

VIRTUAL MEDICAL RESEARCH SYMPOSIUM



MEDICAL RESEARCH
DURING PANDEMIC:
ADAPTING & INNOVATING
IN ADVERSITY

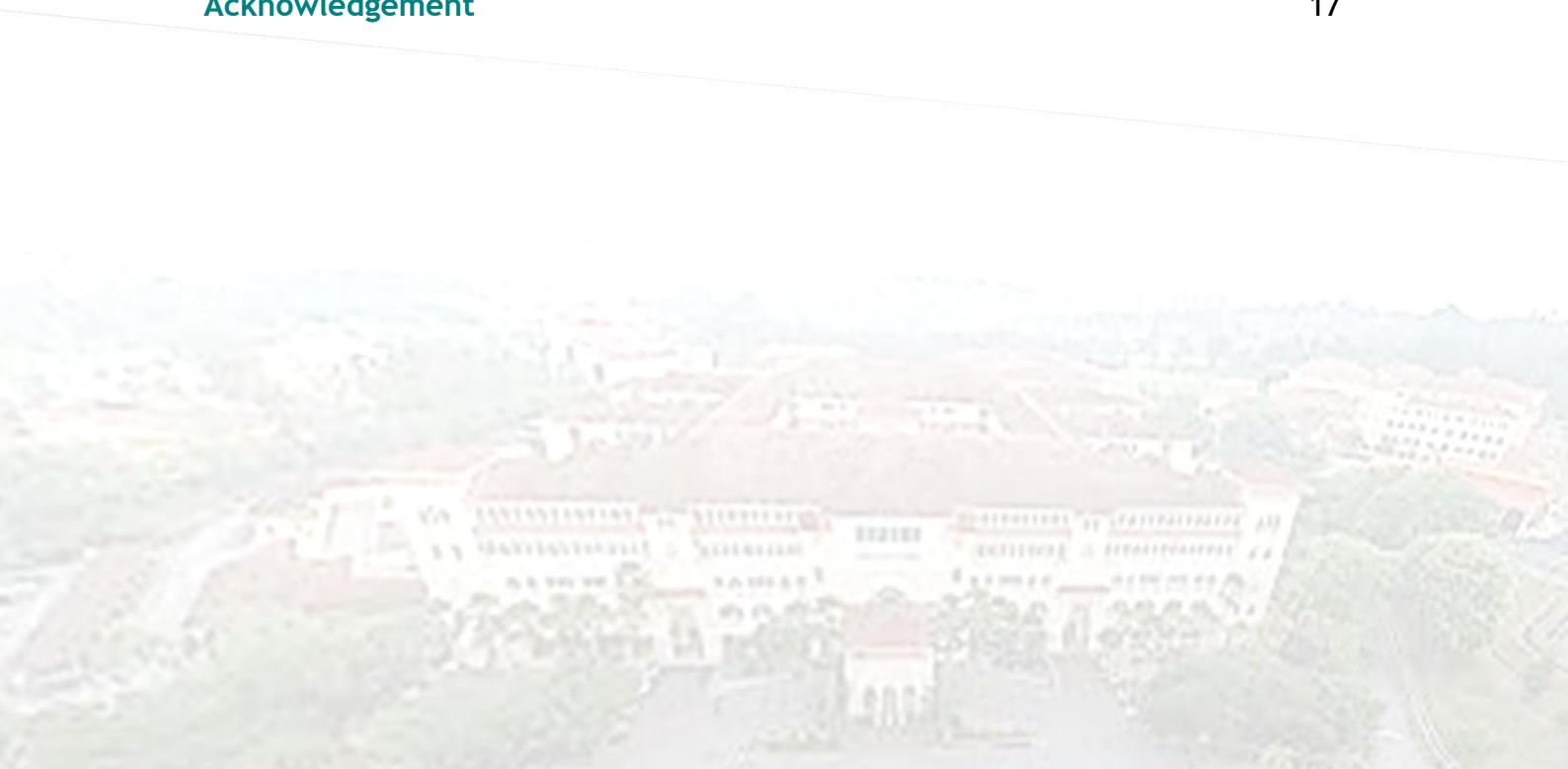
14TH DECEMBER 2021

PROGRAMME BOOK



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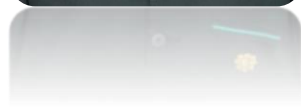


WELCOMING REMARKS



In the name of Allah, the most gracious and the most merciful.

It is with great pleasure I welcome you all to our Virtual Medical Research Symposium (MRS) 2021. This year is we are conducting the symposium online for the first time after a year in silence due to the pandemic condition. The theme for this year is “Medical Research During the Pandemic: Adapting and Innovating in Adversity”.



The organizing committee headed by Assoc. Prof. Dr. Roslina Abdul Rahim, has prepared relevant scientific programs to foster and educate both the academic staff and students on medical research possibilities in the pandemic era.

This year, we have several prominent speakers. There are Prof. Dr. Ahmad Hafiz Zulkifly our Deputy Rector (Responsible Research and Innovation), Prof. Emerita Datuk Dr. Asma Ismail (Holder of the Ibnu Sina Chair, Kulliyyah of Medicine), Assoc. Prof. Dr. Farahidah Mohamed, (Deputy Director, Innovation and Commercialisation, RMC). All these speakers will highlight possible tips and tricks in doing research and commercialization during the pandemic.

Not to forget, this year we have also invited two extraordinary speakers. Prof. Dr. Ima Nirwana Soelaiman (UKM), the Winner, Medical Book Category, Anugerah Buku Negara 2020. She will be sharing with us tips and tricks on writing an award-winning textbook. Meanwhile, Assoc. Prof. Dr. Wan Amir Nizam bin Wan Ahmad (USM) will be sharing with us how to mentor and collaborate on research during the pandemic. We are also highlighting our homegrown researchers where Asst. Prof. Dr. Norhidayah Kamarudin will update on Covid-19 vaccinations, Mental health issues by Assoc. Prof. Dr. Nora Mat Zin, and opportunities and challenges in commercialization by Assoc. Prof. Dr. Ailin Razali.

I hope that the works from this Medical Research Symposium can become an opportunity for the progress of our research work and lead in a good direction to reach excellence in research. Please take care and stay safe wherever you are.

Thank you and Wassalam.

PROFESSOR DR. JAMALLUDIN AB RAHMAN

Dean

Kulliyyah of Medicine, IIUM.

Advisor, Virtual Medical Research Symposium, 2021

FOREWORD BY THE CHAIRMAN



In the name of Allah, the most gracious and the most merciful.

It's a pleasure on the behalf of organizing committee to start this auspicious program by heartily welcoming all the Professors, Associate Professors, Drs, and dear students to our Virtual Medical Research Symposium 2021.

Alhamdulillah, despite the pandemic era we are still able to conduct the Medical Research Symposium virtually this year. I would like to thank the organizing committee who have worked diligently and efficiently as a team for planning, organizing, and executing the program successfully today. I would like to thank our sponsor My Medic Resources for your kind sponsorship for our symposium. May Allah SWT repay all your good deeds.

This year we have received 125 research abstracts from IIUM Kuantan Campus and other universities with a total of 158 registered participants. This symposium aims to encourage and inculcate research culture among our academics and students and to exhibit their research findings despite limitations in the Covid-19 epoch.

Other than that, this year we are going to invite the winners of oral presentations to write a full article in our SCOPUS indexed journal, the IIUM Medical Journal Malaysia (IMJM). The other participants will also be given a chance to write a chapter in our Research book. This is the first time we are going to execute the Research book project. This project aims to increase the number of publications of our kulliyah contributing to our MyRA performance.

I hope that this symposium will benefit all of us and help us to strategize in our research and academic pathway. Please spend your time with us until the end of the session. Please take care and stay safe.

Thank you and Wassalam.

ASSOCIATE PROFESSOR DR. ROSLINA ABDUL RAHIM

Head of Responsible Research and Innovation,

Kulliyah of Medicine, IIUM

Chairman, Virtual Medical Research Symposium 2021

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PROGRAMME TENTATIVE

TIME	PROGRAMME
0800	Registration
0825	Du'a Recitation
0830	<i>Welcoming Remarks</i> Professor Dr. Jamalludin Ab Rahman <i>Dean, Kulliyah of Medicine, and the Advisor of e-MRS 2021</i>
0840	<i>Plenary I</i> Galvanizing Research During Covid-19 Professor Dr Ahmad Hafiz bin Zulkifly <i>Deputy Rector (Responsible Research & Innovation), IIUM</i>
0905	<i>Keynote</i> Research Trend During the Pandemic Professor Emerita Datuk Dr. Asma binti Ismail <i>Holder of the Ibnu Sina Chair, Kulliyah of Medicine, IIUM</i>
0950	<i>Plenary II</i> Recalculating: Navigating the Pandemic During Ongoing Research Associate Professor Dr. Farahidah binti Mohamed <i>Deputy Director, Innovation and Commercialisation, RMC</i>
1010	Break
1030	<i>Symposium I</i> Tips & Tricks in Writing an Award-Winning Textbook During the Pandemic Professor Dr. Ima Nirwana Soelaiman <i>Faculty of Medicine, UKM</i>
1100	Mentoring and collaborations during pandemic Associate Professor Dr. Wan Amir Nizam bin Wan Ahmad <i>School of Health Sciences, USM</i>
1130	Update on Covid-19 Vaccination in Pahang Assistant Professor Dr. Norhidayah binti Kamarudin <i>Department of Pathology & Laboratory Medicine, Kulliyah of Medicine, IIUM</i>
1200	Q & A
1220	Lunch

TIME	PROGRAMME
	<i>Symposium II</i>
1400	Mental health during the pandemic Associate Professor Dr. Nora binti Mat Zin <i>Department of Psychiatry, Kulliyyah of Medicine, IIUM</i>
1420	Opportunity and challenge for potential product commercialization in research Associate Professor Dr. Ailin binti Razali <i>Department of Otorhinolaryngology-Head and Neck Surgery, Kulliyyah of Medicine, IIUM</i>
1440	Q&A
1500	Concurrent session (8 minutes/presenter) <i>Oral Presentation - Clinical</i> <i>Oral Presentation - BMS/Public Health/Others</i>
1640	Commentary from Head of Judges
1655	Best Oral & Best Poster Award Presentation
1655	Closing Remarks Associate Professor Dr. Roslina binti Abdul Rahim <i>Head of Responsible Research and Innovation, Kulliyyah of Medicine, IIUM and the Chairman of e-MRS 2021</i>

KEYNOTE ADDRESS

RESEARCH TREND DURING THE PANDEMIC

Professor Emerita Datuk Dr. Asma binti Ismail

Holder of the Ibnu Sina Chair,

Kulliyah of Medicine, International Islamic University Malaysia



COVID-19 represents the greatest threat to global public health and economies in the 21st century. No country or region has been spared and the crisis has laid bare stark weaknesses in almost every health care system. Within and between countries we have witnessed how already vulnerable and marginalized populations including women bear a disproportionate burden of infection and issues due to the pandemic including mental health. To combat COVID 19 we see the need for sustained investment not only in global health research but also but also planetary health issues that comprises of human health, animal health, environmental degradation and climate change that are intricately combined. Positive effect of Covid 19 include creating a unique opportunity to re-imagine and transform global health so that future pandemics are not nearly as devastating. It has not only charted the path of research areas to be done but also transformed trends in how research should be done. With the advent of industry 4.0, disruptive technologies have entered into our daily lives and livelihoods with numerous victories. In short, modern technologies and discoveries have been used to identify, track and forecast outbreaks. Diagnosis, Drug discovery, vaccine developments and disease surveillance have been accelerated using disruptive technologies including artificial intelligence. This paper will discuss how Covid 19 is influencing research trends globally and in Malaysia as stipulated in the 10-10 MySTIE niche areas for the medical sector to ensure future pandemic preparedness and resilience.

PLENARY 1

GALVANIZING RESEARCH DURING COVID-19

Professor Dr. Ahmad Hafiz bin Zulkifly

¹Deputy Rector (Responsible Research & Innovation), International Islamic University Malaysia

²Department of Orthopaedics, Traumatology & Rehabilitation, Kulliyyah of Medicine, International Islamic University Malaysia



The highly contagious severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has affected from every aspect of life including research. Many academic medical researchers/scientists have paused research activities due this pandemic Covid19 era. Even in the face of institutional shutdowns, scientists/researchers; basic science and clinical research could not stop attending to their laboratories because research is a fundamental tool in evaluating the safety and efficacy of new drugs, medical devices, and health system interventions.

As a researchers/scientist, several strategies include working remotely, think creatively to sustain your research activities, maintain communication with team members for upcoming issues, fulfill time with research activities, online courses and do more publication (peer-reviewed publication) need to be implemented to maintains the research activities.

PLENARY II

RECALCULATING: NAVIGATING THE PANDEMIC DURING ONGOING RESEARCH

Associate Professor Dr. Farahidah binti Mohamed

¹Deputy Director, Innovation & Commercialisation Unit, Research Management Centre, International Islamic University Malaysia

²Department of Pharmaceutical Technology, Kulliyyah of Pharmacy, International Islamic University Malaysia



COVID-19 pandemic posed great challenge to all researchers all over the world. There were on-going researches, funded by various organisation, clinical, non-clinical, in vitro wet and dry labs, all the hi-touch types have been facing difficulties to be smoothly conducted. The departure from the norm and the luxury of accessibility were snatched away almost immediately leading to the risk of being terminated by the funders. The impossible research and invention to be conducted coupled with restriction to the work place have complicate the issues.

It is timely to recuperate and navigate the pandemic with first by listing all on-going projects, measure the strength and weakness of each project, choose and do what we can by prioritizing projects for self-benefit and sharpen with a good plan for future. Amongst aspects that need careful consideration are availability of funding and dedicated research assistant or personnel, equipment location and scopes of studies. The latter could involve the in vitro cell lines, the in vivo in animals and human clinical study. In a nutshell, one has to persevere with ups and downs in R&D, to enjoy doing things, to first benefit oneself and to intend and plan for commercialization. The output would have a ripple impact once it can reach patients or end users who will benefit from the invention.

SYMPOSIUM I

TIPS & TRICKS IN WRITING AN AWARD-WINNING TEXTBOOK DURING THE PANDEMIC

Professor Dr. Ima Nirwana Soelaiman

Department of Pharmacology,

Faculty of Medicine, Universiti Kebangsaan Malaysia



Writing a book can be or a burden or a pleasure, depending on where your interests lie. However, as an academic and an intellectual, authoring books is part and parcel of our duties. Thus, whether we are passionate about writing books or not, we must all write books!

Unlike writing scientific papers for peer-reviewed journal, which is strictly formatted, there is more freedom in writing a book. You are allowed to demonstrate individual writing style to a certain degree. However, as an academic, scientist, researcher, professional and intellectual, writing a non-fictional book must always be evidence-based. Even writing fiction requires the author to base certain facts on scientific or historical evidence.

My narrative is more of a casual approach to writing books, and is based partly on evidence, but mostly on experience. While it is possible to plan your writing towards winning awards, however, do not let that objective curtail your individual talent and style. Let the passion flow through your words, and forget about everything else. You will be surprised at the results!

SYMPOSIUM I

MENTORING AND COLLABORATIONS DURING PANDEMIC

Associate Professor Dr. Wan Amir Nizam bin Wan Ahmad

School of Health Sciences, Universiti Sains Malaysia



Mentoring is a mutually beneficial and collaborative connection that can occur at any time. A strong mentoring relationship will benefit both parties and foster networking, which is crucial in academia. We were taken off guard by the COVID-19 pandemics because we were unprepared. In the year 2020, the pandemic had a significant impact on many elements of academic life in the fields of science, technology, engineering, mathematics, and medicine (STEMM). To get the situation under control, universities and schools were obliged to close. Staff and students were not allowed to continue their laboratory work, therefore research was suspended and left in limbo. Except in selected circumstances where stringent standard operating procedures (SOP) apply, the majority of the training was done online.

This unprecedented event had a significant impact on the mentoring process and collaboration. Researchers discovered that maintaining typical face-to-face contact was difficult at first. However, many universities, including Universiti Sains Malaysia (USM), have increased web-based communication as a result of this incident, making remote mentoring and collaboration easier. As a result of the shared pandemic experience, there was also the benefit of relationship-building. We may conclude from our current experience that, even in the absence of such extraordinary events, this environment has the potential to inspire future efforts to strengthen mentorship and collaborative competence.

SYMPOSIUM I

UPDATE ON COVID-19 VACCINATION IN PAHANG

Assistant Professor Dr. Norhidayah binti Kamarudin
*Department of Pathology & Laboratory Medicine,
Kulliyyah of Medicine, International Islamic University Malaysia*



Vaccination has been established as one of the key measures to end COVID-19 pandemic. Since implementation in late February 2021, the country's National COVID-19 Immunisation Program has been running and transitioned smoothly between phases. Up until early December, over 54 million doses of COVID-19 vaccine have been administered nationwide with nearly 78% of total population being covered.

Pahang is a state comprising approximately 1.7 million people and is divided into 11 administrative divisions. Although being the largest state in peninsular Malaysia, the immunisation campaign had been successful and well-coordinated with almost 70% of its total population having received a complete vaccination. The impact of relatively high vaccination coverage in Pahang had been reflected in the trend of positive case detection, hospitalization, need for ICU admission and mortality related to SARS-CoV-2 virus infection.

Yet the pandemic is still far from over. A constant and ongoing transmission of SARS-CoV-2 within the community will confer opportunity for novel variants to emerge. New variants may in time compromise the effectiveness of the pre-existing preventive measures. To prevent this from happening, the protective barrier of the community needs to be strengthened continuously. Among the anticipated challenges include execution of measures to achieve the highest immunisation rate possible and at the same time to elevate the acceptance of booster dose among the targeted population.

SYMPOSIUM II

MENTAL HEALTH DURING THE PANDEMIC

Associate Professor Dr. Nora binti Mat Zin

Department of Psychiatry,

Kulliyyah of Medicine, International Islamic University Malaysia



End of the year 2019, the Wuhan community was shocked by the detection of Coronavirus infection. Since then, it has been spread to all continents resulting to the announcement of pandemic situation by the World Health Organization. It has created a 'panic' situation in the area of medical, social and economic of entire globe. Lack of knowledge is not just in the way of the disease transmission and its intervention but also in the administration of the country's affairs. Increased death toll, country's lock down, shutdown of the business and shift to the new norms situation affect the people's mental health. Increasing use of digital communication is seen in education, business, communication, working environment, life style and healthcare system. Certainly, it helps to enhance the concept of physical distancing while maintaining the function of the above system. However, the people are fearful and stress with the uncertainty of the information in social-media (Gao, 2020). Technostress and technophobia are known contributing factors to the mental health issue too. The lifestyle changes such as limited social gathering, "new passport" for any activities, mandatory vaccination and the needs to follow really put the people in the situation of "pandemic fatigue"

Unemployment increased by 10% in 2020 ((Buheji et al, 2020). Some industries lay off their workers due to the reduction of the activities. As such, the financial constraint became a major concern in a family. Fear, stress, depression and anxiety are the common mental health issues during pandemic (Rajkumar 2020). Pandemic is not just triggered the mental illness but also exacerbate the existing psychiatric condition. The patient with "Tsunami of the psychiatric illness" was reported. Suicide, depression, domestic violent and substance used were increased (Tendon, 2020). Quarantine and distancing resulted in social isolation, emotional disturbance, feeling of loss and grief (Karthivel, 2020). Meanwhile, depressive disorders increased by three folds in American adult population. The list of psychological and psychiatric disturbances can go on unless something could be done to manage the problem. Therefore, several steps and suggestion such as mental health promotion, screening program, regular communication, supportive measurement and psychoeducation are needed. Evaluation of the gap and prioritizing the need could help in managing the mental health issue during pandemic. This paper is intended to discuss the effect of pandemic to the mental health and how to approach some of the issue. Among the suggested plan are the worklife balance, improving the internet facilities, managing stress effectively and increase resiliency. The underlying reasons and challenges will be highlighted.

SYMPOSIUM II

OPPORTUNITY AND CHALLENGE FOR POTENTIAL PRODUCT COMMERCIALIZATION IN RESEARCH

Associate Professor Dr. Ailin binti Razali

*Department of Otorhinolaryngology-Head and Neck Surgery,
Kulliyyah of Medicine, International Islamic University Malaysia*



Being academicians and researchers in academia, I am sure we have all heard of this ominous valley of death between potential products and their successful commercialized entrée, that looms enormous and treacherous and devours almost ninety percent of all research produced by the academia specifically from the higher learning institution (Murphy, 2003). Notwithstanding this very bleak prospective, there will be many (or hopefully at least a few) optimistic, brave, gung-ho souls among us who; upon completing our research and achieving what we have sought to accomplish, would be asking the inevitable ‘what’s next?’ questions. I hope to able to answer this in my twenty minutes lecture by summarizing how to do this, particularly based on my own experience being in the midst of a product commercialization endeavor and sharing particularly some issues that I wish I had known before embarking on this journey.

SPONSOR

We would like to thank the following sponsor for their generous contribution.



ACKNOWLEDGEMENT

Medical Research Symposium 2021, International Islamic University Malaysia would like to express deepest appreciation to all those who provided the possibility to complete this symposium.



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ABSTRACT BOOK





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- OC111 PREVALENCE OF MALNUTRITION AND ITS OUTCOMES IN PATIENTS UNDERGOING ABDOMINAL SURGERY IN TWO TERTIARY HOSPITALS IN PAHANG
- OC119 A COHORT STUDY ON OBSTETRIC OUTCOME OF OBESE PRIMIGRAVIDA WITH SPONTANEOUS ONSET OF LABOUR AT TERM
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- ONC207 THE RELATIONSHIP BETWEEN EMOTION REGULATION AND MENTAL WELL-BEING AMONG IIUM STUDENTS DURING COVID-19
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ABSTRACTS

ORAL PRESENTATIONS



OC105

THE ASSOCIATION OF ANTHROPOMETRIC CHARACTERISTICS, HORMONAL ALTERATIONS AND OVARIAN VOLUME IN POLYCYSTIC OVARIAN SYNDROME

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Introduction: Polycystic ovarian syndrome (PCOS) is a frequent reproductive endocrinopathy seen in women. Over the years, the relationship between hormones, enzymes, and ultrasonography characteristics in PCOS women have been investigated, with varying outcomes. **Materials and Methods:** This cross-sectional comparative study aims to investigate the association of anthropometric characteristics, hormonal alterations, and ovarian volume in 30 PCOS women in comparison to 30 non-PCOS women. Anthropometric and ovarian volume measurements, and peripheral blood were taken from all subjects and analysed for ghrelin, leptin, fasting blood sugar, and insulin level. Homeostatic model assessment for insulin resistance (HOMA-IR) and for insulin secretion (HOMA-b) were used. Statistical analysis was done using SPSS 26. **Results:** Ghrelin and glucose do not show any statistically significant difference while leptin, insulin, and HOMA-IR levels were significantly higher in the PCOS group ($p = 0.01, 0.02, 0.01$), compared to the non-PCOS group. Leptin and insulin levels were also significantly higher in both PCOS ($p = 0.03, 0.01$) and non-PCOS ($p = 0.002, 0.004$) who are obese. Multiple Linear Regression showed that significant-high insulin levels ($r = 0.979, p = <0.001$) and HOMA-b levels ($r = 0.667, p = <0.001$) were seen in patients with insulin resistance, while only a weak positive correlation can be seen for ovarian volume ($r = 0.374, p = 0.04$). **Conclusion:** Leptin and insulin are positively correlated with BMI in both subject groups. There are associations seen between insulin, HOMA-b and ovarian volume in the group of PCOS with insulin resistance.



OC111

Prevalence of Malnutrition and Its Outcomes in Patients Undergoing Abdominal Surgery in Two Tertiary Hospitals in Pahang

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Introduction: Malnourished patients are at risk of increased morbidity and mortality. The European Society for Clinical Nutrition and Metabolism (ESPEN) has provided criteria to diagnose malnutrition is either a low BMI (<18.5 kg/m²) or the combined finding of weight loss together with either reduced BMI (age-specific) or a low fat-free mass index using sex-specific cut-offs. We aim to determine the prevalence of malnutrition among surgical patients undergoing major abdominal surgery and the associated adverse outcomes. **Materials and Methods:** The nutritional status of patients who underwent major abdominal surgery from June 2019 to September 2020 were classified by Nutrition Risk Screening (NRS) 2002. Patients' complications throughout the admission were documented until discharge or death. **Results:** A total of 150 patients were included. The median age was 53 years, mainly male (53%). The prevalence of malnutrition was 40%. The postoperative Clavien Dindo Classification (CDC) complication was 60%. Complications were more frequent (89.2% vs 39.6%) and more severe (CDC III-V 44.1% vs 12.1%, $p < 0.001$) in malnourished group. Malnourished patients were older, predominantly males, and presented mostly with malignancy ($p < 0.05$). Malnourished patients had a higher rate of open surgery ($p = 0.001$) with more severe postoperative complications ($p < 0.001$). Malnutrition was associated with longer hospital stay ($p < 0.001$), surgical site infection ($p < 0.001$), ventilator usage ($p = 0.006$) and ICU admission ($p < 0.001$). On multivariate analysis, malnourished patients had a longer length of stay ($p < 0.0001$), a higher rate of surgical site infection (OR 4.148), and a higher complication grade (OR 3.424). **Conclusion:** Malnutrition is highly associated with elderly patients and malignancies. Therefore, Policies and strategies should be implemented to screen, diagnose, and individualize care for malnourished patients.



