bleeding however does not affect his visual. An assessment from an ophthalmologist and CT orbital performed consistent with features of a metastasis. **Conclusion:** Synchronous malignancies with an esophageal malignancies is not uncommon. Most common site reported is head and neck followed by lung malignancies. However synchronous esophageal malignancies and renal cell carcinoma is rare. Esophageal malignancies often have distant metastasis to the liver, lung and bone however rare to the eyelid.

PRACTICAL ISLAMIC AND RESEARCH ETHICS: THE USE OF ANIMAL MODEL IN ORTHOPAEDIC RESEARCH

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Introduction: The growing of mortality and morbidity that are related to orthopaedic cases have contributed to the development and innovation of technology which actively seeks for the best treatment options. In order to achieve the goal, animal models have been used as a bridge from in vitro to the clinical study to provide insights both as a precursor and beneficial to human-based research. Many animal models have been developed to investigate bone regeneration, pathological changes and reparation. Besides, animal models are used more commonly in orthopaedic innovation and development. Through the practical application of the 5Rs (reduction, refinement, replacement, reproducibility and responsibility) principles that correlate with the Islamic ethics in this research, this study aimed to provide an ultimate ethical standard on animal use in orthopaedic research. Besides the texts of the Qur'an and the prophetic narrations (hadith), both Muslim jurists (fuqaha) and ethicists' relevant opinion on these matters would be unveiled. As from the Islamic viewpoints, the usage of animal is permissible for scientific research purposed within the permissible limits described by the Shari'ah and guided by ethical values derived from the Divine Revelations (al-wahy al-Ilahyi). By practising the guidelines, it is hoped that these ethical guidelines will help to educate the Muslim scholars and researchers to substantive improvements in terms of quality and the ethical standards of animal studies in orthopaedic research.

DETERMINING THE ASSOCIATION BETWEEN ORAL HEALTH STATUS AND SELF-PERCEIVED ORAL HEALTH SATISFACTION AMONG RESIDENTS IN THE LARGEST CARE HOME IN EAST COAST MALAYSIA

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Introduction: Little is known about the association between actual and self-perceived oral health status among residents living in a care home. This study aimed to assess their oral health status and to determine its association with their self-perceived oral health satisfaction. **Materials and method:** A cross-sectional study was conducted from July to August 2018 among 75 residents of Rumah Ehsan, Terengganu (the largest care home in east coast Malaysia). The oral health status and oral hygiene of the participants were examined. Their sociodemographic profile and self-perceived oral health status were collected through structured interviews. Chi-square, Man-Whitney, and multiple logistic regression tests were used to test the factors associated with the self-perceived oral health satisfaction of the participants. **Results:** Unsurprisingly, the majority of the participants had poor oral health with high median DMF-T score of 29.0 (IQR =12) and majority (86.7%) had poor oral hygiene. It was intriguing to know that the majority of them (64%) perceived they have good oral health status with 68% satisfied with their current oral health status. There was no significant association between their actual oral health status and their perceived satisfaction. However, increasing age, Malay and those eating dependently were less likely to satisfy with their oral health status. Meanwhile, those who were dependent on the staff to brush their teeth were more likely satisfied with their oral health status. **Conclusion:** There was a wide discrepancy between the actual and self-perceived oral health status among residents in care homes. Hence, it is crucial to improving awareness and knowledge among them in order to improve their oral health. Factors contributed to their oral health satisfaction should be acknowledged by all dental practitioners.

DEVELOPING A FRAMEWORK TO IMPROVE THE TRAINING OF MEDICAL PRACTITIONERS IN DOCTOR-PATIENT COMMUNICATION TOWARD ENHANCING SOCIETAL WELL BEING

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Introduction: Doctor-patient communication is a crucial, unique yet complex relationship in clinical practice due to its therapeutic qualities. With the current emphasis on patient-centred care and patient autonomy, medical practitioners are not only expected to possess clinical and biomedical knowledge but also the skills to develop a therapeutic doctor-patient relationship. Nevertheless, this expectation proves to be an uphill battle to physicians as evidenced from patient complaints which among others include lack of appropriate non-verbal behaviours, absence of paralinguistic elements, lack of trust and empathy. Moreover, unsatisfactory doctor-patient communication has been identified as one of the major elements in litigation cases in the medical field. One fundamental factor which leads to this predicament is the ineffective training of communication skills at the medical schools. Hence, this project aspires to develop a training model on doctor-patient communication skills based on patient-centred approach. The model will give more emphasis on the linguistics and psychosocial aspects of communication. **Materials and method:** Utilising both qualitative and quantitative approaches i.e. survey, observation, interview, psychological profiling, persona analysis and document analysis, the project aims to identify 1) the key communicative features and 2) the key clinical and psychosocial features to be incorporated in the model. It will then operationalise these features to conceptualise an expert assistance system which shall be used in the training of future physicians. The study will be conducted at the IIUM Kulliyah of Medicine and it will involve medical students at the undergraduate level. **Conclusion:** The findings from this proposed research are significant in improvising and enhancing the current training on communication skills provided at the medical schools. With a more 'humane' approach to training, indirectly, it will increase the effectiveness in the delivery of health care and achieve sustainability in good health and well-being (SDG3) of the nation.