OC119

A COHORT STUDY ON OBSTETRIC OUTCOME OF OBESE PRIMIGRAVIDA WITH SPONTANEOUS ONSET OF LABOUR AT TERM

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Introduction: Obesity has reached pandemic level with higher prevalence among women. Obese pregnant women have higher risk of comorbidities, prolonged pregnancy, poor labour progress, caesarean delivery, maternal and foetal complications. This study aimed to determine the prevalence of vaginal delivery and pregnancy outcome of obese primigravida presented with spontaneous labour at term. **Materials and Methods:** This prospective cohort study was conducted in a tertiary hospital involving 250 obese primigravida (BMI $\geq 27.5 \text{ kg/m}^2$) and 250 normal BMI primigravida. Data collected from August 2020 till January 2021 and analysed by descriptive statistics, independent T-test and Mann-Whitney test using SPSS version 23.0. **Results:** Our study found that there were no significant differences in the prevalence of vaginal delivery and caesarean delivery between obese and normal weight primigravida. No difference in labour complications such as postpartum haemorrhage and obstetrics anal sphincter injury (OASIS), with high successful delivery without complications. Obese women presented with cervical dilatation of 4cm had longer delivery interval [5.82(2.97) vs. 4.75(2.71), $p=0.013$] but shorter delivery interval at 6cm [2.41(1.58) vs. 3.61(1.78), $p=0.026$] compared to normal BMI. They also had higher caesarean rate indicated for abnormal labour progress [28(71.8) vs. 11(28.2), $p=0.019$] and higher comorbidities [149(72.3) vs. 57(27.7), $p<0.001$]. There was no difference in foetal outcome. **Conclusion:** With careful selection, obese women with spontaneous labour at term are safe for vaginal delivery as they have similar risk of labour augmentation, duration of active labour, caesarean delivery, postpartum haemorrhage, and OASIS despite higher comorbidities.



OC131

KNOWLEDGE AND PREVENTIVE PRACTICES TOWARDS SEXUALLY-TRANSMITTED
INFECTIONS (STI) AMONG PATIENTS ATTENDING STI-FRIENDLY CLINIC
IN PRIMARY CARE

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Introduction: STI-friendly clinic has been established at selected health clinics for easy accessibility and acceptability among the most-at-risk populations (MARPs) to reduce the prevalence of STI. This study is intended to evaluate the knowledge and preventive practices of patients attending the STI-friendly clinic in primary care. **Materials and Methods:** This cross-sectional study recruited 96 patients attending the STI-friendly clinic in Klinik Kesihatan Bandar Sungai Petani, Kedah. A validated self-administered questionnaire was used to assess their knowledge and preventive practices towards STI. **Results:** The median age of the participants was 29.0(IQR =15) and the majority of them were male (75.0%), Malay Muslim (82.3%), single (65.3%), had secondary education level (62.5%), homosexual (44.4%) and had no previous history of STI (67.0%). The median score for knowledge on STI was 18.50 (IQR=13). Age, education level, marital status and sexual orientation were significantly associated with knowledge level ($p < 0.05$). Participants who were single (OR 8.843, 95% CI =1.1-71.071), heterosexual (OR 10.24 95% CI=2.156-48.613) and did not finish secondary school (OR 12.28, 95% CI =1.711-88.169) were significantly associated with having poor knowledge. Preventive practices among the participants were low as only 46.9% used condom during last sexual intercourse, 68.8% did not get tested for STI annually, 83.3% of the participants did not get their partners tested for STI annually and only 52.1% had sexual intercourse with one partner. **Conclusion:** The knowledge and preventive practices among patients attending STI-friendly clinic towards STI were poor and there are needs to formulate a concise module consisting of educational and behavioural interventions in managing STI in primary care.



OC134

PAEDIATRIC ASTHMA CASE CONTROL STUDY USING TELEMEDICINE:
WHAT'S NEW?

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Introduction: Paediatric asthma is still one of the major global health concerns. Multiple risk factors play a role in the development of the disease. The study aimed to evaluate risk factors of bronchial asthma among paediatric patients in Sultan Ahmad Shah Medical Centre (SASMEC @IIUM). **Materials and Methods:** This is a case control study conducted in paediatric clinic SASMEC @IIUM. 70 patients who are asthmatic were selected as cases while 210 of those without asthma and fulfilled inclusion criteria were chosen as the control group. Data was collected from electronic medical record system (i-Pesakit) and phone interviews with parents. The data was then analysed and the differences were tested using univariate and multivariate analysis. **Results:** Patients aged "0 - 4 years" are 67.5% protected or at less risk to have asthma as compared to those aged "5 - 12 years" (95% CI 0.175 - 0.602). Paternal asthma (aOR, 5.36, 95% CI, 2.43 - 11.82) and maternal asthma (aOR, 3.03, 95% CI, 1.26 - 7.33) were also found to be significantly associated with bronchial asthma. Of all the cases group, 75.7% had mild AEBA, 20% moderate, 4.7% severe and 0% life-threatening. Risk factors such as secondhand smoke, respiratory tract infection, air pollution, weather, and allergen did not significantly contribute to the severity of exacerbations. **Conclusion:** Older age and parental asthma have significant predictive value for development of asthma. Further study is needed to evaluate whether COVID-19 pandemic and movement control disorder affect the number of cases and severity of exacerbations.



OC138

Comparison of Anaesthetic Outcomes between Mixed and Sequential Intrathecal Injection of Fentanyl with Hyperbaric Bupivacaine for Elective Surgery in IIUMMC

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Introduction: Intrathecal (IT) anaesthesia is defined as provision of anaesthesia by administration of local anaesthetics (LA) in IT space. Mixing LA and opioid in the same syringe prior to IT injection like in usual practice might alter the pharmacology of both drugs. Sequential IT injection of hyperbaric bupivacaine and fentanyl preserves the pharmacokinetics and pharmacodynamic properties of both drugs. Thus, this study aimed to compare the anaesthetic effects of sequential to the standard mixed IT injection techniques. **Materials and Methods:** Total of 33 subjects were randomized by adaptive randomization into mixed IT injection group (M group) and sequential IT injection group (S group). The M group received an IT mixture of fentanyl 15mcg and heavy bupivacaine 0.5% 2.5ml. The sequential group (S group) received sequential IT injection, fentanyl 15mcg followed by heavy bupivacaine 0.5% 2.5ml. Blood pressure, sensory and motor block data were analyzed and compared. **Results:** There are significant differences of onset of sensory block, duration of analgesia and duration of motor block between the groups (p-value < 0.05). The S group had shorter onset of sensory block (mean=3.06±1.69 min versus mean=6.18±3.92 min), longer duration for analgesia (mean=475.94±102.49 min versus mean=374.88±91.07 min) and longer duration of motor block (mean=142.19±14.50 min versus mean=115.06±34.68 min). No differences in blood pressure reduction, maximum height of sensory block, onset of motor block, and quality of surgical anaesthesia between groups (p-value>0.05). **Conclusion:** Sequential IT technique shows different anaesthetic effects as it provides rapid pain relief, prolonged pain control and serves as an alternative option for lengthy procedures.



OC147

PREVALENCE OF DEPRESSIVE SYMPTOMS AND ITS ASSOCIATED FACTORS AMONG ELDERLY IN PRIVATE NURSING HOMES IN KUANTAN

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Introduction: Mental health constitutes a major component of the global burden of disease worldwide. Residing in a nursing home poses a greater challenge for the elderly physically and mentally. This study aimed to determine the prevalence of depressive symptoms and its associated factors among elderly in private nursing homes in Kuantan. **Materials and Methods:** This was a cross-sectional study conducted at thirteen private nursing homes in Kuantan. 115 elderly residents aged 60 years old and above were recruited to complete the interview-based questionnaire. Participants were assessed with the Malay Geriatric Depression Scale(M-GDS-14), Elderly Cognitive Assessment Questionnaire (ECAQ), and Modified Barthel Index(MBI). Data were analyzed using SPSS version 25.0. Descriptive statistics was used to measure the prevalence and logistic regression to explore the association of depressive symptoms with the background variables. **Results:** The mean age of respondents was 74.1(SD \pm 8.87) and the majority were Chinese (67%) and male (51.4%). The overall prevalence of depressive symptoms was 40% with 23.5% being major depression and 16.5% of clinically significant depression. This study revealed a significant association between depressive symptoms with chronic disease {AOR 3.956, CI 95% (1.071-14.608)}, cognitive impairment {AOR 3.185, CI 95% (1.325-7.655)}, and functional disabilities {AOR 4.314, CI 95% (1.799-10.345)}. **Conclusion:** This study revealed more than 1/3 of the elderly in nursing homes living with depressive symptoms. Residents with chronic diseases, cognitive impairment, and functionally dependent should receive greater attention as early recognition and intervention are crucial to prevent further disability and dysfunction.



OC175

**EFFECT OF LENS THICKNESS ON FOVEAL FIXATION IN CATARACT PATIENTS
MEASURED USING IOL MASTER 700 BIOMETRY**

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Introduction: A good foveal fixation in cataract patients is essential in predicting postoperative visual outcomes. Many studies compared lens thickness with other associated optical biometry factors such as axial length in cataractous eyes. Yet, no study has investigated the effect of lens thickness in the cataractous eye on foveal fixation during pre-operative cataract assessment using IOL Master 700. This study aims to compare the lens thickness among patients with foveal fixation during pre-operative in cataract patients measured using the CARL ZEISS IOL Master 700 biometry. **Materials and Methods:** In this retrospective cross-sectional study, a total of 140 cataract patients (257 eyes) were recruited during pre-operative cataract assessment. Lens thickness measurement and fixation images were captured using the foveal imaging portrayed by the IOL master 700. The difference in the lens thickness between eyes with and without foveal fixation was analyzed using an independent sample t-test. **Results:** This study comprised 257 eyes from 140 patients, equally divided between gender. The mean age was 65.95(11.43) years old. The mean lens thickness in this study was 4.40(0.54) mm. Pre-operatively, foveal fixation loss was seen in 44 eyes (17.4%) compared to no foveal fixation loss in 209 eyes (82.6%). We compared the mean lens thickness with foveal fixation status and found no significant correlation with a $p\text{-value}=0.749$. **Conclusion:** In this study, the fixation status was not affected by the lens thickness. Thus, we can conclude that IOL master 700 biometric reading is reliable in cataract patients with or without foveal fixation.



OC211

**BLUNT TRAUMATIC AORTIC INJURY: WORK PROCESS OF MANAGEMENT IN A
SECONDARY DISTRICT HOSPITAL**

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Introduction: Blunt traumatic aortic injury (BTAI) is a life-threatening condition that commonly presents with concomitant injuries and those presented with isolated injury cause challenges in the diagnosis and the next approach. **Materials and Methods:** This is a case series of 5 patients with BTAI in Hospital Pakar Tuanku Fatimah (HPSF) in 1 year that were referred to tertiary centers for definitive management. **Results:** We report 5 male adults with the age range of 19-75 years old who survived with BTAI. CTA thorax was done due to suspicious widening of mediastinum from CXR and all showed Stanford B dissecting thoracic aneurysm. 2 patients had severe ISS and required ICU admission. They were referred to several tertiary centers. 4 of them proceeded with Thoracic Endovascular Aortic Repair (TEVAR) while 1 person did not proceed with endovascular intervention due to anatomical challenge. TEVAR was done on a different time frame for each patient ranging from after stabilization in ICU and up to 2 weeks post-trauma. Upon follow-up, all of them went on to a full recovery. **Conclusion:** BTAI can present as remarkably occult, hence prompt recognition is important. Stabilization and referral to tertiary centers are mandatory as TEVAR has emerged as the treatment of choice for BTAI. A proper algorithm will be beneficial for guidance to clinicians.



OC229

THE EFFECT OF POLYURETHANE FILM VERSUS *APIS DORSATA* HONEY DRESSING
FOR WOUND DRESSING FOLLOWING INTERNAL FIXATION OF LONG BONE
FRACTURES: A PROSPECTIVE, RANDOMIZED STUDY

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Introduction: Surgical site infection (SSI) following implant-related surgery is an important issue particularly in orthopaedic surgery. Honey-based dressings, with their healing and antimicrobial properties, have a potential to be used as a prophylactic agent. A prospective, randomized clinical study was conducted to compare the effect of using the conventional polyurethane film with *Apis dorsata* honey as dressing materials following long bone fracture fixations. **Materials and Methods:** 40 patients with closed diaphyseal fracture of the femur or tibia that were fixed with plates or intramedullary nails were included: 16 were dressed using polyurethane film (Group A), 13 with *Apis dorsata* honey dressing (Group B), and 11 as controls. Wounds of the two groups were dressed using a similar wound protocol, immediately (D0) and three days (D3) after surgery. In the control group, wounds were applied with non-adhesive film only. All the wounds were evaluated at day 14 and 42 for local complications and the effects on skin commensals. On day 42, wound dehiscence and scar formation were also evaluated. **Results:** *Acinetobacter* species was isolated from one of the controls. One patient from Group A had a superficial SSI. There was no significant association between wound healing and the dressing materials used. Honey dressing had a significant influence in reducing the risk of hypertrophic scar formation. Other outcomes were comparable between Group A and B. **Conclusion:** *Apis dorsata* honey is a safe alternative dressing comparable to polyurethane film as a dressing material following long bone fracture fixation.



ONC122
FACTORS ASSOCIATED WITH KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS
E-CIGARETTE USE AMONG MIDDLE AND LATE ADOLESCENT IN KOTA BHARU
DISTRICT

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Introduction: Electronic cigarettes have gained popularity among cigarette users and adolescents despite its uncertainty of health risk. It has evolved in shape, flavors that attract users. Trend of e-cigarette users among adults aged 15 and above is from 0.8% in 2011 to 10.9% in 2015. Male, young, poor knowledge, family history of smoking are the common associated factors. We aim to determine prevalence, knowledge, attitude, practice, and its associated factors of e-cigarette among adolescents aged 15-19 years old in Kota Bharu district in 2020. **Materials and Methods:** The study was an analytical cross-sectional study, conducted in Mac 2020 on 440 adolescents in Kota Bharu district, who were sampled by using snowball sampling. Data was collected by self-administered questionnaire (google form) and analysed using SPSS version 25.0. **Results:** Majority of the respondents (90.6%, n=399) had ever heard of e-cigarettes. More than half (64.9%) of the respondents had good knowledge on e-cigarette and 50.4% opposed e-cigarette. About 24.4% of the respondents were e-cigarette users and 11.3% were dual users. Gender (male) was found to have association between level of knowledge, attitude towards e-cigarette and practice on e-cigarette ($p<0.001$). Level of knowledge and attitude towards e-cigarette were found to have association with practice of e-cigarette ($p<0.001$). Males were 15 times more likely to practice e-cigarette ($p<0.001$). Attitude (supporting e-cigarette) was 4 times more likely to practice e-cigarette ($p<0.001$). **Conclusion:** From this study, gender and attitude toward e-cigarette were found to be predictors for the practice of e-cigarette. Our study recommends strengthening health education, communication and collaboration with school and parents to combat the practice e-cigarette among adolescents.



ONC128

THE EFFECTS OF TUALANG HONEY AND ITS SILVER NANOPARTICLES ON
HIPPOCAMPAL DAMAGE AND APOPTOSIS IN KAINIC ACID-INDUCED RAT

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Introduction: Kainic acid (KA) was shown to be involved in the mechanism of excitotoxicity-induced neurodegeneration and apoptosis in the brain. Tualang honey (TH) was reported to have protection against it but no study has explored on its silver nanoparticles (THSN). Therefore, this study aimed to determine the effects of TH and THSN on caspase-3 activity and hippocampal injury in KA-induced rats. **Materials and Methods:** Sprague-Dawley rats were randomized into eight groups: (i) control, (ii) THSN (10 mg/kg), (iii) THSN (50 mg/kg), (iv) KA only, (v) KA + TH, (vi) KA + THSN (10 mg/kg), (vii) KA + THSN (50 mg/kg), and (viii) KA + Topiramate (TPM). All rats were pretreated orally with either distilled water, THSN (10 or 50 mg/kg), TH (1.0 g/kg), or TPM, an antiepileptic drug (40 mg/kg), five times at 12 hours intervals. Saline or KA (15 mg/kg) were injected subcutaneously 30 min after last oral treatment and all rats were sacrificed 24 hours post KA induction. Hippocampus was harvested for histological examination using fluoro jade C (FJC) staining. Caspase-3 activity was measured using commercially available ELISA kit. **Results:** The significant ($p < 0.05$) increase in the number of FJC-positive cells in hippocampal CA2 and CA3 in KA only group was ameliorated by the TH and THSN pretreatment groups. Meanwhile, the elevation of caspase-3 activity in KA only group was significantly ($p < 0.05$) reduced in KA + THSN (10 mg group). **Conclusion:** Both TH and THSN pretreatments prevent neurodegeneration in the rats' hippocampus. Remarkably, only pretreatment of THSN (10 mg/kg) reduces the apoptotic marker caspase-3 activity in KA-induced rats.



ONC136

ESTABLISHING AND VALIDATING 1-METHYL-2-PHENYL-1,2,3,6-TETRAHYDROPYRIDINE (MPTP)-INDUCED ZEBRAFISH MODEL OF PARKINSON'S DISEASE

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Introduction: 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) is among the commonest neurotoxins used to induce Parkinson's disease (PD) in animal models as it triggers selective dopaminergic neurodegeneration. Zebrafish has been well established as an ideal model of neurodegenerative diseases, including PD. Here, we demonstrate the establishment of a zebrafish model of PD using MPTP neurotoxin and the validation of the MPTP effect through swimming behavior assessment. **Materials and Methods:** To establish the PD model, we performed intraperitoneal injection of MPTP (100µg/g body weight) into three-month old zebrafish (n=6). Saline was given to the control group. Precautions were taken during the injection to minimize stress. After the injection, zebrafish were transferred to a recovery tank containing anti-bacterial treatment to aid the healing process. To validate the effect of MPTP, we assessed the swimming behavior in an open field test. We analyzed the swimming patterns (swimming distance, velocity, mobility state, and freezing bouts) using EthoVision XT tracking software. The results were statistically compared between the MPTP-induced group and control group. **Results:** Assessment of the swimming patterns showed lesser swimming distance, velocity, and mobility, and higher freezing bouts in the MPTP-induced group compared to the control group, mimicking bradykinesia and dyskinesia of human PD. No mortality was recorded throughout the injection procedure, suggesting a safe MPTP delivery technique. **Conclusion:** Neuronal damage resulted from MPTP neurotoxin induced PD-like symptoms in adult zebrafish, which can be validated by assessing the swimming patterns in an open field test. Modelling PD using zebrafish enables deeper understanding of the etiology and pathogenesis of this disease.



ONC162

**NORMALIZATION OF SPEECH STIMULI IN TEST SPECIFIC NOISE AND BABBLE NOISE
FOR THE PEDIATRIC MALAY MATRIX SENTENCE TEST**

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Introduction: The Paediatric Malay Matrix Sentence Test (PedMalayMST) was developed for six to 12-year-old Malay native speakers as a speech-in-noise test. The sentences were generated from a base of six words from three different categories; numeral, object and adjective. The speech stimuli were recorded in continuous sentences and then edited into single words to account for the coarticulation. This study aimed to normalize the 18-word tokens to ensure all the speech materials were homogeneous. **Materials and Methods:** The intelligibility data were obtained from 20 normal hearing adult Malay native speakers. The sentences were presented monaurally in test specific noise (TSN) and babble noise (BN) at five different signal-to-noise ratios (SNR). The speech reception threshold in noise (SRTn) and slope of intelligibility were obtained for both noises. Level adjustments up to ± 4 dB were made for all words to match the overall mean pre-normalization SRTn. **Results:** The mean pre-normalization SRTn and slope of intelligibility were -12.59 ± 2.1 dB SNR and $8.56\%/dB$ respectively in TSN whereas in BN, the mean SRTn and slope were -12.95 ± 1.02 dB SNR and $9.26 \%/dB$ respectively. After level adjustment, the predicted post-normalization means for SRTn and slope of intelligibility in TSN were -12.62 ± 0.1 dB SNR and $22.04 \pm 7.9\%/dB$, while in BN the mean SRTn were -12.98 ± 0.06 dB SNR and $16.74 \%/dB$ respectively. **Conclusion:** The normalization of speech stimuli increased the predicted slope of intelligibility in both types of noises indicating that the stimuli were of equal loudness.



ONC171

EVALUATION OF HISTOLOGIC LOCALIZATION OF TUMOUR-ASSOCIATED
MACROPHAGES IN INVASIVE BREAST CARCINOMA AND ITS ASSOCIATION WITH
PROGNOSTIC PARAMETERS

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Introduction: There were 2.1 million new cases of breast cancer in 2018 worldwide. Recent cancer research has focused on the heterogeneous population of cells within the tumour microenvironment (TME). Non-cancerous cells surrounding the tumour and macrophages are the most abundant cells in TME. These macrophages, termed as tumour-associated macrophages (TAMs), are responsible for modulation of tumour growth and metastasis. This study aimed to evaluate the localization of TAMs infiltration within samples of breast carcinoma and its association with pathological prognostic parameters. **Materials and Methods:** In 128 paraffin-embedded cases diagnosed as invasive carcinoma, TAMs were immunostained with anti-CD163 antibody and the density of TAMs were counted within the tumour nests and tumour stroma. **Results:** TAMs were seen in both Tumour nests and tumour stroma. High CD163-positive stromal ($p=0.0001$) and nest ($p=0.005$) TAMs were significantly associated with higher tumour grades. High CD163-positive stromal TAMs were also significantly associated with negative estrogen receptor (ER) and progesterone receptor (PR) markers ($p<0.0001$ and $p=0.001$, respectively), and triple-negative subtype ($p=0.002$). Multivariate analysis showed that tumours with higher grades had higher TAMs infiltration in both tumour stroma ($p=0.005$; Odds Ratio (OR)= 13.917; 95% Confidence Interval (CI)=2.178-88.910) and nest ($p=0.021$; OR= 6.201; 95% CI=1.314-29.260). **Conclusion:** This research revealed that high TAMs infiltration in tumour stroma was associated with poor prognostic parameters. We also found that TAMs in tumour stroma and nests had different degrees of association with the clinicopathological parameters. Therefore, evaluation of TAMs will be a useful prognostic marker and may serve as potential cellular target for novel treatment modality in invasive breast cancers.



ONC199

**TUALANG HONEY SUPPLEMENTATION ALLEVIATES OBESITY AND DYSLIPIDAEMIA
IN HIGH CHOLESTEROL DIET INDUCED NON-ALCOHOLIC STEATOHEPATITIS
ANIMAL MODEL**

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Introduction: Dyslipidaemia and obesity are two main features of non-alcoholic steatohepatitis (NASH). This study aimed to investigate the effects of Tualang honey (TH) supplementation on bodyweight, liver weight and lipid profiles in high cholesterol diet (HCD) induced NASH animal model. **Materials and Methods:** Sixteen Sprague-Dawley rats were given 12% HCD for 16 weeks to induce NASH. These animals were then divided into 4 groups for the following diet plan and treatment: Group 1 (continued on HCD), Group 2 (changed to normal diet), Group 3 (normal diet and TH 1.2g/kg) and Group 4 (normal diet and TH 3.0g/kg) for 4 weeks. Body weight measurements were taken daily. At the end of the study period, blood was collected via retro-orbital bleeding for biochemical analysis and the rats were sacrificed to harvest their liver. **Results:** The group 4 rats had significantly lower mean final bodyweight as compared to group 1,2 and 3 rats (478.0 ± 24.4 vs. 635.5 ± 23.9 , 593.8 ± 29.3 , 552.0 ± 72.9 g, $p < 0.05$). Animals in group 4 were also found to have a significantly lower mean relative liver weight compared to groups 1 and 2 (12.9 ± 0.9 vs 22.2 ± 2.4 , 15.7 ± 1.2 g, $p < 0.05$). In comparison to the group 1 animals, the mean concentration of total cholesterol was significantly lower in all the other groups (3.1 ± 0.7 vs 1.8 ± 0.1 , 1.5 ± 0.2 , 1.65 ± 0.1 mmol/L, $p < 0.05$). The lowest mean concentration of triglycerides was recorded in rats of group 4 with significant difference when compared to group 1 (3.3 ± 0.6 vs 0.9 ± 0.4 mmol/L, $p < 0.05$). **Conclusion:** The change from HCD to a normal diet coupled with TH supplementation has shown to reduce bodyweight, liver weight, total cholesterol and triglyceride levels in the 12% HCD NASH induced animal models.



ONC207

THE RELATIONSHIP BETWEEN EMOTION REGULATION AND MENTAL WELL-BEING
AMONG IUM STUDENTS DURING COVID-19

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Introduction: Studies have shown that emotion regulation has a significant association with mental health. It also serves as a protective factor against mental illness. This current study intends to examine how emotion regulation contributes to mental well-being of university students especially in the pandemic. **Materials and Methods:** A cross-sectional study conducted among 478 university students (221 medical and 257 non-medical students) were selected using convenience sampling Methods. Data were collected using Emotion Regulation Questionnaire (ERQ) and Short Warwick-Edinburgh Mental Well-being Scale (SWEMBS). Chi-Square test, T-test, Pearson correlation and linear regression using SPSS version 25 were used to analyse the data. **Results:** Gender, age, education level and marital status were significantly associated with medical and non-medical students ($p < 0.05$). There is a significant difference between mental well-being and Expressive Suppression strategy (subscale of ERQ) between medical and non-medical students respectively ($p < 0.003$, $p < 0.01$). A significant positive correlation was established between Cognitive Reappraisal (subscale of ERQ) and mental well-being with the value of ($r = 0.45$, $p < 0.001$), while Expressive Suppression showed no significant correlation. Regression analysis indicated that Cognitive Reappraisal could predict the mental well-being of university students ($B = 2.11$, $p < 0.001$). **Conclusion:** Emotion regulation has been found to have a relationship with mental well-being of university students especially in the subscale of Cognitive Reappraisal. Cognitive reappraisal has been found to predict mental well-being of students which shows that by changing the way one thinks about a life situation, it may help them to have an improved mental well-being.



ONC216

PROFILING PHYSIOLOGICAL RESPONSES AND RESPIRATOR FIT OF PUBLIC HEALTH WORKERS: PRE AND POST MOSQUITO CONTROL ACTIVITY

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Introduction: Respirators play an important role in protecting public health workers from inhaling hazardous substances during pesticide spraying. The fit of the respirator to the face determines how well it works. However, spraying activity conducted while wearing a respirator in a hot climate may influence the worker's physiological changes and respirator fit. The study aimed to measure the physiological and respirator fit changes of the mosquito control workers in pesticide spraying. **Materials and Methods:** Pre-test and post-test data on respirator fit factor, sweat rate ($\text{g}\cdot\text{m}^{-1}\cdot\text{h}^{-1}$), heart rate (bpm) and breathing rate (bpm) were collected from 43 workers involved in pesticide spraying. Malaysian meteorological data was used to obtain temperature and humidity information. A paired-t test was used to show any differences in respirator fit and physiological parameters for the respirator user. **Results:** The respondents were all men, with a mean age of 39 ± 7.1 years. During the fieldwork study, the temperature and humidity ranges were 22°C - 34°C and 49%-95%, respectively. There were significant differences in post-spraying activity compared with baseline: breathing rate (pre-, mean of 19.49, $\text{SD}=4.78$; post-, mean of 23.56, $\text{SD}=4.45$; $t(42)=-4.67$, ($p=0.05$), heart rate (pre-, geometric mean (GM) = 97.72, $\text{SD}=1.17$; post-, GM = 112.20, $\text{SD}=1.12$; $t(42)=-10.11$, ($p=0.05$), sweat rate (pre-, GM = 18.62, $\text{SD}=1.66$; $t(42)=-8.67$, ($p=0.05$). However, there were no significant changes in the respirator fit factor. **Conclusion:** In conclusion, the use of respirators during pesticide spraying activities under hot and humid conditions can result in considerable changes in the physiological parameters of the workers





ABSTRACTS

POSTER PRESENTATIONS



PC101

**ACUTE INCARCERATION PROLAPSED SOLITARY RECTAL ULCER:
A RARE CASE OF ANORECTAL EMERGENCY**

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We aim to report a case of acute incarceration prolapsed giant solitary rectal ulcer that was treated successfully by transanal excision. A 17-year-old male presented to emergency department with an acute incarcerated mass protruding from the anal canal 3 hours prior. Patient was diagnosed with a solitary rectal ulcer syndrome for one year-old and started receiving medical treatment with signs of partial recovery. On clinical examination, vital signs were within normal limits. His abdomen was not tender and had no signs of peritoneal irritation. Rectal examination revealed a 15 cm x 10 cm incarcerated prolapsed mass, looked like cauliflower, because of the failure of external manual reduction we decided to bring the patient to the operating room. The mass was removed by transanal excision under spinal anaesthesia and the histopathologic result is consistent with solitary rectal ulcer. Our case is a rare presentation of SRUS, although less common than other causes of prolapsed anal mass, it should be considered as part of the differential diagnosis.



PC102

**TREATMENT AND OUTCOME OF GASTROINTESTINAL BLEEDING:
AN OBSERVATIONAL MULTICENTRE STUDY IN EAST COAST REGION OF
PENINSULAR MALAYSIA**

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Introduction: Lower gastrointestinal bleeding (LGIB) is bleeding that occurs in the lower gastrointestinal tract, which distal from Ligament of Treitz. It is one of the commonest indications for hospital admission which accounts for 1% total presentation in the emergency department. Data on LGIB in the East Coast of Peninsular Malaysia is scant. The aim of our study was to describe patient characteristics, interventions and assess clinical outcomes for patients with new onset of LGIB in the East Coast of Peninsular Malaysia. **Materials and Methods:** This was a multicentre cross-sectional study of patients presenting with LGIB to east coast hospitals between September 2019 and September 2020. Data were collected prospectively, and short-term outcomes were evaluated. **Results:** 54 patients (59% male) were recruited, most were elderly. Colonoscopy was the most common investigation, but no patient received endoscopic haemostasis. None of the patients required use of embolization or surgery. 34 % of patients underwent no inpatient investigations. The most common diagnoses were haemorrhoid (48%) and rectal ulcer (11%). 15% of patients present with massive bleeding. Mean length of stay was 4 ± 3 days, 9 % patients re-bled during admission. No in-hospital mortality due to bleeding. 35 (65%) received a red cell transfusion. **Conclusion:** LGIB is common among elderly males. The common cause of bleeding was benign anorectal conditions. Most patients required no endoscopic, radiological or surgical treatment and no mortality.



PC103

DUCTAL ADENOCARCINOMA OF PROSTATE: A RARE VARIANT

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Ductal adenocarcinoma of the prostate (DAP) is rare, an aggressive histologic subtype of prostate cancer accounting for 0.4-0.8% in pure type and 5% in mixed ductal in all prostates. Mostly, it is present in the prostatic urethra around the verumontanum, compared with acinar adenocarcinoma of the prostate (AAP), DAP carries a worse prognosis. Many of the cases were treated with radical prostatectomy with or without adjuvant and/or neoadjuvant chemotherapy. We report a metastatic prostatic ductal adenocarcinoma case that is treated with only leuporelin acetate. In December 2019, a 72-year-old Malay gentleman presented to the Emergency Department with the chief complaint of acute urinary retention for four days with a history of haematuria, dysuria, incomplete voiding, and lower abdominal pain. Digital rectal examination revealed hard and nodular prostate. The prostatic specific antigen was 37.1 ng/mL and other blood investigations were normal. Prostate gland is enlarged and measured 5.4cm x 4.5cm x 4.5cm by ultrasound. He underwent transrectal ultrasound guided biopsy of prostate. Histopathological examination revealed malignant cells arranged in glandular pattern and papillary architecture involving both prostate lobes. A focal area of perineural invasion is seen. Total percentage of cancer (TPC) is 5.1%. CT scan showed bony metastasis. Due to advanced disease, he is treated with the leuporelin acetate for every three months with PSA monitoring. After 12 months, PSA level reduced from 37.1 to less than 0.008. Our patient has a good response to the hormonal therapy without prostatectomy, evidenced by no biochemical recurrence.



PC104

**SKULL METASTASIS IN FOLLICULAR VARIANT OF PAPILLARY THYROID CANCER:
A CASE REPORT**

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Thyroid cancer is among the 10 most common cancers in Malaysia, with highest incidence in the Malay ethnic group. Papillary Thyroid Carcinoma (PTC) is the most common form accounting for 80-85% of all thyroid cancer cases, with the majority being the follicular variant. PTC generally metastasizes to the regional lymph nodes and lungs. Bone metastasis is uncommon in PTC, and skull metastasis is a rare occurrence. Here we report a case of a 30 years old Malay lady who presented to the surgical outpatient clinic with right neck swelling for 1 year, which was gradually increasing in size. The lump was painless, and she had no compressive symptoms. She was clinically and biochemically in euthyroid state. Ultrasound showed a 3.1cm x3.6cm x4.2cm right thyroid nodule with TIRADS 3 classification. Fine Needle Aspiration Cytology (FNAC) was reported as benign follicular nodule, subsequently she underwent right hemi-thyroidectomy. The histopathology examination showed follicular variant PTC. Therefore, completion of thyroidectomy was performed. Post-operative radioactive iodine (RAI) was given, however, her whole-body scintigraphy (WBS) revealed tracer uptake at the right high parietal region. In conclusion, follicular variant of PTC (FV-PTC) has a unique clinical behavior. Rarely, FV-PTC has bone metastasis and if it occurs, it is associated with poor prognosis. Surely, diagnosis can be challenging. Therefore, pre-operative multidisciplinary discussion with a nuclear medicine team may provide a better view in direction of treatment. As for post-operative care, regular follow up is needed and to consider meticulous investigation in the event of probable skull metastasis.



PC106

THE NOMADIC BUG: A CASE REPORT OF SALMONELLA SEPTIC ARTHRITIS OF THE STERNOCLAVICULAR JOINT

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Septic arthritis of the sternoclavicular joint is extremely rare in an otherwise healthy adult. It is reported to affect less than 0.5 % of all bone and joint infections. It usually affects immunocompromised patients or patients with a history of intravenous drug abuse. Septic arthritis of the sternoclavicular joint requires immediate treatment to prevent morbidity and mortality. Serious complications from this condition include osteomyelitis, chest wall abscess and mediastinitis. We present a rare case of sternoclavicular septic arthritis caused by *Salmonella* sp. in a healthy 49-year-old lady complicated with lung empyema and mediastinitis. With early detection, her condition improved with antibiotics and aspiration of the lung empyema. To our knowledge, only two previous cases of *Salmonella* septic arthritis of the sternoclavicular joint were reported in the literature.



PC107

CASE REPORT: COELIAC ARTERY-GDA ANEURYSM; SUCCESSFUL ENDOVASCULAR COIL EMBOLIZATION

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Coeliac artery- GDA aneurysm (CAA) is a rare visceral artery aneurysm, comprising less than 5 % of visceral artery aneurysm (VAA). Most of these aneurysms are detected incidentally and the patient usually is asymptomatic. Early detection is crucial to avoid complications, as rupture of these aneurysms can be fatal. We present a rare case of coeliac artery - GDA aneurysm found incidentally in a man who came with left upper abdominal pain which later revealed ruptured peptic ulcer disease and a left renal mass. Interestingly and luckily for this patient, the common hepatic artery and the splenic artery are coming off the superior mesenteric artery (SMA). This is a type IX anatomical variation which is a total replacement of the common hepatic artery (CHA) to SMA. This anatomical variant is an important factor for a patient's suitability for the endovascular embolization. Patient then had a successful endovascular embolization.



PC109

THE EFFECTIVENESS OF TABLETOP EXERCISE (TTX) IN IMPROVING KNOWLEDGE
AND ATTITUDE OF DISASTER PREPAREDNESS AMONG NURSING STUDENTS IN
IIUM Kuantan

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Introduction: Nursing students as a future nurse should practice disaster exercise as it can increase their preparedness for disaster response. Tabletop exercise (TTX), one of disaster exercises where a group discusses a simulation of an emergency situation which is led by a facilitator, found to be cost-effective and efficient as disaster training compared to other exercises. Yet, there are limited studies reporting on the effectiveness of this method among nursing students in Malaysia. The objective of this study aimed to evaluate the effectiveness of tabletop exercise (TTX) in assessing disaster preparedness among nursing students in IIUM Kuantan. **Materials and Methods:** A quantitative study; quasi-experimental with one group pre- and post-test design was carried out at Clinical Skills Centre (CSC) Kulliyah of Nursing, IIUM Kuantan on 4th April 2021. Purposive sampling Methods had been utilised and a total of 22 nursing students from Batch 172 who had completed both courses NURD 3415 Emergency, Theatre and Intensive Care Nursing and NURD 3326 Emergency, Theatre and Intensive Care Nursing Practice were chosen as samples. The study consisted of pre- and post-test measurement regarding knowledge and attitude of TTX. The intervention of TTX was started using the main scenario of motor-vehicle accident simulation utilising TTX equipment provided. **Results:** This study revealed that knowledge ($p=0.001$) and attitude ($p=0.000$) of nursing students in IIUM Kuantan were significantly higher post-intervention. It also found that gender ($p=0.031$) and involvement in disaster experience ($p=0.00$) were identified as factors that influence the knowledge of nursing students on TTX implementation. **Conclusion:** Tabletop exercise had significantly proven to be effective as a disaster learning method in nursing field.



PC113

**VERTEBROBASILAR DOLICHOECTASIA AND VERTEBRAL ARTERY COMPRESSION OF
MEDULLA OBLONGATA CAUSING UNSTEADINESS AND INTERMITTENT
HEMIPARESIS: CASE SERIES**

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Symptomatic medulla oblongata compressing lesions due to compression by vertebral artery are not much described in the literature. Among these, majority have been attributed to dolichoectasia in the vertebral-basilar system. Here we report a case series of three patients with Vertebrobasilar dolichoectasia (VBD) and vertebral artery compression of medulla oblongata who were presented to our centre in 2021. A 56-year-old lady presented with dizziness and unsteady gait for a year, without any other neurological symptoms and a 53-year-old gentleman who presented with intermittent left sided upper and lower limb weakness with unsteadiness. In both patients, magnetic resonance imaging revealed a vertebral artery exerting compressive effect on the medulla oblongata, with contra-lateral vertebral artery being small in calibre. Another case is a 70-year-old gentleman who complained of headache for a year, associated with intermittent left sided weakness with facial asymmetry and imbalance. MRI revealed a dilated basilar artery with prominent left vertebral artery. In conclusion, VBD and vertebral artery compression on the medulla oblongata may present with heterogeneous symptoms. More studies are needed to further understand the incidence, natural course and intervention of this condition.



PC114

COMPUTED TOMOGRAPHY (CT) IMAGING FEATURES OF PLEOMORPHIC ADENOMA

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Pleomorphic adenoma of the salivary glands are the most common salivary glands tumors. The diagnosis is made by clinical and pathological examination. CT is the primary imaging modality use to assess the tumors. Malignant transformation, though rare has been reported. The treatment is surgical excision. We report a case of 50 years old lady with a slowly enlarging, painless right upper neck swelling. The patient did not have constitutional or symptoms of upper airway obstruction. CT shows a large heterogeneous mass within the right submandibular region. FNAC reveal right submandibular pleomorphic adenoma. In this case report we discuss the CT imaging features of pleomorphic adenoma as well as the differential diagnosis.



PC116

SEVERE STRESS MIMIC HEART DISEASE DURING COVID19 PANDEMIC

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Mental health illness during the COVID-19 pandemic poses a dilemma, particularly the distinction between heart disease and severe stress. Without early intervention, it can be escalating into anxiety disorder or depression with suicidal risk. A 44-year-old man sought a cardiologist consultation due to the "heart disease" symptoms. He has huge commitments and responsibilities during the COVID-19 pandemic as a lab technician in charge adding to his hypertension and dyslipidaemia comorbidities. Despite non-significant investigations related to heart disease, he returned with the same intense unresolved symptoms. His Depression-Anxiety-Stress-Score (DASS) assessment revealed severe stress. Stress management counselling includes detecting the underlying stress impacted by the COVID-19 pandemic, behavioural changes, and stress coping skills was done in 4 sessions. The 1st one-hour session was to instill positive thinking and behavioural changes of the underlying severe stress and to counsel the stress coping skills. Stress coping skills include relaxation techniques (Deep Breathing Technique and Progressive Relaxation Methods) and spiritual empowerment (Islamic Integrated Meditation). The next three counselling sessions of thirty minutes duration to enhance the positive thinking and stress coping skills were done at two-week intervals. A twelve-week follow-up reassessment of stress level has shown a significant improvement of DASS score with no similar symptoms' complaint. This case highlights the clinical complexity and diagnostic challenges in detecting mental health illness during pandemics. A systematic diagnostic approach of biological and psychosocial underlying problem lists demonstrated that without a high index of suspicion, mental health illness may be overlooked.



PC118

A REAL-LIFE DATA ON THE EFFICACY OF SOFOSBUVIR AND DACLATASVIR
COMBINATION IN KOTA BHARU

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Introduction: Hepatitis C virus (HCV) is a leading cause of liver-related deaths, cirrhosis, and hepatocellular carcinoma. The combination of daclatasvir (DAC) and sofosbuvir (SOF) is one of the accepted pan genotypic regimen for Hepatitis C with high efficacy (up to 96%) in noncirrhotic and cirrhotic patients (up to 84%⁴). We would like to capture our real-life data on its efficacy in our cohort of Kota Bharu, Kelantan, Malaysia. **Materials and Methods:** Data were collected for all adult patients chronically infected with HCV undergoing treatment with SOF and DAC ± ribavirin (RBV) in between 1st May 2018 until 30th September 2020. The primary efficacy endpoint was SVR12, defined as undetectable HCV RNA 12 weeks after the end of treatment (SVR12). We are also looking at factors lowering efficacy and medication safety. **Results:** There were a total of 231 hepatitis C patients enrolled. We had male (Male: Female = 186:45) and Malay (Malay: Chinese: Others = 220:6:5) predominant in our cohort. Majority of our patients were treatment naive (n=215) and a little more than half were cirrhotic (n=132). Genotype 3 and 1a were most prevalent (100 and 78 respectively). Out of 231 patients, 201 completed the treatment and came back for the SVR12 testing rest were lost to follow up. Overall SVR12 percentage was 94.5% (n=190; 95.5%non-cirrhotic, 93.8% cirrhotic). Among 11 patients who didn't achieve SVR12, 7 were cirrhotic, 1 treatment experienced and mostly genotype 3 (n=9). Only 6 adverse drug reactions were reported, and all 6 patients were able to complete the DAA. **Conclusion:** The data we presented in this study echoes previously published reports of the efficacy of SOF+DAC combination for the treatment of HCV infection with over 90% SVR12 rate. These drug combinations appear safe with no major adverse reaction.



PC121

**THE EFFECT OF STRUCTURED PHYSICAL ACTIVITY DURING PREGNANCY ON
MATERNAL HEALTH AND FOETAL OUTCOMES: A SYSTEMATIC REVIEW**

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Introduction: Current guidelines recommend pregnant women to be physically active. It has been shown that exercise during pregnancy contributes to positive impacts on maternal and foetal outcomes. The aim of this review was to assess and determine the effects of structured physical activity on maternal health and foetal outcome. **Materials and Methods:** Literature was retrieved from electronic databases, namely PubMed, Google Scholar, Scopus, Medline, Cochrane Library and Science Direct published from 2015 to 2020. Trials published in English involving low-risk, uncomplicated pregnancies evaluating the effects of structured physical activity during pregnancy on maternal and foetal outcome were included. Outcomes assessed were gestational weight gain, lumbopelvic pain, gestational diabetes mellitus, pre-eclampsia, premature delivery, and birth weight. The authors assessed the risk of bias in all eligible studies using Revman Software. **Results:** Twenty studies were included in this systematic review. Structured physical activity during pregnancy did not cause an adverse effect on gestational duration and birth weight. The majority of the studies reported a positive or neutral effect on the incidence of gestational diabetes, pre-eclampsia, and gestational weight gain. Three studies demonstrated that exercise did help to reduce lumbopelvic pain during pregnancy. **Conclusion:** Exercise during pregnancy is beneficial for maternal and foetal health outcomes when practiced according to recommendations. This review is the first to suggest that structured physical activity is associated with significant benefits related to maternal and foetal outcomes. Therefore, it is recommended that healthcare providers encourage and develop tailored exercise program to improve maternal health and foetal outcome.



PC123

KNOWLEDGE OF NURSERY AND KINDERGARTEN CAREGIVERS ON GROWTH AND DEVELOPMENTAL ASSESSMENT

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Introduction: Nursery caregivers play an important role in assessing the growth and development of a growing child so that any pathology can be detected promptly and early referral to clinician can be done. This study aims to determine the level of knowledge, attitude and practice of nursery and kindergarten caregivers on growth and developmental assessment of young children and to assess the effectiveness of a new online training module to improve the knowledge and attitude of these caregivers on the growth and developmental assessment. **Materials and Methods:** We conducted a prospective cohort study involving 120 caregiver nurseries and kindergartens around Kuantan. Participants enrolled into an online training module with a pre- and post-training assessment. **Results:** There was a significant improvement in the knowledge domain for both growth and development with mean difference (95% CI) and p-value of 8.07 (6.69, 9.46), p value <0.001 and 7.48 (5.36, 9.61), p value <0.001. Caregivers with working experiences between 5-9 years were 10 times more likely to have higher knowledge scores at baseline (95% CI = 2.53, 41.02, p-value 0.01) compared to those with less than five years experience. **Conclusion:** Knowledge of caregivers on growth and developmental assessment of young children can be improved with the implementation of an effective online training session.



PC124

PREVALENCE OF LONELINESS AND ITS ASSOCIATED FACTORS AMONG ELDERLY ATTENDING PRIMARY HEALTH CLINICS IN KUANTAN, PAHANG

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Introduction: Loneliness is very common in late stages of life. Previous studies showed that loneliness is associated with depression, sleep problems and suicidal ideation. There is limited data and studies regarding loneliness among elderly in Malaysia. The aim of this study was to measure the prevalence of loneliness and its associated factors among elderly attending primary health clinics in Kuantan, Pahang. **Materials and Methods:** A cross sectional study was conducted in 4 selected primary health clinics in Kuantan. A total of 350 elderly aged 60 years and above were recruited. The data were collected by an interviewer administered questionnaire. A validated Malay version of 6-Item De Jong Gierveld Loneliness Scale was used to measure loneliness. Descriptive statistics were used to measure the prevalence and logistic regression to identify factors associated with loneliness among elderly. Data were analysed using SPSS version 25.0. **Results:** About 97.1% were elderly and 2.9% were oldest old. Majority were female (69.1%), Malay (77.1%), married (62%), have at least 1 child (94.9%) and lives with children (65.1%). The prevalence of loneliness among elderly attending primary health clinics in Kuantan is 48%. This study showed that the oldest old (AOR: 9.099 CI: 1.086-76.237) and being single/widowed/divorced/separated (AOR 2.33 CI: 1.426-3.81) were significantly associated with loneliness, while co-residence with children is a protective factor for loneliness (AOR: 0.552 CI: 0.335-0.909). **Conclusion:** Loneliness is a modifiable health risk. Therefore, it is important to identify loneliness among elderly and intervene early.



PC125

**PREVALENCE OF FEMALE SEXUAL DYSFUNCTION AND ITS ASSOCIATED FACTORS
AMONG TYPE 2 DIABETES MELLITUS PATIENTS IN KUANTAN, PAHANG**

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Introduction: Diabetes mellitus is associated with various complications, including sexual dysfunction. The objectives of this study were to measure the prevalence of female sexual dysfunction (FSD) and its associated factors among type 2 diabetes mellitus (T2DM) patients attending primary health clinics in Kuantan. **Materials and Methods:** A cross-sectional study was conducted in 5 primary care clinics in Kuantan. Data were collected using an interviewer-administered questionnaire. The Questionnaire is divided into 3 sections: sociodemographic, Malay Version of Female Sexual Function Index (MVFSFI), and 9-item patient health questionnaire (PHQ-9). Data were analysed using SPSS version 25.0. **Results:** This study had recruited 241 respondents. The mean age of respondents involved was 52.9 (7.75). The majority were Malay (79.3%), Muslim (80.5%), housewives (68%), and menopause (54.4%). The prevalence of FSD was 39.8%. The most common sexual dysfunction was desire (63.5%), followed by arousal (44.4%), lubrication (35.7%), orgasm (38.6%), satisfaction (38.6%) and pain (33.6%). Multivariate analysis showed that non-Malay (AOR: 2.5, 95% CI:1.24 to 5.23), depression (AOR: 4.5, CI:1.30 to 15.57), and longer duration of marriage (AOR 1.08, CI:1.03 to 1.14) were significantly associated with FSD while having more children is a protective factor (AOR: 0.82, CI:0.69 to 0.97). **Conclusion:** Prevalence of FSD was high and clinicians should concern sexual health as an essential aspect to be focused on when treating T2DM patients, especially among non-Malay, patients with a longer duration of the marriage, a lesser number of children, and those who presented with depressive symptoms.



PC126

A SIX YEAR REVIEW OF PLACENTA ACCRETA SPECTRUM DISORDER IN A TERTIARY REFERRAL HOSPITAL

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Introduction: Placenta Accreta Spectrum results from the rising caesarean sections, hence impacting maternal morbidity and mortality. This research is a review of women with PAS at a single tertiary center from 2015 till 2020. **Materials and Methods:** Data from medical records were collected in which women with PAS were categorized according to their primary surgical approach. SPSS version 25.0 was used for descriptive analysis. **Results:** There were 65 PAS cases with an overall incidence of 1 per 1000 deliveries. Four cases were excluded due to missing records. PAS affected women of age 35.8+/-4.8(36), 85% were multiparous, 96% of the women had previous caesarean delivery in whom 88% had placenta praevia. Thirty-eight had a primary caesarean hysterectomy, 23 had uterine conserving surgery. Fourteen women required delayed hysterectomy due to complications. Prenatal imaging (US/MRI) had a significant association with the intraoperative findings and histopathological confirmation of PAS ($p<0.01$). Adjunct procedure (internal iliac artery balloon occlusion, uterine artery embolization, uterine artery ligation) on both groups showed no significant effect on the blood loss ($p=0.64$). Caesarean hysterectomy was associated with higher blood loss, blood transfusions and bladder injury ($p<0.05$). There was no maternal death in this study. No pregnancy reported in the uterine conserved group. **Conclusion:** Previous caesarean delivery is the leading risk factor for PAS. Primary caesarean hysterectomy carries higher morbidity. Conservative approach is possible in selected cases through perioperative planning in an established well-equipped center.



PC127

**ACUTE PORTO-SPLENO-MESENTERIC VEIN THROMBOSIS WITH PNEUMATOSIS
INTESTINALIS AFTER CHADOX1 NCOV-19 (ASTRAZENECA) VACCINATION: A CASE
REPORT OF SUCCESSFUL MEDICAL TREATMENT AND IMAGING FINDINGS**

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While rapid development of novel vaccines against COVID-19 is imperative during this pandemic, global healthcare raises concern about unusual thrombotic events with thrombocytopenia in association with AstraZeneca's COVID-19 vaccine. This syndrome has been termed "vaccine-induced immune thrombotic thrombocytopenia (VITT)", with cerebral venous thrombosis reported as the most common site of thrombosis. Acute porto-spleno-mesenteric vein thrombosis is an uncommon presentation but serious condition with potential sequelae, such as small-bowel gangrene and end-stage liver failure. We report a case of acute porto-spleno-mesenteric vein thrombosis with pneumatosis intestinalis in a healthy 34 years old young gentleman with no other risk factors who received ChAdOx1 nCov-19 (AstraZeneca) vaccination 9 days before. He was successfully treated with medical therapy, however 3 months later he developed acute abdomen secondary to bowel adhesion and underwent bowel resection. Healthcare providers should be aware of the possibility of such complications and recognising symptoms of VITT which may even occur after a week of vaccine administration.