PREDICTORS OF PEDICULOSIS CAPITIS AMONG PRIMARY SCHOOL CHILDREN IN KUANTAN, PAHANG

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Introduction: Pediculosis capitis is a worldwide problem which carries significant consequences among the school children and caregivers. This study aims to investigate the prevalence and predictors of Pediculosis capitis among primary school children in Kuantan, Pahang. **Materials and method:** An analytical cross-sectional study using two-stage cluster random sampling was carried out among 1,365 primary school children in seven schools in Kuantan, Pahang. A self-administered validated questionnaire was used followed by hair and scalp examination. **Results:** The median age of the respondents was 8.0 years. Majority of them were males (53.41%), Malays (60.29%), household income between RM1000-RM2999 (31.87%) and from urban school location (98.68%). The overall prevalence of Pediculosis capitis was 9.6% (n=131). Multivariate logistic regression analysis showed that predictors for Pediculosis capitis were female (Odds ratio (OR) = 8.571, 95% Confidence interval (CI) = 5.024-14.620), Indian (OR = 5.560, 95% CI = 3.384-9.136), those with siblings more than five (OR = 2.644, 95% CI = 1.044-6.700), history of contact with infested person (OR = 2.445, 95% CI = 1.619-3.691) and urban school location (OR = 0.030, 95% CI = 0.284-0.091). **Conclusion:** Pediculosis capitis is a common public health problem affecting primary schoolchildren in Kuantan, Pahang and those levels are of epidemic importance. Hence, preventive measures are necessary to reduce the transmission of head lice among school children.

THE PREVALENCE OF HIGH RISK OF OBSTRUCTIVE SLEEP APNEA AND ITS ASSOCIATION WITH SOCIODEMOGRAPHIC FACTORS AMONG ADULTS IN TAMAN DATO' RASHID SALLEH, INDERA MAHKOTA, KUANTAN

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Introduction: Obstructive sleep apnea (OSA) is an insidious sleep breathing disorder, with cardinal manifestations of snoring, witnessed breathing pause during sleep and excessive daytime sleepiness. The aim of the study was to estimate the prevalence of OSA and its associated factors among adult population in Taman Dato' Rashid Salleh, Kuantan. **Materials and method:** A cross-sectional study was carried out among 157 participants who lived in Taman Dato' Rashid Salleh from May 2018 to June 2018. Obstructive sleep apnea was quantified using the self-administered Malaynvalidated Berlin questionnaire which apart from the demographic data included three categories (10 questions) designed to elicit information regarding snoring (category 1), daytime somnolence (category 2) and the presence of obesity and/or hypertension (category 3). The respondents were considered as high risk of OSA if two or more categories were positive. Weight, height and neck circumference were measured by using Secca© weight scales, Secca© stadiometer and non-elastic plastic tape, respectively. Descriptive statistics was used to measure the prevalence, while chi-square test was used to explore the association of OSA and its background variables. **Results:** Out of 157 respondents, female and Malay were dominant with the 56.7% and 91.0 %, respectively. The mean age of the respondents was 36.7 (12.2) years old. The prevalence of high risk of OSA in was 18.5%. There was no association between gender, age, race, smoking and neck circumference with risk of OSA while Body Mass Index (BMI) and hypertension were significantly related to an increased risk for developing OSA (p-value < 0.001 and p=0.001, respectively). **Conclusions:** Two in every 10 adults in Taman Dato' Rashid Salleh, Kuantan were at high risk of OSA. It is recommended that appropriate health promotion should be targeted to this community to instill awareness and increase the level of understanding of the public on OSA.