PC129

**A COMPARISON OF THE EFFICACY AND SAFETY OF FASCIA ILIACA BLOCK AS AN
ADJUNCT TO PCA MORPHINE FOR POSTOPERATIVE ANALGESIA IN UNILATERAL
TOTAL HIP ARTHROPLASTY IN HOSPITAL KUALA LUMPUR**

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Introduction: A subgroup of patients suffers from moderate or severe pain after total hip arthroplasty (THA). Adequate postoperative pain control is crucial for early ambulation and early rehabilitation. To date optimal post-operative analgesia of choice is still under debate. The objective is to evaluate the effectiveness and safety of fascia iliaca block (FIB) as an adjunct to patient-controlled-analgesia (PCA) morphine as postoperative analgesia in post unilateral THA patients. **Materials and Methods:** Retrospective observational study of patients who underwent THA in Hospital Kuala Lumpur from January 2018 - December 2020. PCA morphine requirement and pain score at 24 hours were recorded and comparison between groups of patients on PCA morphine receiving FIB and those on PCA morphine only was calculated. **Results:** Results were interpreted in the first 24 hours postoperatively based on a sample of 70 patients, with 33 receiving FIB (FIB group) and 37 receiving no FIB (non-FIB group). There was no difference in PCA morphine usage between the FIB and non-FIB group ($p=0.759$) and in pain score between both groups ($p=0.966$). Nonetheless, the satisfaction level was higher ($p=0.083$) in the FIB group. Both groups of patients had no significant side effects and complications. **Conclusion:** FIB has shown to achieve significant higher satisfaction in postoperative pain control and is statistically proven to be safe. Thus, it can be considered as an adjunct to PCA morphine in our practice.



PC133

**MONOCYTE DISTRIBUTION WIDTH (MDW) IN DETECTION OF SEPSIS IN
CRITICALLY ILL PATIENTS**

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Introduction: Sepsis is the leading cause of admission in ICU. Delayed recognition of sepsis is associated with increased morbidity and mortality. As infection progress to sepsis, the size of white blood cells increases. MDW represents the width of a set of monocyte volume values, as a standard deviation. Hence, this study evaluated the diagnostic accuracy of MDW alone and in combination with WBC for early detection of sepsis upon admission to ICU. **Materials and Methods:** A prospective cohort study conducted in ICU, where a total of 100 patients admitted were grouped into sepsis and non-sepsis according to Sepsis-3 Criteria after fulfilling the inclusion and exclusion criteria. MDW and WBC which are included in CBC were taken upon admission. Patients were subsequently reviewed for evidence of sepsis on day 1, day 2 and day 3, where MDW was taken. **Results:** Area under curve (AUC) for MDW in sepsis was 0.86 (95% CI, 0.77-0.94) with a cut-off threshold at 21.16 (95% CI, 18.38-23.93) based on Youden Index. With that, sensitivity was 92.4% (95% CI, 83.2%-97.5%) and specificity was 64.7% (95% CI, 46.5%-80.3%). PPV and NPV were 83.6% (95% CI, 73%-91.2%) and 81.5% (95% CI, 61.9%-93.7%) respectively. AUC of MDW alone (0.86, 95% CI, 0.77-0.94) was higher than in combination with WBC (AUC 0.82, 95% CI 0.74-0.91) in detection of sepsis. **Conclusion:** MDW alone is an effective screening tool in detection of sepsis upon admission to ICU. As part of the differential in CBC, MDW makes a cost effective and widely available test at present.



PC135

**PAEDIATRIC COVID-19 IN A TEACHING HOSPITAL IN MALAYSIA:
A SINGLE CENTRE EXPERIENCE**

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Introduction: COVID-19 infection in children is common but the mortality rate is lower than adults. The study aimed to report paediatric COVID-19 cases in SASMEC @IIUM. **Materials and Methods:** This is a descriptive study of 31 patients who were admitted in SASMEC @IIUM between January to October 2021. Data were collected from the electronic medical record system (i-Pesakit). **Results:** 22 patients (71%) had COVID-19 category 2 (mild symptoms such as fever, upper respiratory tract illness, and diarrhoea), 8 patients (26%) had COVID-19 category 3 (pneumonia not requiring oxygen), and 1 patient (3%) had COVID-19 category 4 (pneumonia requiring oxygen). Majority of patients (68%) were below 2 years old. Male to female ratio was 2:1. No mortality has been reported. One case of long COVID syndrome was recorded. A 7-year-old boy was hospitalized for COVID-19 infection category 3 and quarantined for 14 days. Patient was well upon discharge, but then re-admitted 3 weeks later due to recurrent palpitation. The electrocardiogram showed sinus tachycardia and spontaneously reverted to normal sinus rhythm one hour later. Echocardiogram and cardiac biomarkers (CK, LDH, and troponin) were normal. **Conclusion:** Compared to adults, children have similar risk to develop COVID-19 infection and long COVID syndrome. Thus, COVID-19 vaccine in children is definitely needed.



PC137

FACTORS ASSOCIATED WITH PAIN-RELATED DISABILITY AMONG CHRONIC PAIN PATIENTS

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Introduction: Chronic pain patients with pain-related disability suffer from impaired functioning and reduced quality of life. Prevalence and risk factors of pain-related disability have not been well studied. The objective of this study aimed to investigate the pain-related disability with its associated factors among chronic pain patients. **Materials and Methods:** A retrospective study involving secondary data extraction from 330 chronic pain patients who visited Pain Management Clinic in Hospital Selayang. Demographic and clinical data including Numerical Pain Rating Scale (NRPS) score to measure pain intensity, Pain Self-efficacy Questionnaire (PSEQ) score to measure self-efficacy and Modified Roland Morris Disability Questionnaire (RMDQ) score to measure pain-related disability were extracted. Dysfunctional level of disability was defined as RMDQ score of more than 4. The variables that were significantly associated with disability score in bivariate analysis were included into a multiple linear regression model to determine factors independently associated with disability score. **Results:** Dysfunctional level of disability was found in 90.3% of patients. The mean RMDQ score was 13.6 ± 6.3 . In multiple linear regression, higher pain intensity ($\beta=0.18$, $p<0.0001$) and higher age ($\beta=0.14$, $p=0.021$) were associated with greater disability score. Higher self-efficacy ($\beta=-0.40$, $p<0.0001$) and being employed ($\beta=0.14$, $p=0.021$) compared to being unemployed were associated with lower disability score. **Conclusion:** Our findings indicate that chronic pain is associated with a significant level of pain-related disability. Self-efficacy enhancing strategy may be potential intervention to reduce disability in addition to pain relief for better quality of life.



PC139

**INFLAMMATORY MYOFIBROBLASTIC TUMOUR: A RARE CHILDHOOD
MEDIASTINAL TUMOUR**

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A previously healthy 8-year-old boy presented with right anterior chest swelling associated with intermittent dull right sided chest pain for 4 months. Child denied any trauma to the chest or history of fall. Otherwise, no respiratory symptoms, fever, or constitutional symptoms. The rest of family members are asymptomatic and denied any contact with pulmonary tuberculosis patients. Physical assessment revealed asymmetrical anterior chest wall with prominent right chest and palpable vague swelling. No anterior ribs and sternum tenderness. The right chest expansion is reduced. The right middle zone is dull on percussion with reduced tactile resonance. Auscultation of the lungs showed reduced air entry and vocal resonance over right anterior mid-zone. CXR showed ill-defined consolidation in the right perihilar region with the branch of the right upper lobe bronchus appears to be displaced and curved upwards. The right heart margin is not clearly defined. Subsequently, contrasted CT thorax revealed a heterogeneously enhancing anterior mediastinal mass with faint calcifications and local infiltration to the right anterior chest wall. Several enlarged mediastinal and right perihilar lymphadenopathies are causing collapsed consolidation of the right upper lobe. Biopsy of the mass showed mixed tissues composed of fibrocartilaginous stroma and skeletal muscle with occasional lymphoid follicle and minimal lymphocytes and plasma cells infiltrates consistent with inflammatory myofibroblastic tumour. This is a rare case of childhood anterior mediastinal tumour. Anterior mediastinal mass in children is usually due to infection such as thymic tuberculosis, germ cell tumour or lymphoma.



PC141

ADRENAL CAVERNOUS HEMANGIOMA WITH INFRARENAL ABDOMINAL AORTIC ANEURYSM: A RARE INCIDENTAL FINDINGS FROM A ROUTINE ULTRASOUND ASSESSMENT

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We report a 76 years old gentleman with a known case of benign prostatic hyperplasia. A large heterogeneous mass was incidentally found at his left hypochondriac region during a routine KUB and prostate ultrasound assessment. On further clinical history and assessment, it was found out that the patient actually had abdominal discomfort, early satiety for one year duration associated with altered bowel habit. Palpation of the abdomen revealed a 5x 10 cm vague abdominal mass around the epigastric region. Driven by all these findings, the patient was advised to get an early CT abdomen to further investigate the mass. Our clinical suspicions prove their worth as the study discovered a large solid cystic mass occupying the left suprarenal area with maximum diameter of 18 cm. Furthermore, the mass was causing mass effects to the surrounding structures; by which the left kidney was pushed inferiorly, pancreas was compressed anteriorly and the spleen was displaced anterolaterally. Another striking finding in the CT images was the presence of fusiform aneurysmal dilatation of the infrarenal abdominal aorta with no signs of impending rupture. Considering all these findings, the patient was planned for left adrenalectomy. His final histopathological diagnosis revealed a cavernous haemangioma, which is an extremely rare benign tumour of the adrenal.



PC143

HEMATIDROSIS AND HEMOLACRIA: A RARE CASE OF BLOODY SWEAT AND TEARS

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Hematidrosis is a very unusual disorder in which healthy skin secretes blood while hemolacria is bleeding from the eyes. Scarce case reports mainly occurred in adolescent Asian girls. Majority were caused by psychogenic stress although systemic disease, blood problems, and strenuous physical exertion are possible aetiologies. Specific investigation to establish the diagnosis is still a dilemma but a greater challenge in primary care is to identify and manage the stressor in a teenage patient. A 16-year-old Malay girl presented to a clinic in Pahang with a one-month history of episodic sweating blood from her forehead and occasionally came as bloody tears. Each episode was spontaneous, brief and associated with panic attacks. Further clinical assessment found no skin trauma or underlying haematological disorder involved. A shared care with the haematology team was arranged which then confirmed the diagnosis. To engage and explore her psychosocial state, CRET (Confidentiality, Rapport, Empathy, and Trust) and HEADSSS framework were utilized. These approaches revealed mild depression precipitated by peers bullying and family conflict. Non-pharmacological therapy (relaxation technique, coping skills, supportive counselling) was instituted at primary care level and psychiatry input was also sought. Eventually her hematidrosis resolved six months afterwards.



PC144

**ATYPICAL TERATOID RHABDOID TUMOUR OF THIRD VENTRICLE: A RARE
INFANTILE BRAIN TUMOUR AT A VERY RARE LOCATION**

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Atypical teratoid rhabdoid tumour (ATRT) is a rare intracranial neoplasm and highly malignant. It is commonly affecting children below 3 years of age. ATRT has a varied clinical presentation, nonspecific radiological findings and complex pathophysiology. The majority of these tumours occur in posterior fossa. We present an interesting case of a rare location of ATRT arising from the third ventricle in a 9 months old boy. This boy presented with vomiting and noted to have increased head circumference. CT revealed a large third ventricular mass with obstructive hydrocephalus. He underwent emergency right Burr hole and VP shunt insertion. An MRI brain examination was done showed a large heterogeneous lobulated solid tumour arising from the third ventricle with leptomeningeal enhancement. Imaging features closely resembled choroid plexus papilloma. Surgical resection was performed and pathological examination revealed atypical teratoid rhabdoid tumour (WHO grade 4). Unfortunately, the child succumbed 2 months after the first presentation. This is an uncommon case of ATRT arising from a rare location. The prognosis of the disease is generally unfavourable and follows a dismal course, the median time to death reported is only a few months after the diagnosis. Due to the rarity of this entity, optimal treatment remains uncertain. Maximum safe resection is still unclear and no standard chemotherapy regime is established to date. Radiotherapy is not favoured in less than 3 years of age in order to avoid neurocognitive impairment. In this uncommon and rapid clinical course of tumour, awareness of an ATRT is important in making the quick and correct diagnosis. A multidisciplinary approach including a surgeon, radiologist, and oncologist should be involved early in the treatment to increase survival rates.



PC148

DIABETIC KIDNEY DISEASE AND ITS ASSOCIATED FACTORS AMONG PATIENTS IN A
SELECTED PRIMARY CARE CLINIC IN PAHANG

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Introduction: Diabetic Kidney Disease (DKD) is an important microvascular complication and the principal cause for dialysis in Malaysia. Preventing and retarding its progress is one of the paramount tasks of any primary healthcare team, and optimal handling of the risk factors is one of the strategies. We aim to study the prevalence and associated factors for DKD among type 2 diabetic patients from a primary health clinic in Pekan, Pahang. **Materials and Methods:** A cross-sectional study was conducted among 202 patients attending diabetic clinic in KK Chini, Pekan within a period of four months. Data was extracted from diabetic record book and was analyzed using SPSS V22.0. **Results:** More than half of the participants were of female gender (59.4%) and from age group below 60 years old (59%). Majority of them have uncontrolled diabetes (82.7%), uncontrolled blood pressure (53.5%) and overweight/obesity (68.8%). Classification of DKD according to GFR stages: 72.8% have GFR I-II and 27.2% have GFR III-V while according to proteinuria: 44.1% have no proteinuria, 20.8% have microalbuminuria and 35.1% have overt proteinuria. On further analysis, male gender was significantly associated with GFR III-V ($\chi^2=11.80$, df (1) $p=0.001$) and overt proteinuria ($\chi^2=14.24$, df(2) $p=0.001$). As expected, those aged more than 50 years old have significantly higher GFR stages ($\chi^2=5.13$, df (1) $p=0.024$). Surprisingly, this study found no significant association between neither GFR stages nor proteinuria with diabetes control, blood pressure control and BMI ($p>0.05$). **Conclusion:** Non-modifiable factors which are male gender and age more than 50 years old were found to be associated with the development of diabetic kidney disease in this study population. Further evaluation is required to identify the reason for the non-association between modifiable factors with DKD.



PC149

MANAGEMENT OF HEPATOCELLULAR CARCINOMA ACCORDING TO BARCELONA CLINIC LIVER CANCER CLASSIFICATION (BCLC): THE EXPERIENCE OF A PAHANG TERTIARY CENTRE

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Introduction: Treatment options of hepatocellular carcinoma (HCC) depends on the stage according to the Barcelona Clinic Liver Cancer (BCLC) classification and necessitates a multidisciplinary approach. This study aims to share our experience of managing hepatocellular carcinoma in our center as the main referral center in Pahang state. **Materials and Methods:** Demographic data, comorbidities, Child-Pugh score, BCLC stage, treatment modalities, duration of follow-up and patient status were collected from 2018 until 2021. **Results:** A total of 19 patients were managed. The mean age was 63. Males and Malay were predominant. 84% were viral hepatitis patients. Hepatitis C was predominant. According to the Child-Pugh score, 58% presented with score A while 42% were child B. The mean alpha-fetoprotein was 461 ng/mL with a very wide range (6.2-3872). According to BCLC Staging of HCC, 73% presented with stage B, 11% in stage A, 11% at stage C. and 5% at stage 0. The mean size for the largest lesion in diameter was 5.8cm (1.3cm-9.8cm). 62% of patients had a single treatment attempt, while the remaining had more than one attempt. TACE was performed 16 times (62%) in 14 patients, while Radio Frequency Ablation was performed six times, 2 cases by microwave ablation and another 2 cases by liver resection. The mean duration of follow-up was 12 months (3-25 months). Seven patients died during follow-up, two of which were related to HCC management, one from non-anatomical liver resection and the other from microwave ablation. **Conclusion:** Managing HCC is a challenging task as most patients present in advanced stages.



PC150

COLD AGGLUTININS: SPURIOUS EFFECTS ON FULL BLOOD COUNT PARAMETERS

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Cold agglutinins are typically IgM antibodies that recognize antigens on the red cells. They are optimally reactive at 4 degrees Celsius and may have a wide thermal amplitude. In addition to causing in vivo haemolysis, their presence in samples for full blood count analysis using haematology analysers might lead to generation of inaccurate results. We report a case with cold agglutinins that caused profound pre-analytical errors in the full blood count results. The patient was an 86-year-old woman who presented to the Emergency Department with abdominal pain and constipation. The initial full blood count revealed a haemoglobin level of 6 g/dL with incompatibly very low haematocrit of (1%) and red cell count ($0.09 \times 10^{12}/L$). The mean corpuscular volume was extremely high (135 fL) while the mean corpuscular haemoglobin and mean corpuscular haemoglobin concentration values could not be generated. The white cell count was $29.4 \times 10^9/L$ with platelet count of $700 \times 10^{12}/L$. The second sample revealed similar red cell indices with a significant reduction in the white cell and platelet counts. A blood film review showed prominent red cell agglutination. A pre-warmed technique sample processing was subsequently carried out to eliminate or lessen the effects of the cold agglutinins. We demonstrated in this patient, the spurious effects of cold agglutinin on the eight full blood count parameters.



PC151

FACTORS ASSOCIATED WITH INCOMPLETE COLONOSCOPY IN SYMPTOMATIC ELDERLY PATIENTS

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Introduction: Colonoscopy is a gold standard procedure for detection of polyps and colorectal cancers as it provides visual assessments of the entire colon. However, inadequate bowel preparation for colonoscopy may reduce the efficacy and lead to adverse complications to the patient. **Materials and Methods:** Data concerning demographic characteristics, comorbidities, indications for colonoscopy, adequacy of bowel preparation, findings of the procedure and colonoscopy completion rates were retrospectively collected in a single centre from 2018 till 2020 and was respectively analysed. **Results:** 108 patients (56% male patients) were recruited for this study, with the mean age of 72 years old. Majority of the patients have comorbid (90%), no diverticular (81%), having complete colonoscopy (67%) and fair bowel preparation (47%). The highest indication for this procedure is chronic constipation (32%) followed by per rectal bleeding (20%). Findings from the colonoscopy have revealed more polyp with the rate of 40% compared to cancer (11%), while adenoma detection rate was 26%. Rate of complication for this procedure was 7%, with large bowel obstruction as the predominant complication (50%). It has been shown that age, cancer, diverticular and bowel preparation was the significant factor behind incomplete colonoscopy in bivariate analysis. While only bowel preparation was the significant predictor of incomplete colonoscopy in multivariate analysis. Having a fair bowel preparation quality will be able to decrease the chance of incomplete colonoscopy by 95% as compared to poor bowel preparation. **Conclusion:** The study has shown that inadequate bowel preparation may predict the incomplete colonoscopy.



PC152

**RARE BLADDER CANCER PATHOLOGY. AN UNFORTUNATE EVENT TO
PONDER UPON**

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Transitional cell carcinoma is the commonest primary bladder cancer in our region. Besides that, squamous and adenocarcinoma being the second and third commonest type. However, there are few rare types of bladder pathology reported in the literature. We reported 2 cases of rare bladder pathology which is a case of primary bladder lymphoma and a case of small cell carcinoma. These cases presented to us with painless haematuria conciseness to other common bladder cancer pathology. Both pathological types are highly aggressive behaviour and diagnosed mainly at advanced stages and believed to have a high metastatic potential. In a late stage of presentation, they may complicate with other organs failure such as renal function that carry poor outcomes. In our centre, both cases came at a very late stage. Compilation of rare bladder pathology cases should be done extensively and meticulously to have complete understanding on the nature of these diseases. Various studies and research are needed to improve the outcome of the disease.



PC153

AUDIT ON WAITING TIME IN A TEACHING PRIMARY CARE CENTRE

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Introduction: Waiting time is one of the factors that could affect a patient's satisfaction. A study in the Ministry of Health (MOH) primary care clinic showed the average waiting time from registration to consultation was 41 minutes. In IIUM Family Health Clinic (FHC), we adopt MOH client charter for waiting time. The MOH waiting time for registration, consultation and pharmacy should be less than 15 minutes, 30 minutes and 15 minutes respectively. However, there is no consensus on ideal consultation length. This audit aims to identify patient's waiting time and consultation length in IIUM FHC in order to formulate our own client charter. **Materials and Methods:** The audit was performed in IIUM FHC from 18th August 2021 until 8th September 2021 using the universal sampling Methods. The waiting time for registration, consultation and pharmacy were manually recorded using timing chits, which were distributed to 300 patients. **Results:** The average waiting time from arrival to registration was less than one minute for all patients. Meanwhile, the waiting time from registration to consultation varies from 1 to 53 minutes, with an average of 8.52 minutes. From consultation to pharmacy, the waiting time ranges from 1 to 7 minutes, with an average of 1.23 minutes. The average consultation length was 22.4 minutes. **Conclusion:** The overall waiting time at IIUM FHC is substantially shorter than MOH client charter due to the low patient to doctor's ratio. As a result, a new client charter will be implemented to sustain the excellent service.



PC154

**EMBOLIZATION OF A HAEMORRHAGING IATROGENIC INTERCOSTAL ARTERY
PSEUDOANEURYSM WITH MASSIVE HAEMOTHORAX FOLLOWING A ROUTINE
CHEST TUBE INSERTION**

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Intercostal artery injury is an uncommon complication following chest tube insertion. However, when it occurs, the consequences can be devastating. One of the commonest techniques to stop the bleeding is via endovascular embolization by an interventional radiologist. We present a case of an iatrogenic intercostal artery injury following a routine chest tube insertion. A 70-year-old gentleman was initially admitted for non-ST elevation myocardial infarction, and pneumonia with parapneumonic effusion. The managing team attempted to relieve the effusion by inserting a chest tube under ultrasound guidance. However, the symptoms worsened following the procedure. The patient's haemoglobin level also dramatically deteriorated. Coupled with a subsequent chest radiograph showing a markedly enlarging effusion, a provisional diagnosis of massive haemothorax was made. The patient underwent a CT angiogram of the thoracic vessels, which confirmed the provisional diagnosis. Actively haemorrhaging intercostal artery pseudoaneurysms were also confirmed arising from the right 10th and 11th intercostal arteries. The patient then underwent embolization of the intercostal artery pseudoaneurysms. The procedure was initially complicated with rupture of the already friable vessels following deployment of the first coil, but eventually stemmed by further embolizations. In this case report, we highlight the tools and techniques in such embolization procedure. The technical challenges that we faced in embolizing the bleeding pseudoaneurysms are also discussed.



PC156

SCREENING AND KNOWLEDGE OF MAMMOGRAPHY IN BALOK, KUANTAN

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Introduction: Breast cancer is the first-ranked cancer in Malaysia. However, Malaysians have a low screening rate for mammography. The objective of this study was to determine the screening and knowledge of mammography among patients attending Balok health clinic. **Materials and Methods:** A cross-sectional study was conducted in Balok Health clinic, Kuantan. 110 women aged 20 and above were recruited to complete the self-administrated validated questionnaire consisting of 2 sections. The first section is on the socio-demographic characteristics including the past history of mammography screening. The second section is on the knowledge of mammography where the total score of more than 70% was graded as good knowledge. The data were analysed using SPSS version 25. **Results:** The mean age of the respondents was 40.14 years (SD=12.98). The majority were under the age of 40 years (55.5%), married (90%), and housewives (50%). Only 29.1% of respondents had a history of mammography screening. There were 29.1% of respondents have a good knowledge of mammography. Multivariate analysis revealed that housewives (aOR=4.237, 95% CI: 1.290 to 13.914), single (aOR=6.967, 95%CI= 1.385 to 45.044), and a previous mammogram screening (aOR= 4.315, 95% CI= 1.598 to 11.648) were statistically associated with the good knowledge of mammography (p<0.05). **Conclusion:** Low percentage of women had performed mammography screening and majority of them have poor knowledge of mammography screening for breast cancer. It is essential to educate the public regarding the importance of mammography because good knowledge will lead to a higher rate of mammography screening.



PC160

EXTRAMAMMARY PAGETS DISEASE OF SCROTUM: A RARE ENCOUNTER LESION

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Extramammary Paget's disease (EPMD) is a rare intraepithelial malignancy that develops from areas of rich apocrine glands such as perineum, vulva, axilla, scrotum and penis. 14% of this disease developed from male genitalia, scrotum and penis. We present a case of a 76 years old Chinese male, presented with a history of left scrotal mass for 1 year duration. The lesion was initially small in size which started with an itchy skin area over the scrotum. However, the lesion started to become big and turned into a fungating mass. The lesion has become over 4x5cm size for the past 1 year. Initial incisional biopsy showed poorly differentiated carcinoma involving the scrotal skin. Patient then was staging with CT TAP and revealed a mass with local extension into testes, penile shaft, and inguinal nodes involvement with no distant metastasis. He was then undergone wide local excision of the mass with left orchidectomy, left inguinal dissection, and scrotal skin flap and SSF over penis. HPE from the excision showed primary extramammary paget's disease of penoscrotal skin with lymphovascular invasion. Immunohistochemical staining of the tumor showed positive CK7, CEA and CKAE1/AE3. Patient was then sent for chemotherapy after recovering from the surgery. Extramammary Paget's disease is a rare disease that can involve the penis and scrotum. Non-invasive EMPD can be treated with local excision. Systemic therapy may be warranted in metastatic disease. The prognosis of EMPD with regional metastasis is up to 77% for 5-year survival rate while 16% if presented with distance metastasis. Due to its rarity, early recognition and biopsy of scrotal lesions may establish the diagnosis early and subject the patient for appropriate treatment earlier.



PC161

THE IMPACTS OF MOTIVATION ON VISION REHABILITATION OUTCOMES AMONG
PATIENTS WITH HOMONYMOUS VISUAL FIELD DEFECT FOLLOWING ACQUIRED
BRAIN INJURY

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Introduction: Homonymous visual field defect (HVFD) is a chronic manifestation of acquired brain injury like stroke. Patients may present with undesirable impairments of visual exploration and reading which are the primary focus of vision rehabilitation including Durham Reading and Exploration (DREX) training. Currently, the impacts of DREX on patients' motivation towards vision rehabilitation remains unknown. The objective of this study is to investigate whether baseline motivation score can predict the outcome of DREX training among patients with HVFD. **Materials and Methods:** In this randomized controlled trial, 60 participants with HVFD were assigned to one of three groups: one group completed tablet-based DREX training, one completed computer-based DREX training, while the control group received standard care. Participants' motivation was assessed before (A1) and after (A2) DREX training using Motivation for Traumatic Brain Injury Rehabilitation Questionnaire (MOT-Q). **Results:** The mean MOT-Q score was significantly higher at A2 relative to A1 in the tablet-based group only, $t_{(16)} = -2.224$, $p = 0.04$; participants had greater motivation to engage with the rehabilitation after the training using tablet-based device. There was a significant positive correlation between A1 MOT-Q score and percentage change in mean reaction time for visual exploration in both tablet-based and computer-based groups, suggesting that participants trained from either training mode who had higher motivation at the beginning gained greater improvement in their visual exploration. **Conclusion:** The use of technology and computerized training have been found to increase patients' motivation to engage in their rehabilitation. Therefore, clinicians could recommend DREX training to their elderly, post-acquired brain injury patients.



PC163

FEEDING PROFILE OF INFANT AND YOUNG CHILDREN WITH STUNTING IN
KUANTAN, PAHANG

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Introduction: Stunting refers to low height for age primarily due to chronic undernutrition. It is the most prevalent form of malnutrition in the under-five population, both globally and locally. This study aims to describe the feeding profiles of infant and young children who were diagnosed with stunting. **Materials and Methods:** A cross-sectional study was conducted at seven government health clinics in Kuantan, Pahang from August to October 2021. All children aged 6 to 59 months diagnosed with stunting were included in this study. An interviewer-guided questionnaire and a validated IMCI feeding assessment were used for data collection. **Results:** A total of 40 under-five children with stunting were included. Mean age was 27.2 ± 14.09 months, and 60% of them were boys. Malays constituted 85% while Orang Asli 12.5%. Among them, 12.5% were pre-term, 7.5% had hospital admission, and 2.5% had incomplete immunization. The caregivers were mostly housewives (70%), and have at least secondary education (97.5%). The mean maternal height was 151 ± 5.07 cm with mean household income of RM 2567 \pm 1843. In terms of feeding, 25% of children were non-exclusively breastfed and 35% were still breastfeed. 40% received inadequate meal frequency, 57.5% inadequate meal amount, 7.5% inadequate meal variety and 15% were not actively fed. **Conclusion:** This study revealed 1 in 4 of the stunted children was non-exclusively breastfed, while feeding problems were prevalent among them. Recognition and intervention of feeding problems are critical to improve the overall health and nutritional status of under five children with stunting.



PC164

PRIMARY DELAYED ANASTOMOSIS OF A LONG GAP ESOPHAGEAL ATRESIA IN A NEONATE IN Kuantan, PAHANG, MALAYSIA

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We present a case of a rare type of congenital anomaly; esophageal atresia without fistula or pure esophageal atresia (EA) (Gross type A). Our patient, now aged 9 months was born preterm at 35 weeks of gestation via normal vaginal delivery to a 28 years old mother who was diagnosed to have fetal with EA with polyhydramnios at 33 weeks of gestation. Following birth, child was noted to have an excess oral secretion with inability to advance and coiling of orogastric tube. A repleg's catheter was inserted for low continuous suction. Child then underwent an open gastrostomy tube placement on day 3 of life and a bronchoscopy done showed no fistula. Gap assessment performed confirmed a long gap EA with a gap of more than 3 vertebral segments between both stumps. A delayed primary anastomosis was performed at 3 months of life. Mobilization of both proximal and distal esophageal pouch were performed via a right cervical and right postero-lateral thoracotomy approach. A circular myotomy of the proximal stump was done after an inter-pouch gap reassessment. Primary anastomosis was then performed, and a chest drain was left in situ with a layered closure of the thoracotomy. The child's postoperative course was uneventful and was discharged home well. Despite various advancements in treatment, long gap pure EA remains a challenge to date. Circular myotomy of the proximal esophageal pouch is a safe procedure that can be used to treat long gap EA with minimal risk of complications and good patient outcomes as evident in our case report.



PC165

PREVALENCE OF ERECTILE DYSFUNCTION AND ITS ASSOCIATED FACTORS AMONG MEN IN GOVERNMENT HEALTH CLINICS IN KUANTAN, PAHANG

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Introduction: Erectile dysfunction (ED) is a significant issue that should not be ignored in the clinical setting. Underdiagnose and no proper management can give a negative impact on the quality of life of a patient and their partner. The objective of this study is to determine the prevalence of ED and its associated factors among men who visited a government health clinic in Kuantan, Pahang, Malaysia. **Materials and Methods:** A total of 300 men aged 18-60 years participated in this cross-sectional study at 12 government health clinics in Kuantan, between 5 July 2021 and 6 October 2021. Information on demographic data, medical history and lifestyle were obtained through self-administered questionnaire included validated Malay version of the 21 item Depression Anxiety Stress Scale (DASS 21) and the International Index of Erectile Function (IIEF-5). **Results:** The overall prevalence of self-reported ED was 69.7%. In terms of severity, 45.7% had mild, 20.7% mild-to-moderate, 2.3% moderate and 1% severe ED. Multivariate analysis showed that ED associated with increasing age (odd ratio [OR] 6.768, 95% confidence interval [CI] 1.586 - 28.875), unhealthy clinical profile (OR 4.611, 95% CI 2.124 - 10.010), stress (OR 14.630, 95% CI 1.702 - 125.732) and diabetes (OR 2.575, 95% CI 1.055 - 6.284). **Conclusion:** ED was common among men aged 50 years and above at government health clinics in Kuantan, Pahang. Increasing age, clinical health profile, stress and diabetes were significantly associated with ED.



PC167

**MRI APPEARANCE OF EWING SARCOMA OF BONE WITH METASTASIS IN TODDLER:
A CASE REPORT**

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Primary malignant tumour is rare before 5 years of age. Ewing's sarcoma (ES) is the second most common bone sarcoma in children after osteosarcoma. As many as 75% of patients are under the age of 20 years at presentation, most between 5 and 15 years, and 90% are under 30 years. Usually a single bone is involved, but multiple lesions occur at presentation in 10% of cases and commonly later in the disease as ES readily metastasises to bone. We report a case of a 23 months old boy with presentation of entire right lower limb swelling and tender at inguinal region for 4 days. Plain radiograph of right femur and pelvis noted permeative appearance of the right hip and femur. MRI femur and pelvis revealed intramedullary lesions involving the right iliac bone and femur with femoral cortical erosion and intramedullary expansion and soft tissue component related to both the iliac wing and proximal femur showing evidence of extension and infiltration to the adjacent soft tissues. On histopathology examination, on cut-section grey-white tumour was seen in diaphysis of femur extended into soft tissue. Histologic type was ES. The patient was later referred to HUSM for further treatment. This case indicates that although ES of children in early age is rare, it can occur in toddler and must be considered in the differential diagnosis of bone lesions, even with presentation of metastasis. MRI is the preferred imaging modality for assessing ES because it provides excellent tissue contrast and can assess tumour extent, size and relationship to the neurovascular bundle and joint space.



PC173

**ADULT MOYAMOYA SYNDROME AS A MANIFESTATION OF VARICELLA-ASSOCIATED
CEREBRAL VASCULOPATHY: A CASE REPORT**

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Moyamoya disease (MMD) is a rare cerebrovascular disorder with the characteristics of progressive large intracranial artery narrowing and development of small vessel collaterals. The latter has a smoky characteristic appearance on angiography and hence named 'moyamoya', a Japanese word which means puffy. Moyamoya syndrome (MMS) refers to the angiographic findings of MMD with predisposing medical conditions such as brain tumours, atherosclerosis or meningitis. Varicella-associated cerebral vasculopathy is a severe complication of varicella zoster virus infection and its association with MMS is rarer in adults. We report on a case of a 55-year-old lady who presented with progressively deteriorating dysphasia and left lower limb weakness following one week onset of right herpes zoster ophthalmicus infection. She has a background history of poorly controlled diabetes mellitus, hypertension, dyslipidaemia and nontoxic multinodular goiter. On examination, she was mute with dense left hemiparesis at presentation. The Magnetic Resonance Imaging (MRI) brain demonstrated features of encephalitis with microabscesses at the right frontal white matter region, extending to the right side of corpus callosum with the MR Angiography indicating atherosclerotic disease. Her cerebrospinal fluid (CSF) analysis was confirmed to be the diagnosis of viral encephalitis. She was started on intravenous acyclovir treatment as well as antiplatelet and statin therapy. She however experienced dynamic clinical progress with episodes of clinical deterioration observed. Her serial repeated MRI brain imagings subsequently demonstrated worsening of cerebral infarctions with internal carotid artery stenosis especially on the right side and basal ganglia collaterals with Ivy sign, suggestive of Moyamoya vasculopathy and hence the eventual diagnosis of MMS. This case highlights the rare association of varicella-associated cerebral vasculopathy (VACV) with MMS and thus should be considered as a potential serious complication in a patient with varicella zoster viral infection.



PC176

**UNILATERAL ISCHEMIC CENTRAL RETINAL VEIN OCCLUSION IN A YOUNG
HEALTHY ADULT: A CASE REPORT**

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Central retinal vein occlusion (CRVO) is an obstruction of the central retinal vein due to the impingement from the fellow central retinal artery. It is the second most common retinal vascular disease after diabetic retinopathy. Risk factors of CRVO include diabetes mellitus, hypertension, hyperlipidaemia, cardiovascular disease, male gender and age above 50 years; with 90% of the cases occurring in individuals aged 55 years and above. We report a rare case of left eye ischemic CRVO in a 24-year-old healthy gentleman who later on found out to have hypercholesterolemia. He presented with a sudden onset of reduced vision of his left eye. Examination revealed visual acuity (VA) of the left eye was 6/120. Fundus examination showed marked papilloedema with dilated and tortuous blood vessels and extensive flame-shaped haemorrhages with cotton wool spots in all four retinal quadrants. There was a presence of macular edema as well. The ancillary tests confirmed the diagnosis of left eye ischemic CRVO with significant macular edema. The blood investigation revealed elevated cholesterol levels. For treatment, 6 times of monthly intravitreal Ranibizumab injections were planned for the macular edema and oral Atorvastatin 40 milligrams daily was started. Following the intravitreal Ranibizumab injection, his VA has significantly improved with a reduction of macular edema. This report highlights the importance of prompt diagnosis and investigation of CRVO, especially in the younger age group. Early treatment of macular edema secondary to CRVO is able to reduce the edema thus leads to VA improvement.



PC177

UNILATERAL BRANCH RETINAL ARTERY OCCLUSION DUE TO INTERNAL CAROTID ARTERY OCCLUSIVE DISEASE IN A YOUNG ADULT: A CASE REPORT.

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Branch retinal artery occlusion (BRAO) occurs when the branch of retinal artery is blocked, most commonly due to emboli. The sensitive neural tissue of the retina is highly dependent on adequate blood flow and hypoperfusion of retinal tissue can cause visual field loss. We report a case of a 23-year-old female who presented with sudden onset, painless, inferior visual field loss in the right eye for three days. She had no other co-morbidities, was a non-smoker, and denied any history of head and neck trauma. Clinical examination revealed vision in the right eye was 6/6 with Humphrey Visual Field showing altitudinal visual field loss. The intraocular pressure was 13 mmHg. Fundus examination revealed a pale and edematous superior retina with cotton wool spots. There was the presence of Hollenhorst plaque over the superotemporal quadrant of the retinal vessel. Left eye examination was unremarkable. The blood investigation results revealed that the patient was dyslipidaemia. The Carotid Doppler demonstrated proximal right internal carotid artery thrombosis causing significant Internal Carotid stenosis. This report is to highlight the rare case of branch retinal artery occlusion caused by carotid artery occlusive disease in young women.



PC182

OUTCOME OF VENOGRAM IN A HAEMODIALYSIS PATIENT: A TERTIARY VASCULAR
CENTER EXPERIENCE

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Introduction: Maintenance of arteriovenous fistula (AVF) in haemodialysis patients is a challenge. Central venous and AVF occlusion is common in haemodialysis patients. Venogram is useful to confirm diagnosis and decision on rescue therapy. The objective of our study is to describe venogram procedures done for diseased AVF in haemodialysis patients in a vascular unit at Sultan Ahmad Shah Medical Centre (SASMEC). **Materials and Methods:** This is a descriptive study of end stage renal disease patients on haemodialysis underwent venogram. We reviewed retrospective data reported between March 2019 and October 2021. Patient demographic characteristics, comorbidities, type of AVF, diagnosis, location of venous occlusion, and treatment plan was retrieved from hospital record. **Results:** 20 patients (55% male) were recruited, the mean age was 60 years. All patients had Hypertension, 75% had Diabetes Mellitus, and 10% had dyslipidaemia and a history of cerebrovascular accident (CVA). Most patients had left brachiocephalic fistula (55%), followed by right brachiocephalic fistula (20%) and left brachio basilic fistula (10%). Of all the venograms done, 55% of patients had AVF occlusion. 45% had central venous occlusion involving brachiocephalic vein (78%) and subclavian vein (22%). 6 (30%) patients were subjected for balloon angioplasty, with 90% successful rate. 10% of patients require AVF ligation. The remaining required new AVF creation or other means for renal replacement therapy. **Conclusion:** Venogram in a haemodialysis patient for problematic AVF is helpful in its management. Further studies are needed to improve AVF outcome in haemodialysis patients.



PC183

PREVALENCE OF URINARY INCONTINENCE AND ITS ASSOCIATED FACTORS AMONG ELDERLY IN PRIMARY HEALTH CLINICS IN KUANTAN, PAHANG

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Introduction: Urinary incontinence is a major and common problem involving elderly population worldwide. It is often underreported and underestimated and presents a social, economic and health problems. The purpose of this study is to investigate the prevalence and its associated factors among elderly population in primary health clinics in Kuantan, Pahang. **Materials and Methods:** A cross-sectional study conducted in 6 primary health clinics in Kuantan Pahang that were selected using simple random sampling. 314 participants were selected using consecutive sampling Methods. The inclusion criteria were Malaysian citizens aged 60 years and above, who able to understand Bahasa Malaysia with no exclusion criteria. The participants that were selected were personally interviewed using validated Malay questionnaires that consisted of sociodemographic profiles, International Consultation on Incontinence Questionnaire Urinary Incontinence Short Form (ICIQ-SF) and Geriatric Depression Scale (GDS-15). **Results:** The statistical analyses were done using chi-squared test of independence then proceed with linear regression and binary logistic regression. The prevalence of urinary incontinence was 12.1% with the mean age was 69.13 years old (SD= 7.19). The majority of participants were women (59.6%) and Malays (80.3%). The significant factors associated with urinary incontinence were age (AOR=1.07, CI=1.01-1.14, p-value=0.01), constipation (AOR= 8.67, CI=2.27-33.04, p-value=0.002), neurological disease (AOR =65.90, CI=20.89-207.93, P value=<0.001) and benign prostatic hyperplasia (AOR=23.49, CI=1.76-313.20, P value=0.017), significant P value <0.05. **Conclusion:** Participants with an increase in 1 year of age has 1.07 times the odds to have urinary incontinence while those that have constipation, neurological disease and benign prostatic hyperplasia are predicted to have higher risk to develop urinary incontinence.



PC184

CUPPING THERAPY: A MISADVENTURE

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Cupping therapy has been used in alternative medicine in treating muscular pain and various disease since ancient times. It is done by creating a negative pressure inside cups either by suction or heat, which is applied at the area of disease. Cupping, puncture and cupping (CPC) which involve puncturing of the skin Methods is popular among Asians. The therapy may work but complications such as anaemia, Koebner phenomenon, stroke and abscesses formation have been reported. We would like to report a case of huge back abscess post cupping in a diabetic patient. A 44-year-old Malay male with a history of diabetes mellitus presented to us with pain and swelling over the upper back for 3 weeks. It started with a backache which he tried to reduce the pain by applying cupping. However, the pain persisted, and the swelling was getting larger. On examination he was not in sepsis. The back examination noted 20x20cm of fluctuant and erythematous swelling occupying the whole of his upper and lower back. His sugar level was 18 with Hba1c of 7.5. CT scan of the back showed no deep structure involvement. He underwent incision and drainage of the abscess which drained 1.5 liter of pus. The cultures from the pus came out as *Staphylococcus aureus*. He was treated with intravenous antibiotics and was discharged well. Cupping therapy is a well-known ancient alternative treatment of pain. Although it may give positive effects in some patients, in high-risk patients with underlying diabetes mellitus, complications such as abscess formation should be anticipated.



PC185

EFFECT OF ELECTIVE DAY CARE CANCELLATION IN TERTIARY VASCULAR

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Introduction: Elective surgical case cancellation refers to surgical case that is booked into operating room list but is not operated upon as scheduled. Cancellation on the day of surgery has a detrimental impact on operating room resources, as well as patient satisfaction and perceptions of quality health care services. It can be classified into preventable and non-preventable causes. The incidence of cancellation of elective surgical operations has been reported to range 20%-40%. We explore the rate and reasons for elective day care surgery cancellations in a tertiary hospital managing vascular cases. **Materials and Methods:** Retrospective data were collected from our day care surgical ward since the year 2017 up till the year 2021. Patients' demographic data, type of procedure, time to surgery from preoperative visit, patient outcome and reasons for cancellations were extracted from the Electronic Medical Records (EMR). **Results:** A total of 32 patients were collected and analyzed. Case cancellations lead to underuse of operating room, increase waiting period, patient frustration and lead to wastage of hospital consumables. **Conclusion:** Improving scheduling and admission procedures may optimize the use of hospital resources and avoid wastage of operating time.



PC186

TELEMEDICINE IN THE MANAGEMENT OF OUTPATIENT CLINIC - EXPERIENCE IN
VASCULAR TERTIARY CENTRE DURING COVID 19 PANDEMIC

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Introduction: Covid - 19 has affect the whole world including the practice of medicine. In situations where pandemic is declared, the approach to outpatient clinic follow up has been changed. In order to minimize the risk of disease transmission, telemedicine is a safe and effective alternative way to assess patient disease without the need of direct physical contact. With this new strategy on interacting with our patients, we're investigating patient satisfaction over this period while employing telemedicine as an option. **Materials and Methods:** We conducted a survey using a validated Telemedicine Satisfaction Questionnaire to evaluate patient satisfaction with telemedicine for vascular surgery outpatient clinic follow up during Covid - 19 period from 5th June 2020 until 27th September 2021. **Results:** A total number of 94 patients were collected. Their basic demographic data were collected and the questionnaire answers were analysed. **Conclusion:** Although Covid - 19 has made such drastic changes to our practice of medicine and specifically in vascular surgery, the most important value that we could learn from the pandemic is that the use of telemedicine could help us in giving the same high quality service and satisfaction to our patient.



PC190

**SOCIODEMOGRAPHIC PROFILE OF PRESCHOOL CHILDREN WITH SCREEN MEDIA
DEPENDENCY IN URBAN AREA**

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Introduction: Screen media dependency is an addictive behaviour related to screen media use. Nowadays, the screen media is widely accessible especially in urban era. Thus, it is beneficial to identify the sociodemographic profile of children with screen media dependency. The aim of this study was to describe the sociodemographic profile of preschool children with screen media dependency in Kuala Lumpur, Malaysia. **Materials and Methods:** A cross sectional study was carried out among parents of preschool children aged 4 to 6 years old in Kuala Lumpur, Malaysia. The Screen Dependency Score (SDS), which is a parent report measure, was used to assess their children's dependency to screen media. All of the children who had screen media dependency were included in this study. **Results:** 197 children were screened using SDS and were found out to have screen media dependency. Their mean age was 5.37 ± 0.639 years old with 50.8% were boys and 49.7% of them started using screen media ≤ 2 years old. Majority of their parents had tertiary education level (65.5%), practised restrictive type of parental mediation (56.3%) and used screen media in front of their children (94.9%). Greatest number of the children had an internet facility (91.4%), used smartphone (90.9%) and also watched television (82.2%). Majority spent 1 to 2 hours per day on screen media over the weekdays (47.7%) and ≥ 2 hours daily over the weekend (62.4%). **Conclusion:** Screen media dependency among preschool children may be influenced by sociodemographic factors. Thus, further analysis is needed to determine the significant association between sociodemographic factors and screen media dependency.



PC192

**GANGRENOUS CHOLECYSTITIS: SEVERE COMPLICATION OF CHOLECYSTITIS
FREQUENTLY FOUND DURING COVID-19 PANDEMIC. A CASE SERIES**

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Acute cholecystitis is a common surgical diagnosis, however it may progress to a severe complication of gangrenous cholecystitis (GC). We present four cases of GC that were frequently found at our centre during the pandemic era: (1) Patient MAG, a 71 years old male presented with right hypochondriac pain and vomiting, ultrasound (USG) suggestive of acute cholecystitis. Computed tomography (CT) done on day 8 of illness revealed ruptured gallbladder. Open cholecystectomy performed, multiple necrotic areas were found. (2) Patient MMS, a 35 years old female diagnosed with perforated gallbladder empyema in another centre, surgery was delayed due to unavailability of operation theatre. Surgery done 6 days after diagnosis established, her gallbladder was gangrenous with pathology report confirmed extensive infarct. (3) Patient RD, a 64 years old male with central abdominal pain, negative Murphy's sign and elevated WBC, USG suggestive of acute cholecystitis while CT revealed perforated gallbladder empyema. Open cholecystectomy performed at day 4 of illness found gangrenous gallbladder with multiple perforation. (4) Patient JAT, a 65 years old male presented with fever and nonspecific abdominal pain, both USG and CT done were suggestive of acute cholecystitis. Open cholecystectomy performed at day 8 of illness revealed gangrenous part of gallbladder. There should be a high index of suspicion for GC looking at predictive factors which may prompt earlier surgery in order to reduce morbidity and mortality.



PC193

CLINICAL AUDIT ON TYPE 2 DIABETES MELLITUS PATIENTS IN A TEACHING
PRIMARY CARE CLINIC IN KUANTAN, PAHANG

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Introduction: Type 2 Diabetes Mellitus (DM) is an important risk factor for cardiovascular disease and microvascular complications. Patients with DM require ongoing evaluation and monitoring. The indicator for good DM control is HbA1c $\leq 6.5\%$, targeting at $\geq 30\%$ of DM patients per clinic. This audit aims to describe the patients' profile and identify the clinic performance in DM management at IIUM Family Health Clinic, Kuantan. **Materials and Methods:** This audit was performed in September 2021 by universal sampling. MOH Clinical DM audit instrument was used for collecting data from patients' diabetic records. **Results:** A total of 72 active DM patients were included. The majority are female (53%) and aged between 40 to 59 years old (65%). The prevalence of comorbidities for hyperlipidaemia, hypertension and overweight were 90%, 60% and 70% respectively while the prevalence of DM complications were low except diabetic kidney disease (27.8%) and ischemic heart disease (9.7%). 18% of patients achieved HbA1c $\leq 6.5\%$ with only 75% patients had done routine HbA1c test. The other indicators for clinical monitoring of diabetes-related complications have achieved target except fundoscopy (13.9%) and foot examination (41.7%). Counselling sessions were given to all patients, with weight reduction was the least advice given (26.4%). Pharmacologically, 78% of patients were treated with oral glucose lowering drug (OGLD), 22% on combination therapy with insulin, 64.3% on antiproteinuric medication and 85.5% on statin. **Conclusion:** The target for good DM control was not achieved is contributed by non-optimal laboratory monitoring. Thus, a comprehensive patient database and a dedicated DM team need to be established.



PC195

**A DISASTROUS COMPLICATION OF COLONEPHROCUTANEOUS FISTULA:
BRAIN ABSCESS**

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A rare case of colonephrocutaneous fistula complicated with a brain abscess is a life-threatening clinical condition. We report a case of a 35-year-old lady with a history of partial left nephrectomy complicated with left colonic injury who presented with persistent vomiting associated with headache and blurry vision for 5 days. Clinically, she was confused and restless with Glasgow Coma Scale (GCS) of 12/15, however her pupils were equal and reactive bilaterally. Other neurological examinations were unremarkable. Abdominal examination noted functioning ileostomy with a skin opening at left lumbar with pus discharge. Diagnosis of brain abscess was made after contrasted computed tomography (CT) scan of brain. Urgent open drainage surgery was done followed by long course of antibiotic. Contrasted CT abdomen and fistulogram revealed a left colo-psoas and left nephrocutaneous fistula, hence, she was subjected for surgery. Intraoperatively, there was a fistula tract connecting the descending colon, remaining of left kidney, and the skin. Thus, left hemicolectomy, completion of left nephrectomy, and fistulectomy was done. The long-standing infective foci can lead to septic emboli and causes formation of abscess at distant site. Its management is challenging involving both medical and surgical therapy.



PC196
CHALLENGE IN PREOPERATIVE DIAGNOSIS OF PHYLLODES TUMOR OF BREAST:
CASE SERIES

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Phyllodes tumor of breast is a rare fibroepithelial tumor with incidence of <1% of all primary breast tumors. Preoperative diagnosis via core biopsy is often difficult especially in determining its grade. Most patients are diagnosed after surgical resection. This is a descriptive study of a small series of patients in Sultan Ahmad Shah Medical Centre @IIUM, Kuantan. We reviewed retrospective data reported between 2019 and 2021. We diagnosed five patients with phyllodes tumor. The median age is 35. One patient presented with bloody nipple discharge, and the rest had painless breast lump. Three of them have a family history of breast cancer. Preoperative core biopsy revealed atypical cells in 3 of them while the other 2 patients were reported as mesenchymal neoplasm and fibroepithelial tumor. 3 cases underwent wide excision, 1 patient had simple mastectomy and the other had wide excision followed by mastectomy. The final histopathology reported malignant phyllodes in 3 of the cases, the others are borderline and benign phyllodes. Unfortunately, 1 of the malignant phyllodes patient had tumor recurrent with metastasis to axilla and mediastinal lymph nodes, and lungs. All malignant phyllodes tumor patients were subjected to adjuvant radiotherapy. However, only 2 patients completed radiotherapy while the metastatic tumor patient died prior to initiation of radiotherapy. Preoperative diagnosis of phyllodes tumor is challenging. Definitive diagnosis is only achieved after tumor excision. Further studies are needed to describe its clinical and biological characteristics to improve the treatment strategies and better outcomes.