PILGRIMS' HEALTH SCREENING PROFILE FROM A FELDA SETTLEMENT IN PEKAN, PAHANG

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Introduction: Good physical health or *istitha'ah* is one of the shariah requisite to perform hajj pilgrimage. Hence, passing the health screening is mandatory for the pilgrim to-be in Malaysia. The aim of this study is to describe the pilgrims' health screening profile from a FELDA settlement in Pekan, Pahang. **Materials and method:** All 26 candidates from Chini's FELDA cluster who were selected for hajj pilgrimage in 2017 underwent health screening at a nearby health clinic. Data from this health screening were analysed descriptively using SPSS software version 23.0. **Results:** Candidates consists of 11 men and 15 women aged between 48 to 86 years with the mean age of 61. Result showed that both sexes have comparable mean age and body mass index. Most of the candidates (88.5%) have at least 1 chronic medical problem (excluding overweight) while 54% have at least 2 or more medical problems. Women have higher prevalence of non-communicable disease (NCD) conditions namely obesity, hypertension, and diabetes (40%, 60%, and 40%) compared to men (27%, 45% and 36% respectively). This figure is higher than 2015 national figure for age specific: 50 years group (obesity 36.6%, hypertension 49.3%, diabetes 27%). In addition, 20% of the women also have anaemia while none in men. **Conclusion:** Majority of the candidates in this group are elderly and have at least two chronic medical problems. Women have higher prevalence of NCD and anaemia than men. Thus, based on the findings, early and focused pilgrims' health screening especially among elderly female is essential and appropriate action should be taken in order to reduce risk for morbidity and mortality during hajj pilgrimage.

FACTORS ASSOCIATED WITH PEDICULOSIS CAPITIS AMONG PRIMARY SCHOOL CHILDREN IN KUANTAN, PAHANG

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Introduction: Pediculosis capitis among primary school children is a worldwide problem which carries significant consequences among the school children and caregivers. Despite causing significant health problem which needs to be intervened, only few studies were conducted in Malaysia and there is no previous study conducted in Pahang. Thus, this study aims to investigate the determinants of prevalence of Pediculosis capitis among primary school children in Kuantan, Pahang, Malaysia. **Materials and method:** An analytical cross-sectional study using cluster random sampling of primary schools was carried out in Kuantan. Self-administered validated questionnaire was used followed by hair and scalp examination. Multivariate logistics was done to determine the predictors and to control for confounding effect. **Results:** The overall median age of the 1,365 respondents was 8.0 years. Majority of them were males (53.41%), Malays (60.29%), household income between RM1000-RM2999 (31.87%) and from urban school location (98.68%). The overall prevalence of Pediculosis capitis was 9.6%(n=131). Multivariate logistic regression analysis showed that female (Odds ratio (OR) = 8.571, 95% Confidence interval (CI) = 5.024-14.620), Indian (OR = 5.560, 95% CI = 3.384-9.136), those who had number of siblings more than five (OR = 2.644, 95% CI = 1.044-6.700), history of contact with infested person (OR = 2.445, 95% CI = 1.619-3.691) and urban school location (OR = 0.030, 95% CI = 0.284-0.091) were predictors for Pediculosis capitis. **Conclusion:** The prevalence of Pediculosis capitis among primary school children in Kuantan, Pahang is endemic(9.6%) and predictors are female, Indian, having siblings of more than 5 and contact with infested person. Hence, preventive measures are necessary to reduce the transmission of head lice among school children.

IS THERE ANY NEED FOR HEALTH INTERVENTION ON PEDICULOSIS CAPITIS IN PUBLIC PRIMARY SCHOOLS IN KUANTAN, PAHANG ?

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Introduction: Pediculosis capitis among primary school children is a global problem which poses significant consequences among school children and caregivers alike. Previous studies showed an association between pediculosis capitis and sociodemographic factors such as school location, age, gender, ethnicity, parental education, monthly household income, number of siblings and number of family members. Primary schools in Malaysia consist of National School and National-type school (Chinese) and (Tamil), all of which have different sociodemographic backgrounds. Thus, this study aims to investigate and compare the prevalence of pediculosis capitis among children of different types of primary school in Kuantan to properly plan for future intervention. **Materials and method:** An analytical cross-sectional study using stratified random sampling was carried out. The schools were stratified according to their types. Number of respondents from each school was determined by proportionate-to-size. Respondents from standard one to six were given self-administered validated questionnaire. Then, their hair and scalp were examined for the evidence of pediculosis capitis. Data was analysed using descriptive statistics. **Results:** There were 1,365 respondents involved in this study; consisting of students from National Schools (n=791), Chinese Schools (n=424) and Tamil Schools (n=150). The overall median age was 8.0 years. Majority of them were males (53.41%), of Malays ethnicity (60.29%), with household income between RM1000-RM2999 (31.87%) and from urban school location (98.68%). The overall prevalence of pediculosis capitis was 9.6% (n=131). The prevalence of pediculosis capitis among the selected schools was found to be the highest in National-type school (Tamil) at 33.33% (n=50), followed by National School at 7.33% (n=58) and National-type school (Chinese) at 5.42% (n=23). **Conclusion:** Pediculosis capitis showed an endemicity in all types of primary schools. Hence, preventive measures are necessary to reduce the transmission of head lice among school children.