PC197

RAMBUTAN RELATED OCULAR TRAUMA

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Rambutan trees are widely planted in the rural areas. Regardless of the small size, its physical characteristics may inflict ocular trauma when it accidentally hit the eyes. We report a case of a 61-year-old gentleman who suffered with right eye deeply embedded cornea foreign body and fungal keratitis following direct ocular trauma by rambutan fruit. He complained of right eye pain with reduced vision after alleged hit by rambutan fruit during harvesting from the tree. Upon slit-lamp examination, there were multiple woody-like cornea foreign bodies in which one of them had deeply embedded up to the deep stromal layer. Following uncomplicated cornea foreign bodies removal under general anaesthesia, the patient had developed fungal keratitis in which successfully treated with topical and oral antifungal. This report highlights the importance of prompt diagnosis and proper management of rambutan related ocular trauma. Early removal of cornea foreign body as well as early initiation of topical and systemic antibiotic and antifungal following vegetative material injury able to prevent more serious corneal infection and endophthalmitis.



PC198

PREVALENCE OF BURNOUT AND ITS ASSOCIATED FACTORS AMONG HEALTHCARE PROVIDERS IN GOVERNMENT HEALTH CLINIC IN KUANTAN, PAHANG DURING COVID 19 PANDEMIC.

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Introduction: Burnout is defined as a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with other people in some capacity, especially in demanding job like healthcare professionals. High level of burnout in healthcare providers has been associated with decreased work efficiency. The aim of this study was to identify the extent of burnout among them and to identify its associated factors. **Materials and Methods:** In this cross-sectional study, healthcare providers consist of doctors, nurses, medical assistants and pharmacists in government health clinics in Kuantan, Pahang were studied. Oldenburg Burnout Inventory was used for this study which consists of 16 questions. **Results:** A total of 308 respondents were included. Mean age was 37.14 years, and 85.4% were females. Malay constituted 96.8% while Chinese and Indian, 2.3% and 1.0% respectively. Among them, 54.9% were nurses, 23.4% were doctors, 12.7% were medical assistants and 9.1% were pharmacists. This study revealed 55.8% of the respondents had high burnout. There is a significant association between high burnout and perception of underpaid with the p-value of 0.010. **Conclusion:** The prevalence of burnout among healthcare providers in this study is lower compared with the previous studies. However, it is not a negligible number for us. Ameliorating burnout among them should be a key priority for a sustainable care of the patients during the pandemic.



PC200

PHYSICAL THERAPY TREATMENTS FOR CHILDREN WITH ERB'S PALSY - VIEWS
FROM THE PHYSICAL THERAPISTS IN MALAYSIA

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Introduction: Physical therapists are among the essential members of a multidisciplinary team in treating Erb's palsy. The selection of the appropriate treatments by the physical therapist on Erb's palsy is crucial as it may influence the children's recovery rate and prognosis. This study was conducted to explore the experiences and views of physical therapist experts in Malaysia on Erb's palsy treatments. **Material and Methods:** This qualitative study was conducted among six physical therapist experts in Malaysia through online focus group discussion (FGD) via the Zoom platform. The sessions were recorded and transcribed verbatim. The data were analysed following a thematic analysis using the Atlas.ti 9 software. **Results:** The themes that emerged from the discussion were: 1) the treatment used by the physical therapist in Malaysia, 2) play therapy: the most preferred approach 3) strengthening exercise: the use of the elastic band 4) concerns in stretching exercise and 5) advanced exercise. Factors influencing the treatment choice include the feasibility, cost and challenges in conducting the approaches. Issues such as limited information and lack of standard treatment procedures hindered the physical therapists from performing a comprehensive treatment in Erb's palsy children, leading to difficulty in delivering effective exercises. **Conclusion:** The findings from this study should offer useful evidence that could be used by paediatric physical therapists in Malaysia and worldwide to design treatment for Erb's palsy children.



PC203

**CASE REPORT: ELEVATED BETA HUMAN CHORIONIC GONADOTROPHIN: DOCTOR,
AM I PREGNANT?**

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Pancreatic cancer is rare yet lethal cancer in Malaysia. Diagnosing is challenging despite advances in technology and patients are usually presented late. They frequently presented with the symptoms related to paraneoplastic syndromes released by tumour cells itself, Beta Human Chorionic Gonadotropin (beta hCG) hormone. Beta hCG produced by females to detect and monitor pregnancy or pregnancy-related illnesses. It's also a highly sensitive and specific marker for placental and germ cell trophoblastic tumours. In general, this hormone is undetectable in healthy non-pregnant people. However, about 45-60% of patients with biliary and pancreatic cancer give raise to beta hCG. We report a case of a 28-year-old housewife who had been diagnosed with unresectable head of pancreas adenocarcinoma, presented with progression of disease, in which urine pregnancy test done noted to be positive. The first beta hCG level was raised to 1242 IU/L, then dropped to 230 IU/L after 48 hours. This patient's pregnancy test resulted in a false positive due to the presence of pancreatic cancer. Although a positive urine pregnancy test and increased beta hCG levels, the transabdominal ultrasound still revealed an empty uterus. Furthermore, if the pregnancy is suspected to be ectopic, the beta hCG level should raise less than 63% or static in 48 hours. In conclusion, Beta hCG could be elevated in case of pancreatic cancer about 45 to 60% of prevalence. Physicians should consider hCG testing in persons of suitable age since malignancies can induce increased hCG levels that are unrelated to pregnancy.



PC204

**ROLE OF SURGERY IN ASYMPTOMATIC EXTRACRANIAL CAROTID ARTERY
STENOSIS**

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Stroke is one of the top five leading causes of death and one of the top 10 causes for hospitalization in Malaysia. Frequency of ischaemic stroke is about 56% to 75% among all stroke patients and about 80% of its aetiology is due to underlying carotid artery pathology. We reported 2 cases of young and asymptomatic patients with severe extracranial carotid artery stenosis that were referred to our Vascular Unit, Department of General Surgery, Sultan Ahmad Shah Medical Centre (SASMEC@IIUM), Kuantan for the surgical intervention. Carotid artery stenting or carotid endarterectomy are two most commonly surgical procedures done for the carotid artery stenosis. Both carry procedural risks, but they can restore patency and reduce the rate of recurrent stroke about 50%. There is about a 1% risk of disabling stroke or death. Other complications such as non-disabling stroke, non-fatal myocardial infarction, or cranial nerve palsy. In addition to good medical therapy, carotid procedures are appropriate for our patients. However, which one is better between endovascular or open surgery is still up to debate.



PC205

MANAGEMENT OF IATROGENIC PSEUDOANEURYSMS: HOW WE DO IT

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Introduction: Pseudoaneurysm occurs when there is localised extravasation of blood from the arterial wall and is confined by a pseudocapsule and its surrounding structures. Its causes can be iatrogenic, acquired or spontaneous. There is an increasing trend in cases of iatrogenic pseudoaneurysm due to increased rates of endovascular procedures. Open surgical repair used to be the mainstay of treatment; however it has been replaced by less invasive approaches such as ultrasound-guided compression and endovascular techniques such as stenting and embolization.

Materials and Methods: We conducted a retrospective review from 2019 until 2021 on cases of iatrogenic pseudoaneurysms that were referred to our Vascular Unit for our expert management. Medical records of patients who presented with iatrogenic pseudoaneurysms were reviewed. **Results:** We managed a total of 7 cases of iatrogenic pseudoaneurysms. Majority of our patients were male (71%) whereby the eldest patient was 65 years old and the youngest patient was only 14 years old. The commonest site of pseudoaneurysms was femoral artery (42%) followed by brachial artery (28%), inferior thyroid artery (15%) and carotid artery (15%). Treatment ranged from non-invasive Methods such as observation and ultrasound guided compression, to less invasive approaches such as endovascular embolization and stent deployment, and finally, via open surgical repair. Successful treatment was confirmed by radiological imaging and patients were observed for post-procedural complications until discharge. Five patients (70%) were discharged well while two patients (30%) succumbed to sepsis not related to vascular access with multi-organ failure. **Conclusion:** Iatrogenic pseudoaneurysms can be managed by non-invasive approaches such as observation and ultrasound guided compression. Failure or pseudoaneurysms not amenable to non-invasive Methods require more invasive approaches such as endovascular technique or open surgical repair. Iatrogenic pseudoaneurysms are an emergency, as they can lead to devastating complications such as bleeding, infection and compression to vital structures.



PC208

REVIEW OF MANAGEMENT OF PSEUDOANEURYSM IN A TERTIARY CENTER

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Introduction: Pseudoaneurysm occurs when there is localised extravasation of blood from the arterial wall and is confined by a pseudocapsule and its surrounding structures. Its causes can be iatrogenic, acquired or spontaneous. There is an increasing trend in cases of iatrogenic pseudoaneurysm due to increased rates of endovascular procedures. Open surgical repair used to be the mainstay of treatment, however it has been replaced by less invasive approaches such as ultrasound-guided compression and endovascular techniques such as stenting and embolization. **Materials and Methods:** We conducted a retrospective review from 2019 until 2021 on cases of iatrogenic pseudoaneurysms that were referred to our Vascular Unit for our expert management. Medical records of patients who presented with iatrogenic pseudoaneurysms were reviewed. **Results:** We managed a total of 7 cases of iatrogenic pseudoaneurysms. Majority of our patients were male (71%) whereby the eldest patient was 65 years old and the youngest patient was only 14 years old. The commonest site of pseudoaneurysms was femoral artery (42%) followed by brachial artery (28%), inferior thyroid artery (15%) and carotid artery (15%). Treatment ranged from non-invasive Methodss such as observation and ultrasound guided compression, to less invasive approaches such as endovascular embolization and stent deployment, and finally, via open surgical repair. Successful treatment was confirmed by radiological imaging and patients were observed for post-procedural complications until discharge. Five patients (70%) were discharged well while two patients (30%) succumbed to sepsis not related to vascular access with multi-organ failure. **Conclusion:** Iatrogenic pseudoaneurysms can be managed by non-invasive approaches such as observation and ultrasound guided compression. Failure or pseudoaneurysms not amenable to non-invasive methods require more invasive approaches such as endovascular technique or open surgical repair. Iatrogenic pseudoaneurysms are an emergency, as they can lead to devastating complications such as bleeding, infection and compression to vital structures.



PC209

**RARE OCCURRENCE OF ISOLATED ESCHERICHIA COLI PANOPHTHALMITIS:
A CASE REPORT**

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Escherichia coli (*E.coli*) panophthalmitis with orbital cellulitis is a severe ocular condition which often always leads to devastating outcomes such as evisceration if not treated in a timely manner. It is usually endogenous in origin with urinary tract infection as the common primary source of infection. We report a rare case of a 61-year-old patient with left eye panophthalmitis with orbital cellulitis having positive vitreous culture of *E. coli* with negative systemic septic workup. Due to the severity of ocular condition at presentation and disproportionate level of pain the patient had, immunocompromised state was suspected and later the diagnosis of diabetes mellitus was confirmed via laboratory investigation. Despite the delay in presentation which prevented earlier intervention, we managed to salvage her eyeball after treating her with 3 sessions of intravitreal antibiotic administration and a complete course of intravenous antibiotic. Panophthalmitis with orbital cellulitis due to *E. Coli* is an uncommon disease with immunosuppression in some form usually present. Although the visual prognosis is very poor, proper antibiotic treatment may enable to salvage the eyeball and prevent the extension of disease.



PC212

REVIEW OF ACUTE LIMB ISCHAEMIA TREATED WITH FEMORAL ARTERY
EMBOLECTOMY AT SULTAN AHMAD SHAH MEDICAL CENTRE

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Introduction: Acute limb ischemia (ALI) due to thromboembolism is a rapidly progressive condition that leads to sudden interruption of blood flow which might cause loss of limb or even mortality due to the disease or conditions related to it. In this study, we describe 3 cases which were managed operatively at Sultan Ahmad Shah Medical Centre. **Materials and Methods:** This is a retrospective analysis of a series of cases accrued at a tertiary center with a single vascular surgeon from June 2019 to August 2021. **Results:** All 3 patients were female with mean age of 52 years old. One patient presented with Rutherford 2A and two with Rutherford 2B ALI to casualties. Associated co-morbidities include diabetes mellitus (100%), hypertension (67%), morbid obesity (33%) and heart disease (67%). Two patients underwent open femoral artery embolectomy with adjunctive fasciotomy and one patient underwent open femoral artery embolectomy alone. Two patients had recurrent ALI at day 5 post embolectomy and were counselled for above knee amputation however both succumbed to death due to acute pulmonary embolism and septic shock with multiorgan failure prior to amputation. One patient ended up with above knee amputation due to infected fasciotomy wound after two months of embolectomy. **Conclusion:** Although successful embolectomy performed in all patients, recurrence rate is high, and patient may end up with mortality and amputation due to other causes. Thus, a systemic approach of treatment is vital for survival of the limb and life.



PC213

COLONOSCOPY IN THE ELDERLY SYMPTOMATIC PATIENTS: IT IS SAFE AND
HIGH YIELD

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Introduction: Colonoscopy is a gold standard for the investigation of low GI symptoms. Colonoscopy may have an increased risk of complications in elderly patients. The purpose of this study was to assess the safety and diagnostic performance of colonoscopy in patients aged 65 years and older. **Materials and Methods:** Retrospectively, we reviewed endoscopic and pathological reports for all patients 65 years of age and older who underwent colonoscopy in our institution between 2018 and 2020. Patient characteristics, examination indications, colonoscopy findings and complications were recorded and analysed. **Results:** One hundred and eight patients (56 percent male) underwent colonoscopy at an average age of 72 ± 5 years. Forty-seven percent of patients were ASA Grade II. There were 35 cases (33 percent) of incomplete investigations. The rate of adenoma detection was 40 percent, the rate of cancer detection was 11 percent and the total detection rate, including adenoma and cancer, was 51 percent. A total of two major complications (perforation) were reported (1.8 percent). **Conclusion:** Although colonoscopy completion rates in symptomatic elderly patients are below recommended rate, it is safe and has a high diagnostic yield.



PC215
INADVERTENT CAROTID ARTERY INJURY DUE TO CENTRAL VENOUS LINE
CATHETERIZATION

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A 24-year-old man with underlying ulcerative colitis with metastatic colon adenocarcinoma. The patient underwent subtotal proctocolectomy with end ileostomy. Later on, the patient complained of abdominal pain after second chemotherapy. CT Abdomen has noted bowel perforation. Subsequently, the patient underwent exploratory laparotomy and peritoneal washout. An intraoperative central venous line (CVL) was inserted. Post-procedure, a chest x-ray showed the left CVL catheter traversing the neck region to the upper mediastinum and coursing inferiorly along the left side of the paravertebral region with its tip at the level of T7. However, no pneumothorax or mediastinal widening is observed. CTA neck noted the CVL catheter is seen traversing at the left neck straight into the left common carotid artery. The distal tip is seen within the descending aorta. No obvious hematoma is observed, and no contrast extravasation is seen on the arterial phase. The left internal jugular vein (IJV) is not opacified, possible thrombosis. The patient was referred to the vascular team. The vascular team then decided to remove the CVL catheter, followed by point compression for 5 minutes. No complication is observed post-procedure.



PC217

**A TECHNICAL NOTE ON THE MEDIAL FLAP OF THE FOOT: AN ALTERNATIVE FOR
SOFT TISSUE COVERAGE POST TRANSMETATARSAL AMPUTATION**

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Introduction: Soft tissue reconstruction around the foot following surgery remains a challenge for surgeons. The foot has limited options for local flaps considering the lack of surrounding soft tissues. Traditionally, wound coverage following a transmetatarsal amputation will utilize a local flap raised from the plantar aspect of the affected foot. We describe an alternative reconstructive option following a transmetatarsal amputation performed on a case of a locally aggressive tumour of the foot. **Materials and Methods:** We performed a transmetatarsal amputation on a 64-year-old lady who was diagnosed with verrucous carcinoma of her right 4th and 5th toes to achieve optimum oncologic clearance. A flap was raised from the medial aspect of the foot to cover the wound. The wound healed well and there was no infection or local recurrence. She was able to ambulate well with the healthy stump two months after the surgery. **Results:** The medial flap utilizes the medial plantar artery, a main branch of the posterior tibial artery. Reconstructive surgeons occasionally raise rotational flap from the medial plantar aspect of the foot to cover wounds over the distal extremity. The advantages of this flap are the presence of the medial plantar artery and perforator, and the subcutaneous venous system, which has a large calibre and thicker walled that drains into the saphenous vein. **Conclusion:** A medial flap of the foot is a potentially good option for wound coverage following a transmetatarsal amputation, provided that the medial aspect of the foot is not involved or compromised.



PC218

HEEL RECONSTRUCTION WITH FREE OSSEOFASCIOCUTANEOUS FLAP OF DEEP CIRCUMFLEX ILIAC ARTERY: A REPORT OF TWO CASES

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Heel reconstruction following surgery or injury remains a challenge. A combination of osseous and soft tissue coverage is paramount to restore weight bearing abilities, lower limb functions, and cosmesis. We report two clinical cases of heel reconstruction utilizing free deep circumflex iliac artery (DCIA) osseofasciocutaneous flap following a traumatic bone loss and a wide resection of a calcaneal tumour. The first case was an unfortunate 6-year-old boy who sustained a severe degloving injury involving his right heel with massive calcaneal bone loss. The second case was an 18-year-old man who underwent a total calcanectomy for local oncologic control of a left calcaneal chondroblastoma. Good surgical and functional outcomes were observed in both cases. Bone union achieved after 2 and 4 months, respectively. In addition, both cases started to bear full weight by 6 months post-surgery. The tricortical feature of the iliac bone graft has a weight-bearing surface on its crest and two surfaces on the anterior and superior aspect for arthrodesis with the cuboid and talus. The Achilles tendon can be anchored to the posterior surface of the graft. Hypertrophy of the composite graft facilitates the function and stability of the foot. Thus, a tricortical iliac bone graft gives a better contour to reconstruct a calcaneal defect. DCIA osteofasciocutaneous flap is a good option for osseous and soft tissue reconstruction of the heel for traumatic injuries as well as oncologic cases.



PC220
BOWEL ISCHEMIA IN A POST COVID 19 INFECTION

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A case report of 2 patients that were encountered in our hospital, bowel ischemia in post Covid-19 infection. The first case is a 37 years old gentleman with underlying diabetes mellitus, hypertension and end stage renal failure on regular dialysis. He was hospitalized for covid 19 pneumonia category 4, recently discharged from the hospital, prior presentation of acute abdomen - bowel ischemia. Underwent 2 laparotomies on two separate occasions. Initial laparotomy, found perforation of caecum with macerated appendicitis, done right limited hemicolectomy with ileocolic anastomosis. Subsequently, a second laparotomy, intraoperative findings of gangrenous ileocolic anastomosis with bowel ischemia from terminal ileum to rectosigmoid junction, underwent subtotal colectomy and ileostomy. Second case, 57 years old, gentleman. Diagnosed for covid 19 pneumonia category 4 complicated with pulmonary embolism 4 weeks prior current presentation. Presented with an acute abdomen of perforated viscus, underwent laparotomy findings perforated jejunum with multiple thrombotic spots throughout bowel. Small bowel resection with end-to-end anastomosis. According to Bikdeli et al, hypercoagulability associated with COVID-19 may present with abdominopelvic or lower extremity arterial or venous thromboembolism. Llitjos JF et al, develop thrombi despite prophylaxis or progressive thromboembolism despite full-dose anticoagulation. Coagulation factor derangement after resolution of initial symptoms places patients at risk for thromboembolism after hospitalization. COVID-19 may present with medium to large arterial and venous abdominal and extremity microthrombi.



PC221

YOUNG BREAST CANCER; A 4-YEAR REVIEW OF CLINICO-PATHOLOGICAL DATA FROM SULTAN AHMAD SHAH MEDICAL CENTRE @IIUM, KUANTAN, PAHANG

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Introduction: Breast cancer (BC) is the most common cancer diagnosed in Malaysia. Variations exist globally of the mean age of presentation with women in the eastern hemisphere presenting at a younger age. Young breast cancer in females diagnosed under the age of 40 poses a significant and unique challenge including a higher propensity for a biologically aggressive disease leading to poorer prognosis and major psychosocial concerns. **Materials and Methods:** Retrospective, cross-sectional study of histology-confirmed epithelial breast cancers in patients aged 40 and below diagnosed at Sultan Ahmad Shah Medical Centre @IIUM from January 2018 - October 2021 were conducted. Demographic data, stage at presentation, tumour biology, and treatment received were reviewed. **Results:** A total of 97 patients were diagnosed with breast cancer, 12 were diagnosed at age 40 and below (12.4%). All were of Malay ethnicity. The youngest patient was diagnosed at 27 years old. Only two patients presented early (Stage I and II) while 10 others (83%) presented at advanced stages (Stage III and IV). Estrogen receptor (ER) and progesterone receptor (PR) were positive in 9 patients. Human epidermal growth factor 2 (HER2) was positive in only two patients. One patient had triple negative disease. Four out of the 5 patients who underwent surgery had Grade 3 tumour, no breast conserving surgery was performed. Two patients requested transfer of care to a different centre while others received surgery, chemotherapy, radiotherapy, hormonal and targeted therapy accordingly. Two patients died due to metastatic complications. **Conclusion:** Late presentation is a significant issue in young patients, as the majority of our cohort has hormone positive disease, early identification will greatly improve outcome. More study is needed to identify the causes of delay in presentation.



PC222

DIABETES CONTROL AND ITS RELATED FACTORS AMONG ELDERLY DIABETIC PATIENTS IN KUANTAN

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Introduction: The ageing population in Malaysia is transforming swiftly at the same pace as other countries globally. With a growing elderly population, the healthcare burden in chronic diseases like diabetes is undoubtedly remarkable. This study aims to measure the diabetes control and identify its related factors among elderly diabetic patients in Kuantan. **Materials and Methods:** A cross-sectional study was conducted at six selected government health clinics in Kuantan that involved 300 elderly diabetic patients from stratified random sampling. The information obtained were sociodemographic profile, clinical profile and answers from self-administered questionnaire of revised version for quality of life of diabetes patients (RV-DQOL13). The data were analysed using SPSS version 26. **Results:** The mean age of the patients is 68.04 (SD=6.009). Most patients were female (57.3%), Malay (70.3%), married (66%), living independently (Modified Barthel Index = 99%), and from the B40 group (96.3%). The prevalence of diabetes control is 59.3% (cut-off point=HbA1c 7.5%). Multivariate analysis revealed non-Malay (aOR=0.275, 95%CI: 0.116 to 0.655), using insulin (aOR=4.606, 95%CI: 2.001 to 10.603), and good satisfactory impact from RV-DQOL13 (aOR=1.211, 95%CI: 1.018 to 1.441) were statistically associated with good diabetes control ($p<0.05$). **Conclusion:** Good diabetes control is highly prevalent among elderly diabetic patients in Kuantan. Continuous effort in delivering clinical care should be emphasized to maintain good diabetes control among elderly with special attention to Malay patients, those using oral antidiabetic agents, and those who are unsatisfied with diabetes care.



PC223

HORMONAL AND HER2 EXPRESSION OF BREAST CANCER CASES IN SULTAN
AHMAD SHAH MEDICAL CENTRE @IIUM, PAHANG

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Introduction: Breast cancer (BC) is the commonest cancer in the female population of Malaysia with a lifetime risk of 1 in 27. Its incidence is increasing annually with the highest mortality rate. In 2020, 8418 new cases were diagnosed in Malaysia with 3503 deaths. Estrogen receptor (ER), Progesterone receptor (PR) and HER2 gene expressions have prognostic and therapeutic implications and may vary between regions according to age and ethnicity. The objective is to study the incidence of tumour biology of BC cases in Sultan Ahmad Shah Medical Centre @IIUM. **Materials and Methods:** Retrospective cross-sectional study. Tumour biology of all consecutive epithelial invasive BC diagnosed (n=96) between January 2018 and October 2021 were analyzed. Tumors of stromal and non-epithelial origins (n=1) were excluded. BC patients with missing data were excluded (n=10). **Results:** Majority of BC patients had positive ER/PR status (64.95 %) and HER2 3+ (32.99%). Patients with both HER2 immunohistochemistry (IHC) 3+ and positive in-situ hybridization (ISH) test were (n=13), suggesting a concordance rate of (87%). There were 6 number of patients with triple negative tumor (6.98%) with mean age of 55. This study showed that the majority of BC patients presented to Sultan Ahmad Shah Medical Centre @IIUM had ER and PR positive tumour which is similar to global study. Most literature showed that ER/PR negative BC was found in younger aged women but not in this study. **Conclusion:** Majority of the patients have hormone positive BC which carries a good prognosis. Targeted therapy is an expensive treatment, findings of this study will help estimation of provision that should go into oncology care to improve patient outcome.



PC225

THE IMPACT OF COVID-19 LOCKDOWN ON GLYCEMIC CONTROL AND LIFESTYLE CHANGES IN CHILDREN AND ADOLESCENT WITH TYPE 1 DIABETES MELLITUS: A SYSTEMATIC REVIEW

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Introduction: The World Health Organization has declared the SARS-CoV-2 outbreak as a pandemic on 11th March 2020. As a measure to prevent the spread of COVID-19, many countries have implemented a lockdown order. The restriction led to lifestyle changes and further affected glycaemic control in children and adolescents with type 1 diabetes mellitus. Thus, this systematic review aims to evaluate the impact of COVID-19 lockdown on glycaemic control and lifestyle changes in children and adolescents with type 1 diabetes mellitus. **Materials and Methods:** We systematically identified studies by searching Scopus, Pubmed Central, Oxford Academy, Google Scholar, JSTOR and included 19 studies. Levels of HbA1c, time in range (TIR), time below range (TBR), time above range (TAR), weight gain, body mass index (BMI), duration of physical activity, sleeping duration, and screen time were our outcomes. **Results:** A total of 19 studies are included in our research. Regarding the glycaemic control, n=12 (63 %) studies showed significant improvement in glycaemic outcomes. However, n=2 (11 %) research noticed a deterioration of glycaemic control during the lockdown. Furthermore, there were some studies, n=6 (32%) showed no significant changes. A total of 13 studies discussed lifestyle changes of the children and adolescents with type 1 diabetes mellitus during the lockdown and most of them were reported to have lifestyle changes excessively. It was observed that different countries demonstrate different findings in which studies from Italy, the UK, Slovenia, and Denmark show improvement while studies from KSA and Egypt show deterioration of glycaemic outcomes. **Conclusion:** The majority of studies showed significant improvement of glycaemic parameters during the Covid-19 lockdown even though there is drastic lifestyle changes. Thus, further research on a broader scale is recommended.



PC226

DELAYED PRESENTATION OF BREAST CANCER IN SULTAN AHMAD SHAH MEDICAL
CENTRE@IIUM, PAHANG, MALAYSIA

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Introduction: Breast cancer (BC) is the commonest cancer in the female population of Malaysia with a lifetime risk 1 in 27. The BC incidence is increasing annually with the highest mortality rate. In 2020, 8418 new cases were diagnosed in Malaysia with 3503 deaths. Prognosis is directly related to Stage; the 5-year survival rate for BC from Stage 1 to 4 are 100%, 93%, 72% and 22% respectively. The objective of this study is to determine the incidence of stage for BC patients who presented to Sultan Ahmad Shah Medical Centre @IIUM. **Materials and Methods:** Retrospective cross-sectional study. Clinical stage of presentation of all consecutive invasive epithelial BC diagnosed (n=96) between January 2018 and October 2021 were analysed. Tumors of stromal and non-epithelial origins (n=1) were excluded. **Results:** 9.28% and 25.77% were diagnosed at Stage I and II, more than half (64.94%) were diagnosed late (Stage III and IV). Majority of patients presented at stage IV (38.14%). Subgroup analysis of T-stage revealed up to 36.08% presented with advanced symptoms (T4) and majority stage IV BC patients fall in the age group 61-70 years old (32.43%). Patients with BC tend to present late to our facility when compared to other facilities in Malaysia, the reasons for this are not studied yet. Reservedness, poor awareness, lower education and socioeconomic levels, poor family support, patient's ignorance, and preferences for alternative treatments may be contributing factors. **Conclusion:** Delayed presentation of breast cancer is associated with poorer overall survival rates. Prospective studies, and the use of local cancer registries may help determine the reasons for this global issue for early detection of breast cancer to improve prognosis.



PC230

**DOES BLURRING OF VISION AFFECT THE OUTCOMES OF VISUAL SEARCH
TRAINING IN PATIENT WITH HEMIANOPIA? EVIDENCE FROM A CASE STUDY**

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Introduction: A study on the effects of induced optical blur on visual search performance and training in neurotypical participants with intact visual fields showed that visual search performance significantly improved after training despite blurring of vision. To make recommendations about how to use visual search for rehabilitation in clinical practice, it is crucial to understand this behaviour in the populations of interest like patients with hemianopia. The objective of this study is to investigate the visual search performance of a patient with hemianopia under optically induced blurring of vision. **Materials and Methods:** Both eyes of a patient with hemianopia were blurred optically to 6/24 at near distance prior to completing a pre-training assessment, five sessions of search training, and a post-training assessment. The primary outcome measures were the mean reaction time and accuracy of the colour, size, and shape feature search tasks. **Results:** There was an improvement in the visual search performance in all feature search tasks after the search training as such the patient's search speed was remarkably faster. **Conclusion:** Visual search training could still be an effective rehabilitation tool for patients with visual field loss including hemianopia and comorbid blurring of vision.



PC232

PREVALENCE OF DEPRESSION AMONG PSORIASIS PATIENTS IN KUANTAN AND ITS ASSOCIATED FACTORS

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Introduction: Psoriasis is the most common skin disease that occurs worldwide. The skin disease may contribute to an enormous burden of anxiety and depression. The study aims to assess the prevalence of depression among psoriasis patients in Kuantan and its associated factors. **Materials and Methods:** A total of 145 patients who attended the dermatology referral centre at Hospital Tengku Ampuan Afzan, Kuantan, participated in this cross-sectional study. The sociodemographic information, medical profiles, and resilience level of the psoriasis patients were recorded from the respondents. Patient Health Questionnaire-9 and Connor-Davidson Resilience Scale (CD-Risc) were used to measure depression and resilience levels, respectively. The participant who scored 5 and above scale, would be determined to have mild to severe depression. Those participants who scored 21 and above would be determined to have a high resilience level. Chi-square test, Fisher's exact test, and multiple logistic regression were used for analysis by using IBM SPSS 28. **Results:** Of these respondents, the average age was 43 years old, 53.1% of them were males, 84.1% were Malays, 66.2% were married, almost 50.0% had a tertiary education level, 66.2% of them were B40 category, 16.6% had diabetes mellitus, 24.8% had hypertension, and 4.1% had heart disease. Most of the participants had moderate to high resilience levels (86.2%). The prevalence of psoriasis patients with mild to severe depression was 47.6% (CI: 39.2% to 56.0%). Those with high resilience level had an unadjusted OR of 0.111 to develop depression symptoms (CI: 0.032 to 0.384). The patients who scored a high resilience level were less odds to develop depression symptoms, as high as 89.0% reduction after adjusting for employment status. **Conclusion:** The resilience level was significantly associated with depression symptoms among the participants in the current study. High resilience is the protective factor from developing depression among psoriasis patients in Kuantan.



PC234

EVALUATION OF PERIOPERATIVE BLOOD LOSS IN TUMOUR-RELATED INTERNAL
HEMIPELVECTOMY

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Introduction: Pelvic tumour resections are complex and associated with extensive blood loss during surgery. Despite various blood management options in orthopaedic surgery, their uses are limited particularly for pelvic tumour resections. Identifying predictive factors for a large amount of perioperative blood loss is paramount. The study aimed to evaluate the volume of perioperative blood loss in tumour-related internal hemipelvectomy and to identify the risk factors. **Materials and Methods:** A retrospective review of 25 patients with pelvic tumours who were treated with internal hemipelvectomy were conducted. Patients with tumour originating from the sacrum were excluded. Total blood loss consisted of estimated intraoperative blood loss and the drainage volume on the first day post-surgery. A loss of more than 3000ml was classified as large amount of blood loss. Statistical analysis was performed using Fisher's exact test. **Results:** Six (24.0%) patients had large amount of blood loss perioperatively. Resections of primary bone sarcomas (osteosarcoma and chondrosarcoma) had the highest mean blood loss volume (6556.67ml and 1768.57ml, respectively). The most important factor associated with large amount of blood loss was the involvement of the acetabulum. Neoadjuvant therapies and preoperative embolization were not shown to be associated with the amount of blood loss. Other associated factors include duration of surgery and tumour recurrence. **Conclusion:** Resection of pelvic tumours involving the acetabulum are likely to have large amount of blood loss perioperatively and should be anticipated. Pre-operative radiotherapy that was believed to increase the risk of bleeding intraoperatively, was not observed in this study.



PC235

SIMULTANEOUS PSEUDOANEURYSM OF FEMORAL ARTERY WITH ARTERIOVENOUS FISTULA FOLLOWING FEMORAL CATHETER PLACEMENT

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A 56-year-old lady with underlying diabetes mellitus, hypertension and end stage renal failure (ESRF) on continuous ambulatory peritoneal dialysis (CAPD), presented with persistent swelling at right inguinal region following right femoral vein catheterization for venous access about 9 months prior. The procedure was complicated with haematoma formation at the puncture site. Physical assessment revealed a right inguinal swelling just below the inguinal ligament which measures about 4.0 x 5.0 cm. CT Angiogram of lower limb was performed and revealed a large pseudoaneurysm with mural thrombus arising from the right superficial femoral artery (SFA). It has a narrowed neck of 2 mm in diameter. Early right superficial femoral vein (SFV) enhancement is also present with a communication seen in between right SFA and SFV. Early enhancement of the right deep femoral vein and right common femoral vein until inferior vena cava is also observed. Pseudoaneurysm and arteriovenous fistula occurring together are rare complications following venous puncture. Early diagnosis and treatment are crucial to prevent complications such as progressive heart failure due to cardiac volume overload.



PC236

A QUALITATIVE SYSTEMATIC REVIEW OF HEALTHCARE PRACTITIONERS' EXPERIENCE OF WORKPLACE VIOLENCE

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Introduction: The rate of workplace violence in Malaysian healthcare setting is high with 73.2% among nurses and 69.2% among doctors. Effective training minimizes the possibility of becoming a victim. However, limited fundamental knowledge are available to support the establishment of such the training within Malaysian healthcare setting. This review aims to understand the experience of workplace violence among healthcare practitioners in different countries and to determine any specific studies that had been conducted in Malaysia. **Materials and Methods:** Qualitative studies published between 2015 - 2021 from online databases of Science Direct, PubMed, MEDLINE and Jstor were searched. A total of 1868 studies were identified. Following review based on title, abstract and full text, only 22 studies were included. Three systematic steps (thematic analysis) were used to analyse the studies: coding relevant ideas while reading the studies, developing and comparing 'descriptive themes' based on the coding, and construct 'analytical themes' based on the 'descriptive themes'. **Results:** Studies were conducted in six different countries: UK, Australia, China, India, Pakistan and Italy. No study conducted in Malaysia. The experience of workplace violence can be described through three themes: verbal violence as the common workplace violence, perceived causes and seeking for help. **Conclusion:** The most common of workplace violence was verbal violence. Causes of workplace violence as perceived by the participants were lack of information, unmet expectation of patients, refusal of unreasonable request, delay in receiving treatments, and poor management. Future study is required to explore the experience of workplace violence among healthcare practitioners in Malaysia.



PC237

PSYCHOLOGICAL DISTRESS AMONG IIUM PHARMACY STUDENTS

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Introduction: Emerging adulthood is a developmental stage that occurs between adolescence and adulthood and is marked by several transitions and difficult activities, such as achieving financial independence, making career and intimate relationship decisions, and laying the groundwork for adult lives.

Materials and Methods: A cross sectional, questionnaire-based study was conducted among 223 undergraduate pharmacy students from International Islamic University Malaysia (IIUM). The 12-item General Health Questionnaire (GHQ-12) was used to determine the rate of psychological distress among pharmacy undergraduate students. The items on the GHQ-12 represent 12 manifestations of psychological distress, and respondents were asked to rate the presence of each of these manifestations in themselves during the last few weeks preceding the study period. The minimum GHQ-12 total score was 0 and the maximum GHQ-12 total score was 12.

'Caseness' was defined as a total questionnaire score of 4 or more. **Results:** We showed that the prevalence of psychological distress among IIUM Pharmacy study is 26% and the correlation psychological distress with social support is significant.

Conclusion: Psychological distress among university study should be detected early, so it can be managed properly and prevent it from become serious mental illness.



PNC112

MALAY IOWA INFANT FEEDING ATTITUDE SCALE (IIFAS-M): VALIDITY AND RELIABILITY AMONG MOTHERS WITH INFANTS IN MALAYSIA

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Introduction: Maternal knowledge, attitude and practices are factors that can influence infant feeding choices, particularly breastfeeding. Valid and reliable instruments on maternal attitudes towards infant feeding choices in the Malay language are still insufficient for the Malaysian population. **Materials and Methods:** Four independent language experts performed forward and backward translation of IIFAS. A cross-sectional study involving 272 mothers with infants below one year old was conducted between 8th March 2021 to 6th June 2021 through social media platforms using the final versions of the translated questionnaires. Construct validity, Cronbach's alpha coefficients and test-retest reliability were calculated. Descriptive analysis and factor analysis were performed. **Results:** The online questionnaire received a total of 522 responses. Two hundred seventy-two responses fulfilled the inclusion criteria and were analysed. Most of the respondents are Malay women with the mean age being 30 years old and have two children with the youngest age being 5-month-old. The validity and reliability measures of the Malay IIFAS were acceptable. Pearson correlation shows all the items to be significant at 0.01. KMO is 0.657, and Bartlett's test of sphericity is significant at 0.001. Principal component analysis extracted six factors with value ranges from 0.4 to 0.8. The Cronbach's alpha value for the scale was 0.62 and ranged from 0.2 to 0.6. Test-retest showed good reliability ($r = 0.802$, $p < 0.01$). The IIFAS Malay showed acceptable internal consistency reliability. **Conclusion:** The Malay version of IIFAS is a valid, reliable, and locally accepted questionnaire to assess maternal attitude towards infant feeding in the Malaysian population. However, a locally developed questionnaire may be made in the future to produce a better statistically accepted questionnaire.



PNC115
A QUALITATIVE STUDY ON FEEDBACK PROVIDED BY STUDENTS REGARDING
MEMORABLE PROBLEM-BASED LEARNING (PBL) EXPERIENCE

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Introduction: Problem-based learning (PBL) educational tool approach that uses collaborative learning in small groups of students. This study aims to help basic medical sciences lecturers understand the perspectives and expectations of students providing their feedback to educators about memorable Problem Based Learning (PBL) sessions. **Materials and Methods:** A sample of convenience was used to recruit Year 2 participants from Kulliyyah of Medicine, International Islamic University Malaysia. A total of sixty-four students were recruited to answer an anonymous online questionnaire regarding PBL sessions. The responses were in the form of unstructured feedback. Data was analysed using inductive thematic analysis. **Results:** Four core themes were discerned based on the narratives of the questionnaire answers: (1) lecturer's teaching style (2) lecturer's personality (3) knowledge gained; and (4) how the lecturer made the students feel. **Conclusion:** This study identified the main areas in which students evaluate their PBL experience. Students preferred an interactive teaching style with personal experience sharing and guided approach, cheerful and friendly personalities, reinforcement of basic medical sciences knowledge with exposure to clinical knowledge and sessions that made learning enjoyable and stimulating.



PNC117

THE EFFECTS OF TUALANG HONEY ON SPERM PROFILE AND FOLLICULAR-STIMULATING HORMONE IN HIGH CHOLESTEROL DIET INDUCED ANIMAL MODEL
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Introduction: Hypercholesterolaemia is a recognised factor associated with male infertility. However, currently, there is limited therapy available. Tualang honey (TH) is a type of Malaysian polyfloral wild honey produced by the rock bee (*Apis dorsata*) that has been proven to exert both anti-inflammatory and anti-oxidative effects. This study aimed to determine the effects of TH on the sperm profile and follicular-stimulating hormone (FSH) level of high cholesterol diet (HCD) administered rats. **Materials and Methods:** Thirty male Sprague Dawley rats were randomly divided into a control group (n=6) fed with the standard diet and HCD group (n=24). The rats in the control group were fed with standard rat pellets while rats in the HCD group were fed with 12% HCD for 16 weeks. At the end of 16 weeks, rats in HCD group were divided into four subgroups (H1, H2, H3, and H4) and continued with 12% HCD in addition to administration of distilled water, 1.2, 2.4, and 3.0 g of honey per kg body weight daily respectively for another 4 weeks. While the rats in the control group continued with commercial rat pellets without honey supplementation for the same duration. At the end of 4 weeks, all rats were sacrificed, and blood specimens were taken for FSH estimation, and the cauda epididymis was collected for sperm analysis. **Results:** The FSH level and the sperm parameters (sperm concentration, morphology, percentage of total sperm motility, progressive motility, and viability of rats in HCD subgroup H1 were significantly reduced compared to the control ($p<0.001$). In contrast, all TH supplemented subgroups demonstrated significant improvement in their sperm parameters ($p<0.001$). The higher the dosage of TH in the HCD subgroup, the greater the improvements in the sperm concentration, morphology, and viability. Although the levels of FSH were increased in all treated HCD groups compared to H1, there was no significant difference in the serum FSH levels between the groups. **Conclusion:** The Tualang honey supplementation improved the sperm profile in HCD induced animal models.



PNC120

DECREASE IN LIVER ENZYMES ACTIVITIES AND LIVER TOXICITY OF CHRONIC LOW DOSE MONOSODIUM METHYLARSONATE (MSMA) IN THE RAT ANIMAL MODEL

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Introduction: Inorganic arsenic has been known to cause pathological changes with concomitant increase of liver enzymes, signifying liver injury. Monosodium methylarsonate (MSMA) is an organic arsenic-based herbicide that is considered as less toxic than the inorganic counterpart. This underrated risk has allowed its continued wide use. Thus, the objective of this study was to investigate the effect of organic arsenic (MSMA) exposure on the liver enzymes and tissue. **Materials and Methods:** Forty-two Male Sprague Dawley rats were divided into three groups according to durations of exposure to MSMA, each with its non-exposure control. MSMA was given daily at a dose of 63.20 mg/kg for 2, 4 and 6 months through oral gavage. Serum samples were analysed for AST, ALT and ALP levels, while liver tissue was analysed for arsenic accumulation and histomorphometric evaluations following H&E, PAS, reticulin and TUNEL staining. **Results:** The cumulative level of arsenic was significantly higher in the MSMA-exposed rats compared to their control ($p < 0.001$), with the 6-month exposure group being the highest. Both ALT ($p < 0.05$) and ALP ($p < 0.05$) were significantly lower in the 4-month MSMA-exposed group than their control. Histopathologically, ballooning degeneration, focal necrotic, apoptotic, and fibrotic changes were observed in both the 4- and 6-month exposed rats with more extensive changes in the latter. The number of TUNEL positive cells was significantly higher in the MSMA-exposed group ($p < 0.05 - 0.001$). **Conclusion:** MSMA has the potential to lead to liver toxicity despite decrement in liver enzymes.



PNC130

THE miRNAs EXPRESSION PROFILE IN ACUTE MYOCARDIAL INFARCTION OF YOUNG ADULTS

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Introduction: Acute myocardial infarction (AMI) is the most severe manifestation of coronary heart disease where Malaysians are getting AMI at younger age compared to well-developed countries. MicroRNAs (miRNAs) are short, non-coding RNAs that play important regulatory roles in development of human pathologies. **Materials and Methods:** This study investigated the miRNA expression profile in 3 Controls, 3 Young AMI and 3 Mature AMI patients with matching criteria, using RNA sequencing, followed by Gene Ontology (GO) and Kyoto Encyclopedia of Genes and Genomes (KEGG) enrichment analyses. **Results:** A total of 1599 miRNAs were differentially expressed in AMI patients compared to Controls, of which 1288 miRNAs were upregulated, and 311 miRNAs were downregulated. When miRNA expression profiles of Young AMI patients were compared to Mature AMI patients, a total of 1497 miRNAs were found to be differentially expressed, where 1090 miRNAs were upregulated, and 407 miRNAs were downregulated. The top 5 upregulated miRNAs were miR-552, miR-4446-3p, miR-432-5p, miR-548j-5p and miR-219; while the top 5 down regulated were miR-16, miR-1064, miR-431, miR-790 and miR-1177. For these 1497 differentially expressed miRNAs, 34,195 target genes were predicted by GO analysis. The enrichment analysis revealed 11,199 involved in biological processes, 10,984 in molecular functions and 12,012 in cellular components. Target genes of differently expressed miRNAs that were mapped in signal transduction pathway KEGG, revealed that 346 classes were enriched. **Conclusion:** Small RNA sequencing discovered previously unknown miRNAs and suggested that these miRNAs regulatory mechanisms on gene expression are closely involved in Young AMI. This could be a foundation study that requires further elaboration.



PNC132
BURNOUT LEVEL AND ITS ASSOCIATED FACTORS AMONG NURSES IN
CRITICAL CARE AREA

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Introduction: Burnout is a psychological syndrome emerging as a prolonged response to chronic interpersonal stressors on the job. Recently, burnout is getting a lot of global interest as it affects people in a wide variety of professions including healthcare. Nurses in critical care areas with fast-paced and stressful environments are among healthcare workers who are most likely to experience burnout. **Materials and Methods:** Critical Appraisal Skills Programme (CASP). Studies that were published in English between January 2010 and August 2020 and have burnout and associated factors related to burnout as the outcome only will be included in the final analysis. **Results:** 571 full texts were identified in the electronic databases. After exclusion and screening, only 45 studies fulfilled the inclusion criteria. Most studies concluded that there was a high prevalence of burnout ranging between 11.8% to 84.4%. Emotional exhaustion (EE) is the highest dimension of burnout, followed by depersonalization (DP) and reduced personal accomplishment (PA) with a range of 88.0% to 16.0%, 77.0% to 13.0% and 6.85% to 77.1% respectively. There are few main risk factors of burnout identified which are sociodemographic such as age, gender, marital status, having children and education level. Meanwhile, occupational variables associated with burnout include working in shift schedule, working experiences, workload, job dissatisfaction and workplace conflict. Finally, several studies also found that psychological and personal traits may have contributed to the development of burnout. **Conclusion:** It is uncertain whether burnout is among a significant problem in the nursing profession, predominantly in Malaysia healthcare. However, findings from this literature review suggested that critical care nurses may suffer from a high level of burnout, potentially affecting patient care management.



PNC140

**ROAD CONSTRUCTION WORKERS' SAFETY PERFORMANCE AS A RISK FACTOR FOR
WORKPLACE ACCIDENTS IN DEVELOPING COUNTRIES: A SYSTEMATIC REVIEW**

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Introduction: Occupational injury rates worldwide in the construction sectors are higher than those in all other major industries. The situation is especially dangerous in the construction industry, where the frequency of accidents is much higher than in other industries. The magnitude and intensity of accidents occurring at road construction sites are alarming, especially in developing countries. This systematic review aimed to explore the risk factors of road construction accidents in developing countries, especially focusing on workers' safety performance. **Materials and Methods:** Four electronic databases (Medline, PubMed, Scopus, and Springer Link) were searched from January 2011 to May 2021 for published findings of cross-sectional studies on road construction accidents involving workers. **Results:** Twelve cross-sectional studies in 11 developing countries were included in this review. The construction accident causation framework was used to explain the 115 identified risk factors. Worker safety performance was the major shaping risk factor for road construction accidents (33 factors, 47%). **Conclusion:** Addressing workers' safety performance in the risk management system of a road construction project will help in reducing road construction accidents.



PNC142

KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS DENGUE FEVER AMONG B40
PERCENT GROUP IN HULU LANGAT DISTRICT, SELANGOR

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Introduction: Dengue is a significant threat to public health in Malaysia. Bottom-40 (B40) percent group or also known as a low socioeconomic group in the country also contributes to current dengue statistics. This study aims to determine the level of knowledge, attitude and prevention practice towards Dengue and the associated factors among the B40 group in Hulu Langat, Selangor. **Materials and Methods:** An analytical cross-sectional study was conducted among adults above 18 years old who receive financial assistance from the Department of Social Welfare Malaysia. About 407 respondents were selected by proportionate stratified random sampling Methods. Data collection was done by phone call interview in Malay or English language. **Results:** Overall, 67.3% were identified as knowledgeable, 53.3% with a positive attitude and 94.3% with poor preventive practice level. There was a significant association between knowledge and attitude ($\chi^2 = 9.977$, $df=1$, $p=0.002$). Both educational level and previous participation in health promotion activity had significantly associated with good knowledge, positive attitude and good dengue prevention practice. Other significant factors for knowledge were ethnicity and previous history of Dengue outbreak. Meanwhile, age, ethnicity and previous history of Dengue infection had significant association for attitude; and monthly household income was significantly associated with practice. **Conclusion:** With the related findings, it may assist the authorities in curbing dengue issues among B40 groups in Malaysia by designing holistic prevention programmes with suitable social language. Therefore, a decrease of dengue incidence among the group may be achieved in future.



PNC145

RESILIENCE AMONG IIUM Kuantan STUDENTS

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Introduction: The pandemic covid-19 is a global issue that has affected and changed different aspects of life. The life transitions give a jolt to psychological well-being. Coping with mental health challenges has become an important issue for all levels of society. Therefore, this study is to measure the resiliency among IIUM Kuantan students. **Materials and Methods:** A cross-sectional study was conducted in June 2021 among IIUM Kuantan students (n = 2123). A Brief Resilience Coping Skills questionnaire was used to measure the level of resilience among IIUM students. **Results:** Majority of IIUM Kuantan students were found to be of low resilience copers 45.5 % (n = 988) and followed by moderately resilience 38.4 % (n = 835) and high resilience 14.4 % (n = 313). Based on the Independent t test, male students are significantly ($P = 0.045$) higher resilience ($M = 13.99$, $SD = 2.85$) compared to female students ($M = 13.69$, $SD = 2.97$). There were significant statistical differences ($P = 0.08$) between Kulliyyah Medicine ($M = 14.11$, $SD = 2.90$) and Kulliyyah of Science ($M = 13.55$, $SD = 3.05$) in terms of resilience level. **Conclusion:** This study highlights the importance of enhancing resilience skills for IIUM students.



PNC146

**Perceived Level of Stress among IIUM Kuantan Students during the
Pandemic Covid-19**

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Introduction: The Covid-19 pandemic has struck the world and forced countries to lockdown, including the education sector. Malaysian universities, in particular, have gone through many challenges to bring their online learning system up and ready to resume the education process. These new normal online classes have impacted various aspects, including the emotional and psychological part. The aims of this study were to measure the stress level of IIUM Kuantan Campus, to identify gender differences in perceived stress, and to identify the differences among kulliyyah in perceiving stress. **Materials and Methods:** This was a cross sectional study. The perceived stress scale questionnaire was administered to 2123 IIUM Kuantan Students. **Results:** Majority of IIUM Kuantan students were found to be of moderate stress 64.9% (n = 1378) and followed by high stress 24.4% (n = 517) and low stress 10.7 % (n = 228). Based on the Independent *t* test, female students were found to be significantly ($P < 0.001$) higher in stress ($M = 22.23$, $SD = 6.52$) compared to male ($M = 20.96$, $SD = 6.75$). One-way Anova was conducted to measure the statistical differences between kulliyyah. It was found that there were statistical differences between kulliyyah in perceived stress; $F(5,2117) = 2.332$, $P = 0.040$. **Conclusion:** The findings of this study will help the Counselling and Career Services Department, IIUM Kuantan, in planning the psychological intervention for IIUM Kuantan students especially in enhancing resilience among them.