VALIDATION OF CORRUPTED MEDICAL IMAGE LABELLING USING DEEP NEURAL NETWORK

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Introduction: Deep Neural Networks (DNN) has been successfully applied in a variety of medical image analysis. However, in building a good DNN model, it requires validated label from medical experts. The task of getting labels validated by the medical expert is quite a challenge due to the complexity of the image as well as large variability between the experts. Thus, this research investigates the effect of corrupted medical label on deep neural network for analysing diseases. **Materials and method:** In investigating this issue, a chest X-ray dataset comprising of 2560 images with 14 multilabel diseases from the National Institutes of Health (NIH) are examined. The DNN models that are explored are MobileNet, which is a base network that uses a depth-wise separable convolutional in building lightweight DNN and Xception, which is also utilised depth-wise separable convolutional with inception modules as an intermediate step in between regular convolutional and the depth-wise convolutional. Different training and testing sizes are presented to the models with different ranges of corrupted labels from 10% to 50%. The training and validation accuracy is compared for each of the test cases together with other statistical analysis. **Results:** Based on the conducted experiments, it can be highlighted that both models can classify the diseases with the accuracy of more than 80% if the images have been previously trained by the model for different sizes of the corrupted labels. For the unseen or previously untrained images, the models can reach the accuracy of 70% and as the sizes of corrupted label increases, the accuracy will decrease as low as 50%. **Conclusion:** To conclude, corrupted labels have a critical effect on the DNN models. Thus, it is very essential to study the effect of the corrupted medical images label to ensure the reliability of the DNN models for medical imaging.

SYSTEMATIC REVIEW ON THE EFFECTIVENESS OF USING CARBON MONOXIDE MEASUREMENT IN SMOKING CESSATION INTERVENTION

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Introduction: Carbon monoxide measurement is one of the biomedical risk assessments in smoking cessation. With the advancement in medical devices, risk assessment among smoker using carbon monoxide can be an effective intervention for quit smoking. A systematic review was conducted on the effectiveness of using carbon monoxide measurement in smoking cessation intervention. **Material and methods:** A systematic review and narrative synthesis were done using PRISMA guideline. A broad database search on English literature was conducted including Medline, PubMed, Scopus and Science Direct from 2008 till 2017. Additional studies were also searched through snowballing technique by searching the bibliographies of selected studies. Five studies met the criteria with two studies were done in clinical settings while the other was done at population settings. The studies were conducted in the United States of America, United Kingdom and South Korea. All study were two-arm randomized controlled trials with variation in the outcome measurement mainly intention to quit, quit attempt and smoking abstinence. There was also variation in the duration of follow up ranging from 1 week to 12 months. **Results:** Only three studies found statistically significant increased in motivation or intention to quit smoking but only at 1 month follow up. All five study found no significant difference in frequency of quit attempt or smoking abstinence. Most of the studies recruited participants based on voluntary participation thus limiting the generalizability of the results. **Conclusions:** The present review has found limited studies on the effect of carbon monoxide measurement intervention for quit smoking. It may only be beneficial at the motivational level and not translated into behavioural changes. However, the effect too was short term and not sustained in the long term.

QUANTITATIVE EVALUATION OF EFFECTIVENESS OF HOSPITAL MESRA IBADAH COURSE: A PRE-POST STUDY

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Introduction: Solat or prayer, as one of the five pillars of Islam, and it is associated with bio-psycho-social benefits in Muslim patients. Many Muslim patients neglected solat while being hospitalized as they are unaware of the convenience (rukhsah) available for them. Ibadah Friendly Hospital Courses have been conducted in different states of Malaysia to impart knowledge to the hospital staff who can in turn educate their patients. This study aims to construct a content-validated assessment tool and to assess the effectiveness of a state-level Hospital Mesra Ibadah course. **Materials and methods:** A self-administered questionnaire was constructed and content-validated by a panel of three experts (two religious teachers and one consultant spine surgeon). All 15 questions achieved item-level content validity index (I-CVI) of 1.00 after two rounds of validation. The questionnaires were distributed to participants of a state-level Hospital Mesra Ibadah course to compare the participants' pre-course test score and post-course test score. **Results:** A total of 88 participants (48.9%) were included in this study. There was a significant difference in the pre-course test mean score and post-course test mean score among the participants. There was also a significant reduction of unsure answer after the course. There was no significant association found between the gender, place of working and occupations with the pre-post test score difference. **Conclusion:** This study demonstrates that the Hospital Mesra Ibadah course is effective in imparting as well as consolidating the knowledge among participants, hence it should be routinely organized to benefit more participants.

PERIODONTAL HEALTH AWARENESS AMONG IIUM MEDICAL STUDENTS

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Introductions: Proper knowledge of oral diseases is crucial in medical practice because periodontal disease is associated with multiple systemic conditions. A large number of systemic diseases and drugs have oral manifestations as well as adverse reactions. The aim of this study is to assess periodontal awareness, knowledge and attitude among medical students of International Islamic University Malaysia (IIUM). **Materials and method:** This cross-sectional study utilized questionnaires which were distributed to fourth and final year medical students of IIUM Kuantan. Each participant's consent was obtained before being recruited into the survey. Questions pertaining to oral health, periodontal disease and its relation with systemic conditions were given. Based on the answers, respondents' awareness, knowledge and attitude were assessed. The data was analyzed by using Statistical Package for Social Sciences (SPSS) version 21. **Results:** A total of 93 students completed the survey questionnaires. 3% of them have awareness that periodontal disease is related to gingiva. 10% respondents agreed that the dental plaque is the primary cause of periodontal disease. 80% respondents have knowledge of associations between periodontal disease and systemic conditions. 4% of them were able to identify drugs causing gingival enlargement. 97% of respondents showed positive attitude for referral to dentist in the future. **Conclusions:** The participants have superficial awareness and knowledge about periodontal disease and its relation to systemic conditions. However, they have positive attitude for future practice towards their patients. Hopefully, this research may provide direct suggestion to incorporate basic periodontal knowledge in their medical syllabus.

CAN DOCTORS BE APP DEVELOPERS? OUR EXPERIENCE AS MEDICAL EDUCATORS

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Introduction: Smartphone and mobile apps have become an indispensable companion in our modern-day living and working environment. In the medical field, web browsers and medical apps have transformed the medical practice as the most current knowledge, best practices, medical references, and calculators are available instantaneously at our fingertips. However, these functionality and usage are limited by the creativity and imagination of the app developers. To overcome these limitations, doctors should think out-of-the-box and educate themselves to be app-developers to create functional and useful apps in their field. Our aim was to create medical apps from ground-up independently without formal software development training. **Material and method:** Hybrid app technology is a popular method for creating apps for newbies due to the familiarity with web browsers. We explore the Ionic® Framework which is a free and open-source front-end with good resources and documentation. This programming technology assumes that everyone has experience with web browsers and the modern browsers essentially run on three technology stacks which are Hypertext Markup Language (HTML), JavaScript and Cascading Style Sheets (CSS). The HTML is a standard markup language for web browser while JavaScript is a scripting language for running commands and functions. The CSS is used for describing how HTML elements should be displayed. **Results:** We successfully published three apps on the Apple AppStore and Google Play, namely, OrthoBoard®, OpList and OOLH. Based on our experience of designing, coding, testing and deploying the apps, it is not impossible for medical doctors to achieve this goal and utilizing the app-development skills as an armamentarium for teaching, learning, and medical practice tools. **Conclusions:** App development is an essential skill especially for medical educators to leverage the technological advancement in their teaching and learning as well as medical practice in tandem with our nations' aspiration towards Education 4.0.

THE EFFECT OF TUALANG HONEY IN CHRONIC EXPOSURE OF HIGH CHOLESTEROL DIET IN ANIMAL MODEL

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Introduction: Hyperlipidaemia accompanies chronic renal disease either as a consequence of the renal dysfunction or as part of generalized metabolic derangements. The aim of this study was to determine the effects of tualang honey (TH) on the kidneys of animal model with chronic exposure to high cholesterol diet. **Materials and method:** Twenty Sprague-Dawley rats were divided into two groups, the high cholesterol diet (12% CD (n= 16) and standard diet (SD) (n=4) and were fed for 12 weeks. After 12 weeks, the rats in the 12% CD group were subsequently divided into four groups. The first group was continued with only 12% CD while the other 3 groups in addition to the 12% CD, they were given TH treatment at different concentrations (1.2, 2.4 and 3.0 g/kg/day) for 4 weeks. Biochemical analysis of lipid profile and renal function were performed at the end of the experiment. The animals were sacrificed and the kidneys were harvested for histological examination. **Results:** In the 12 weeks HCD group, the serum cholesterol, LDL-c and creatinine levels were significantly higher) compared to that of the SD group. All groups with the tualang honey treatment had significant reduction in the LDL-c, triglyceride and creatinine levels. Histological examination of the kidney tissues of the HCD and HCD+TH groups at 16 weeks revealed segmental mesangial proliferation of some glomeruli with focal mesangial matrix expansion. No areas of periglomerular and peritubular fibrosis were observed. **Conclusion:** Tualang honey supplementation of animal model with chronic exposure to high cholesterol diet improved the renal function hence suggesting the its renoprotective effect. However, there were no changes seen in the histology of the kidneys . Additionally, tualang honey showed improvement in the LDL-c and triglyceride levels indicating its lipid lowering activities.

THE EFFECT OF VIRGIN COCONUT OIL (VCO) ON PHYSIOLOGICAL HALITOSIS. A RANDOMIZED CONTROLLED PILOT TRIAL

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Introduction: VCO oil pulling therapy has been used as a remedy for oral malodour in traditional Indian folk. Main objective for this research is to study on the effect of VCO oil pulling on physiological halitosis among IIUM Kuantan Campus students. The specific objectives are to evaluate the effect of VCO oil pulling on physiological halitosis and to compare the efficacy of VCO with conventional mouthwash in reducing physiological halitosis. **Materials and method:** 20 convenient samples were selected based on inclusion and exclusion criteria and divided into two groups, mouthwash and VCO based on single blind randomized controlled trial. Subjects required swishing oil pulling (group A) or rinsing with mouthwash (group B). Breathing analysis was recorded during pre-assessment, post assessment (on day 1-short term and day 14-long term) using organoleptic 1, organoleptic 2 (self-assessment) and Tanita device. The results were analysed using paired t-test in SPSS version 22. IREC approval: 2018-061. **Result:** There were significant difference between pre and post assessment of mouthwash in short term ($p < 0.001$) and long term ($p=0.002$) period of usage and between group VCO pre and post assessment in short term ($p= 0.001$). However, there was no significant ($p < 0.05$) between group of VCO and mouthwash. **Conclusion:** VCO has potential to reduce physiological halitosis in immediate observation after the oil pulling procedure. VCO oil pulling and gargling with commercial mouthwash had no significant difference in reducing physiological halitosis.

THE POTENTIAL EFFECT OF COCONUT WATER AS NATURAL HEALER IN ADULT PATIENT WITH CHRONIC PERIODONTITIS: A PRELIMINARY CLINICAL STUDY

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Introduction: Mechanical and chemical debridement had been practiced as one of the management for chronic periodontitis. Recent interest and advances in the field of alternative medicine has promoted the use of various herbal and natural products for multiple uses in the field of medicine. As for it, coconut water is one of the potential natural sources that have various health benefits. **Materials and method:** Randomized control study was chosen as study design in this research project. 12 patients who have moderate to severe chronic periodontitis were selected from patients whom attended Polyclinic Kulliyah of Dentistry, IIUM Kuantan Campus from November 2016 to January 2018. After stratified random sampling done, the subjects divided into 2 groups; Intervention Group and Control Group. All patients will go for ultrasonic scaling and root planning by using hand instruments. 6 patients in Intervention Group were given fresh coconut water to drink during daytime. The first re-assessment was done after 6 weeks. The control group of another 6 patients didn't receive any medicament. Paired sample t-test was used to analyse the pre and post intervention data. The study had obtained ethical approval from IREC (IREC 849). **Results:** Probing depth (PD) at mid-buccal site and bleeding on probing (BoP) shown significant result ($p < 0.05$) in intervention group. There is no significant difference noted in the control groups, which are for PD, BoP and Plaque Score (PS) variables. **Conclusion:** Coconut water has potential benefit in reducing the periodontal pockets with chronic periodontitis as an adjunct after mechanical debridement.

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ACKNOWLEDGEMENT

Medical Research Symposium 2019, International Islamic University Malaysia would like to express deepest appreciation to all those who provided the possibility to complete this symposium.