PNC155

THE IMPACT OF SPOUSAL SUPPORT ON MENTAL AND MATERNAL HEALTH CARE
OF POSTPARTUM PATIENTS IN GOMBAK DISTRICT

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Introduction: Globally, 10-15% of postpartum women are affected by postpartum depression (PPD). It has significant impact to the family and community if left untreated but is preventable by using screening tools. This study is to determine the impact of spousal support in maternal health care with postpartum depression and its contributing factors. **Materials and Methods:** This cross-sectional study was conducted for 4 months in Gombak District, Selangor with 210 postpartum women aged more than 18 who understood Bahasa Melayu or English were involved. 91.4% responded to the 9 self-structured questionnaires to assess their sociodemographic and the spousal support. The Edinburgh Postpartum Depression Scale (EPDS) was used to assess the risk of PPD. Respondents with a cut-off points of ≥ 12 , or score 1-3 on item 10 of EPDS showed high risk of PPD. **Results:** Women in low-risk group for PPD are associated with excellent spousal support in maternal healthcare (chi-square test 6.491, p-value 0.039). Five contributing factors to PPD: family history of depression (OR 9.643, 95% CI 2.399-38.759, p 0.001), spouse with shift working system (OR 2.557, 95% CI 1.037-6.306, p 0.041), support in breastfeeding (OR 0.046, 95% CI 0.005-0.46, p 0.009), spousal knowledge on PPD (OR 0.273, 95% CI 0.117-0.638, p 0.003) and moderate spousal involvement in maternal health care (OR 2.996, 95% CI 1.245-7.210, p 0.014). Family history of depression is a significant predictor of PPD (AOR 7.772, 95% CI 1.153-52.403, p 0.035). **Conclusion:** Excellent spousal support in maternal health care is associated with a low risk of PPD.



PNC157

THE EFFECT OF TRANSIENT RECEPTOR POTENTIAL VANILLOID 4 (TRPV4)
LIGANDS ON FATTY ACID-BINDING PROTEIN 4 (FABP4) ADIPOCYTES SIGNALLING
IN DIFFERENT DURATION OF DIFFERENTIATION

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Introduction: Fatty acid-binding protein 4 (FABP4) is one of the adipocyte lipid chaperone proteins (LCPs) and is commonly related to metabolic diseases. The progression of obesity and diabetes was thought to be associated with increased mitochondrial calcium uptake. Ligands of transient receptor potential vanilloid 4 (TRPV4) are known to affect adipocytes' intracellular calcium concentration. This study was intended to determine the effect of TRPV4 ligands on adipocytes FABP4 signalling at different phases of cell differentiation. **Materials and Methods:** Primary adipocyte cultures from male Wistar rats were differentiated in high glucose media (17.5 mM/L) and divided into 2 groups. The first group was differentiated up to day 5, while the other group was up to day 9. They were treated with 100nM GSK101 (TRPV4 agonist) and 500nM HC067 (TRPV4 antagonist) for 24-hours. RNA extracted from adherent adipocytes was subjected for RT-PCR analysis, while cell lysate and conditioned media were collected for western blotting. The data was interpreted by GraphPad Prism Software (San Diego) and ImageJ (National Institutes of Health, USA). **Results:** GSK101 markedly upregulated FABP4 expression, whereas HC067 caused its downregulation among day 9 treated groups ($p < 0.05$). A significant reduction of cytosolic FABP4 was observed in the day5-HC067 treated group ($p < 0.001$), unlike those treated on day 9. Despite TRPV4 ligands stimulation, FABP4 secretion was only observed on day 9 differentiation. **Conclusion:** Since FABP4 was only secreted by mature adipocytes and increased intracellular calcium affects its signalling time-dependently, these help us to understand the association of adipocytes LCPs regulation towards progression of metabolic diseases.



PNC166

IN VIVO STUDIES OF LEPIDIUM MEYENII OR MACA IN ANIMAL MODELS OF
DIABETES MELLITUS AND METABOLIC SYNDROME

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Introduction: *Lepidium meyenii* or maca is a Peruvian plant that belongs to the Brassicaceae family with various attributed health benefits due to the diversity of its bioactive compounds. Studies revealed that maca are effective to be used for many purposes including in the treatment of hyperglycaemia and metabolic syndromes. This review aims to uncover the underlying anti-diabetic effects of maca as well as its potential in the treatment of metabolic syndrome of animal models *in vivo*. **Materials and Methods:** A scoping review of the literature was conducted using a protocol by Arksey and O'Malley. The protocol centered on the identification of research questions, identification and selection of relevant studies, data charting and collating, summarizing, and reporting the findings. Searches were conducted using Semantic Scholar, Scopus, PubMed Central and ScienceDirect. **Results:** Seven studies were included in the review. The studies varied in terms of purpose, methodology, and detail of findings. They include the administration of maca in different types of animal models and its effect on either qualitative, quantitative, or semi-quantitative parameters. Histological and histopathological examinations were part of qualitative parameters measured whereby body weight, tissue weight, and a variety of biochemical parameters were categorized as either quantitative or semi-quantitative parameters. **Conclusion:** There is fundamental scientific evidence from this review which supports the anti-diabetic properties of maca in animal models of diabetes mellitus and metabolic syndrome. However, the scarcity of reports indicates the need for more rigorous studies in the future.



PNC168

THE EFFICACY OF ANTIOXIDANTS SUPPLEMENT ON SPERM QUALITY IN MEN WITH OLIGOSTHENOTERATOZOOSPERMIA (OAT) AT REPRODUCTIVE MEDICINE UNIT, HOSPITAL TUNKU AZIZAH KUALA LUMPUR

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Introduction: Male factor infertility affects one in 20 men in the general population and oxidative stress-related infertility accounted for 30-80% of these cases. Evidence of a positive relationship between the intake of antioxidants supplement and the improvement of sperm parameters were reported mainly in European and American and very little in Asian populations. Hence, we aimed to investigate the association between antioxidants supplement intake (i.e., Profertil®) and sperm parameters in Malaysian men with Oligoasthenoteratozoospermia (OAT) condition. **Materials and Methods:** This is a single-centre retrospective study that investigated a total of 195 men with OAT condition, whose female partner underwent ART treatment between 2016 and 2021. They were divided into 2 groups; a treatment group where male patients received two daily capsules of the antioxidant supplement (i.e., Profertil) for 3 months (n=92) and a control group where no micronutrient was given to the male partner (n=103). Sperm parameters including semen volume, sperm concentration, progressive motility, total motility and morphology were analysed before and after treatment groups. Kruskal Wallis test was performed to compare the median levels of the sperm parameters and Chi-square test to compare the frequencies of normal morphology between the studied groups. **Results:** Overall, the sperm parameters were comparable between the treatment and control groups, except the median level of total sperm concentration ($p=2.28 \times 10^{-5}$) and total sperm count ($p=0.003$). Significant increment of median level of sperm concentration ($P_{\text{adjusted}}=1.46 \times 10^{-5}$), total motility ($P_{\text{adjusted}}=4.63 \times 10^{-6}$), progressive motility ($P_{\text{adjusted}}=1.07 \times 10^{-14}$), total sperm count ($P_{\text{adjusted}}=1.61 \times 10^{-6}$) and total progressive motility ($P_{\text{adjusted}}=1.61 \times 10^{-6}$) was observed in men receiving Profertil® when compared to their baseline sperm quality. Interestingly, we observed a total of 58 (63.7%) men with abnormal morphology have improved after receiving Profertil® ($p=3.88 \times 10^{-22}$). **Conclusion:** Our data showed Profertil® has a positive effect on semen parameters in men with OAT condition.



PNC169

**EFFECTS OF VITAMIN A ON DIACYLGLYCEROL ACYLTRANSFERASE2 (DGAT2)
GENE EXPRESSION IN HIGH CHOLESTEROL DIET-INDUCED STEATOSIS RATS**

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Introduction: The incidence of non-alcoholic fatty liver disease (NAFLD) is increasing worldwide. In many studies, depending on the severity of the disease, serum level of retinoic acid (RA), was found to be low in NAFLD patients. To date no single effective treatment is available. Thus, the present study aimed to investigate the effects of RA on hepatic Diacylglycerol Acyltransferase2 (DGAT2) gene expression in high cholesterol diet (HCD)-induced steatosis rats. **Materials and Methods:** Forty male Sprague-Dawley rats were divided into five groups (n=8/group). For the first four weeks, groups A and B received a standard diet while groups C, D, and E were fed with HCD to induce steatosis. The successful induction of steatosis was confirmed by our pilot study in HCD treated groups. For the second four weeks, the rats received either a standard diet (Group A), a standard diet with RA (7.5mg/kg) subcutaneously twice weekly (Group B), a HCD (Group C), HCD and vehicle (Olive oil) (Group D), or a HCD with RA (7.5mg/kg) subcutaneously twice weekly (Group E), respectively. At the end of the experiment, the hepatic expression of the DGAT2 gene was quantified using Real-Time TaqMan qPCR. **Results:** RA-treated groups showed a reduced pattern of hepatic DGAT2 gene expression as compared with standard and HCD groups, although statistically non-significant ($P>0.05$). **Conclusion:** RA administration might reduce the liver DGAT2 gene expression and can be considered as a potential candidate for improving NAFLD. Nevertheless, further studies are required.



PNC170

RECOGNITION OF DANGER SIGNS IN CHILDREN UNDER 5 AND ITS ASSOCIATED
FACTORS AMONG CAREGIVERS IN PAHANG

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Introduction: Caregivers' knowledge and experiences in handling unwell children are essential in caring for their young children, as it predicted appropriate health seeking behaviour. We aim to identify the association between correct recognition of danger signs for children under 5 with caregivers' source of health information and past experiences. **Materials and Methods:** A cross-sectional study was conducted among 393 caregivers of children under 5 who attended 8 child health clinics in Kuantan, Pahang between January, and August 2020. A checklist of signs and a self-administered questionnaire were used for caregivers to choose the correct danger signs and to check their source of information and past experiences. **Results:** Majority of the caregivers were female (90.6%), of Malay ethnicity (89.3%) with the mean age of 32 ± 6 . 61.8% to 81.9% of caregivers have the correct response for 9 out of 10 danger signs. Their main sources of information were healthcare providers, HCP (64.4%), child health's record book, BRKK (56.0%) and the internet (55.5%). In terms of past experiences, 31.3% and 6.9% of caregivers have managed serious conditions and death among children respectively. Significant associations were found between correct responses with seeking information from BRKK (χ^2 5.13, $p=0.024$), HCP (χ^2 5.42, $p=0.02$), "Mother's card" (χ^2 5.771, $p=0.016$) and magazines (χ^2 7.941, $p=0.005$), while incorrect responses with friends as source of information (χ^2 3.86, $p=0.049$), and past experience of serious condition (χ^2 5.821, $p=0.016$). **Conclusion:** Empowering caregivers with reliable health information resources is crucial in primary care as it might influence parental knowledge. Direct interaction with healthcare providers and printed materials are still relevant mediums among caregivers.



PNC174

UNDERGRADUATE PAEDIATRIC CLINICAL TEACHING: DOES COVID-19 PANDEMIC AFFECT THE OUTCOME?

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Introduction: The emergence of COVID-19 pandemic has caused disruption in medical education and healthcare systems worldwide. It transformed medical education to either fully or partially online. It is important to assess the feasibility and adequacy of online learning methods. This study aims to compare the performance in clinical examination of medical students engaged in online clinical learning. **Materials and Methods:** This was a retrospective cohort study conducted among 109 year-five medical students undergoing paediatric posting. Clinical examination results of students that received different proportions of their clinical education online were compared. **Results:** There was no difference in the clinical examination and total examination score between the group of students who had predominantly online learning compared to those with predominantly face-to-face learning with mean difference of 0.96 and p-value of 0.101 and 1.03% and p-value of 0.256 respectively. **Conclusion:** The examination results of clinical year students were not affected by the mode of learning they have experienced.



PNC181

AN EXPERIMENTAL MODEL OF INDUCTION OF OSTEOARTHRITIS IN NEW ZEALAND
WHITE RABBIT

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Introduction: Historically, animal models for osteoarthritis have been established to facilitate the study of the pathogenesis of osteoarthritis and the potential medical treatment. The anterior cruciate ligament transection (ACTL) and partial meniscal resection model in rabbits have been widely used. The aim of the study was to establish a more effective surgical approach to induce knee osteoarthritis in New Zealand White Rabbits. **Materials and Methods:** This descriptive study was approved by the Institutional Animal Care and Use Committee (I-ACUC) ethical committee. The surgical approach of induction of osteoarthritis was done in Advanced Orthopedics Research Laboratory, International Islamic University Malaysia. Eight rabbits underwent lateral and medial meniscectomies at bilateral foreleg knees to induce osteoarthritis. The models were examined through physical and radiographic analysis. **Results:** Physical exams showed that all model animal daily food and water intakes were normal. Animal model knee motion in passive range showed limitation and instability. Radiographic imaging analysis showed osteoarthritic changes in all models. Moreover, no mortality was recorded during the study. The approach requires less surgery time and easier access. The analgesia was more humane and showed faster recovery. **Conclusion:** These outcomes suggested an effective and feasible technique of inducing knee osteoarthritis in New Zealand White rabbit models.



PNC187

THE ROLE OF DRD4 DNA METHYLATION IN SCHIZOPHRENIA

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Introduction: DRD4 is a dopamine receptor subtype that has been linked to schizophrenia genetically. Previous studies have shown that the density of DRD4 in schizophrenics' brains was higher than the other dopamine receptors. However, the genetic research of *DRD4* in the physiology of the dopaminergic system with increased risk of schizophrenia is still not well established. Due to the complexity of the gene variations associated with schizophrenia and the influence of environmental factors, the study aimed to analyse the *DRD4* DNA methylation in the peripheral blood of schizophrenia. **Materials and Methods:** This study was a case-control study. A total of 138 schizophrenia patients were recruited from the Psychiatry Clinic, Hospital Kuantan Ampuan Afzan, Kuantan Pahang and 132 matched healthy controls were included from Kuantan district. The genomic DNA from the peripheral blood was extracted and bisulfite converted. The MethyLight Taqman® test was used to determine the degree of *DRD4* DNA methylation quantitatively. The data was analysed using analysis of covariance (ANCOVA) after being adjusted for age and gender. **Results:** When compared to the control group, schizophrenia had significantly lower *DRD4* DNA methylation ($p=0.001$). Males ($p=0.026$) and females ($p=0.004$) patients both had hypomethylation. **Conclusion:** This research strongly suggests that DNA methylation of the *DRD4* gene may have a role in the genetic foundation of schizophrenia.



PNC188
**MENTAL HEALTH STATUS AND PSYCHOSOCIAL JOB DETERMINANT AMONG
EMPLOYEES IN A MALAYSIAN HIGHER INSTITUTION DURING THE COVID-19
PANDEMIC**

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Introduction: Workplace mental health is becoming significant in higher education. Employment is one of the factors that can impair an employee's mental health, restricting their capacity to function well. This study aimed to assess mental health status among employees in a higher institution in Kuantan and its association with sociodemographic and job characteristics. **Materials and Methods:** An online survey was conducted using a random email list. The employees were given the validated Malay versions of the DASS-21 and the Job Content Questionnaire. **Results:** Depression, anxiety, and stress were prevalent in 26.5%, 36.2% and 21.3% of these workers, respectively. Individuals who lived alone during the Covid-19 movement control order reported having stress symptoms (57.1%, $p=0.04$). Job insecurity was associated with anxiety (95% CI = 1.4, 11.71, $p = 0.01$) while lack of supervisor support showed higher risk of depression (AOR=7.4, 95% CI = 1.99, 27.5, $p=0.003$), anxiety (AOR=4.7, 95% CI = 1.15, 13.69, $p=0.03$), and stress (AOR=9.3, 95% CI = 2.09, 41.84, $p=0.003$). **Conclusion:** Our research concluded that this group of employees frequently reported depression, anxiety, and stress. The results also highlight the need for better support and job security from higher authorities.



PNC191

CHRONIC POSTPARTUM CHANGES OF MESENTERIC ARTERIES IN N^ω-NITRO-L-ARGININE METHYL ESTER HYDROCHLORIDE (L-NAME)- INDUCED HYPERTENSION IN PREGNANT RATS MODEL.

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Introduction: Women with a history of hypertensive disorders of pregnancy (HDP) have a two- to four-fold increased risk to develop cardiovascular diseases later in life. It has been postulated that the transient increase in blood pressure (BP) during pregnancy leads to ongoing endothelial dysfunction even though BP is normalized during postpartum. A balanced production of endothelin-1 (ET-1) and nitric oxide (NO) is important for BP regulation. This study aims to investigate the chronic postpartum effects of hypertension during pregnancy on the mesenteric arteries. **Materials and Methods:** Twenty-four female Sprague-Dawley (SD) rats were assigned to four groups (n=6). Hypertension was successfully induced in the treated groups given 125mg/kg/day of L-NAME. All groups were sacrificed at Day 30 postpartum. Histopathological study of mesenteric arteries and ELISA analyses were done to measure ET-1 and NO levels. **Results:** The endothelial cells were seen as a simple squamous cell with flattened nucleus. No obvious abnormalities were observed in the treatment groups. The media to luminal ratio did not show significant alteration in the treatment groups. The endothelial cells number to length ratio remains the same across the groups. In addition, the concentration of ET-1 and NO were not significantly different in the treatment groups. **Conclusion:** Based on the current studies, there is no evidence that demonstrates abnormal changes to the endothelium and tunica media of the resistance artery in long-term duration following HDP. However, further investigation of its potential chronic effect warrants a deeper analysis at the endothelial receptors and alteration at the ultrastructure level.



PNC201

EFFECT OF MAHKOTA DEWA FRUIT EXTRACT ON KIDNEY FUNCTIONS IN MICE

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Introduction: Mahkota dewa fruit is known for its antidiabetic effect and is commonly used in Malaysia, Indonesia, Philippine, Thailand and Oceania. However, there is still insufficient information available to validate the safe dose of the fruit extract for human use. Hence, the aim of this research was to determine the safe dose for renal function in mice. **Materials and Methods:** [MM2] The subcritical liquid carbon dioxide extract of Mahkota dewa fruit was prepared and administered via oral gavage to two groups (normal and 3000 mg/kg bw based on up and down procedure) for acute toxicity according to the OECD-425, 2008 and five groups viz. normal control, 250, 500, 1000 and 2000 mg/kg bw for sub-acute toxicity according to the OECD-407, 2008. The renal function parameters such as urea, creatinine and morphological observation of kidney tissue were analysed. **Results:** [MM3] The extract exhibited no mortality, morbidity, and no change in general behaviour up to a dosage of 3000 mg/kg body weight ($LD_{50} > 3000$ mg/kg). [MM4] The result of urea markedly rose to 76.71 mg/dL and 87.38 mg/dL compared to the control group (48.46 mg/dL) at doses of 1000 and 2000 mg/kg bw respectively. Similarly, creatinine value was also increased 0.87 mg/dL and 0.94 mg/dL compared to the control group (0.61 mg/dL) at doses of 1000 and 2000 mg/kg bw respectively. Moreover, the abnormal morphological finding was also found such as dilated tubules, focal degeneration, apoptosis, renal lesions/tissue haemorrhages of kidney tissue in the same doses (1000 and 2000 mg/kg bw). On the other hand, normal biochemical and histological findings were found at doses of 250 and 500 mg/kg bw in comparison to the normal control group. **Conclusion:** The findings revealed that Mahkota dewa fruit extract up to 500 mg/kg bw is a safe dose that would offer a greater therapeutic benefit without causing any nephrotoxicity effects. However, further clinical trials are still warranted to determine a safe dose before its commercialization.



PNC214

CHRONIC EXPOSURE OF LOW-DOSE ORGANIC ARSENIC INDUCED OXIDATIVE
STRESS INJURY ON THE RATS KIDNEY

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Introduction: Monosodium methylarsonate (MSMA) is an organic arsenical herbicide widely used in agriculture. Humans are exposed to arsenic through contaminated drinking water and anthropogenic activities. Exposure to acute and high dose of inorganic arsenic induced oxidative stress injury in the tissue. However, studies focusing on effects of chronic low dose organic arsenic exposure on oxidative genes of kidneys are limited. Therefore, the objective of this study is to determine the effects of chronic low dose organic arsenic exposure on rats' kidneys oxidative genes at 6-month duration. **Materials and Methods:** Twelve male Sprague-Dawley rats, aged 2-3 months old, with average weight of 200 to 250g divided into two groups (n=6); control and treatment respectively. The control group was given daily oral gavage of distilled water and the treatment group was given daily oral gavage of MSMA at 63mg/kg body weight for 6-months duration. Kidneys were harvested for histology and gene expression analysis. **Results:** Histologically, on H&E & PAS staining, the control group showed normal appearance of the glomerular and tubular structures. The treatment groups showed microscopic changes of the glomerular and tubular structures such as glomerular atrophy with widening of Bowman's space, dilated tubular lumen, loss of brush border and presence of tubular cast. Gene's analysis showed upregulation of Glutathione reductase (GSR) and downregulation of Catalase and nitrite oxide synthase 1 (NOS1). **Conclusion:** Chronic exposure to low dose organic arsenic induced kidney injury through oxidative stress mechanism.



PNC219
**RISK OF COLORECTAL CANCER DUE TO STREPTOCOCCUS GALLOCYTICUS: A
SYSTEMATIC REVIEW**

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Introduction: World Health Organization (2019) has declared colorectal cancer (CRC) as the top 3 most common cancer in both genders with an increased trend in the incidence. One of the pathogens specifically associated with malignant colonic diseases is *Streptococcus gallolyticus* (Sg). Owing to only a little research done in determining evidence to support Sg as a determinant of CRC, a systematic review is constructed. **Materials and Methods:** Full-text articles on case-control and cohort studies published from 2010 to 2020 were searched using 3 research databases. The papers were critically appraised using the STROBE statement. Qualitative synthesis was done by comparing descriptive study, risk of bias, distribution of Sg according to stage and Methods used for Sg detection. **Results:** 7 articles that fulfil the eligibility criteria were selected. 4 papers have low overall risk of bias. Sg is found to be a risk factor for CRC from 3 papers. 2 papers studied the association between distribution of Sg and stages of CRC, where the results were contradictory making it to be inconclusive. The most common Methods used for Sg detection is culturing technique. **Conclusion:** There is insufficient evidence to prove Sg colonization as a risk factor of CRC. There is significant association between Sg distribution and CRC stage. Culturing technique is the most common Methods used for Sg detection. However, it is recommended that further research needs to use strong statistical analysis to control most of the confounders and use more methods in the detection of Sg.



PNC227

**FACTORS INFLUENCING LEARNING AND WELLBEING AMONG MEDICAL STUDENTS
DURING COVID-19 PANDEMIC: PRELIMINARY FINDINGS FROM KUANTAN**

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Introduction: Since the COVID-19 pandemic, most teaching and learning processes have shifted to online distance learning including in medical schools. While online learning has been ongoing for more than one year, the factors influencing online learning among Malaysian medical students and their well-being has yet to be described, especially when medical courses heavily rely on experiential learning.

Materials and Methods: After obtaining ethical approval, we invited all Year 1 (n=151) and Year 2 medical students (n=135) in International Islamic University Malaysia to participate in this cross-sectional observational study in August-September 2021. We distributed a 65-items self-administered online questionnaire that contains Online Learning Experience, Course Evaluation Questionnaire, Well-Being Index, Generalised Anxiety Disorder, Abbreviated World Health Organisation Quality of Life, and Pittsburgh Sleep Quality Index Questionnaires. **Results:** We received a 55% response (n=77 of Year 1, n=81 of Year 2). The mean scores of the learning community and student support ranged between 3.68-3.71 over 5. The most prevalent barrier in online learning was the inadequate opportunity to study with other classmates (92%). In general, participants reported satisfactory quality of life (mean 14.6 over 20). Nevertheless, 87% reported anxiety symptoms, whereas 74% had poor sleep quality. **Conclusion:** Although online learning was rated positively, the majority of IIUM medical students had poor sleep quality and exhibited anxiety symptoms. This warrants further investigation followed by early intervention to prevent further decline in their wellbeing.



PNC233

THE INFLUENCE OF PAMIDRONATE ON BIOENGINEERED HYDROXYAPATITE (HA)
SCAFFOLD INCORPORATED WITH VEGF AND BMP-2 IN VITRO

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Introduction: Bisphosphonate such as pamidronate are readily available and have been used extensively in bone disorders to promote bone formation. Incorporation of pamidronate together with vascular endothelial growth factor (VEGF) and bone morphogenetic protein-2 (BMP-2) on hydroxyapatite (HA) scaffolds will help to augment cell recruitment and ingress into the scaffolds which is important for a successful bone regeneration. This study was performed to investigate the half maximal effective concentration (EC₅₀) of pamidronate incorporated with growth factors (VEGF and BMP-2) along with assessment of its morphological changes in vitro. **Materials and Methods:** HA scaffold were engineered to MC3T3-E1 cell incorporated with VEGF and BMP-2 growth factors with pamidronate in vitro. Measurements of EC₅₀ values were conducted using MTT (3(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) tetrazolium reduction assay. The morphological assessment of the engineered HA scaffold in vitro was documented using inverted microscope **Results:** The EC₅₀ of pamidronate on the engineered HA scaffold in vitro was 17.32 ug/ml. The results showed an increase of MC3T3-E1 cell proliferation and differentiation after 72 hours at pamidronate concentration ranging from 12.47 ug/ml to 24.94 ug/ml. Migration and adherence of the MC3T3-E1 cells onto the scaffold was noted; forming a bioengineered complex at the reported concentration. **Conclusion:** Pamidronate influences the bioengineered HA scaffold at 17.32 ug/ml and the morphology of changes are aligned with the effective concentration reported.



PNC238

EFFECT OF CLIMATE VARIABILITY ON DENGUE CASES IN PAHANG

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Introduction: Pahang is located in the eastern part of Peninsular Malaysia, and experienced strong winds and heavy rainfall during the Northeast monsoon. In contrast, during the Southwest monsoon, it will encounter a dry season with high temperatures. Due to the tropical climate, vector-borne diseases such as dengue fever are endemic in this area. This study aims to determine the association between climate variability and dengue cases in all districts in Pahang from 2011 to 2018.

Materials and Methods: Monthly dengue cases and average monthly temperature, rainfall, relative humidity, and surface wind speed were obtained from the Ministry of Health Malaysia and the Malaysian Meteorological Department, respectively. Poisson generalized linear model and overdispersed Poisson were developed to quantify the association between climate data and the number of dengue cases.

Results: The total number of dengue cases in Pahang during the study period was 13170. The findings revealed a positive linear relationship between relative humidity and dengue cases in Pekan ($p = 0.014$) and Rompin ($p = 0.001$). For temperature, Raub indicated a positive association with dengue cases ($p = 0.022$). Surface wind speed was inversely associated with dengue cases in Bera ($p < 0.001$), Maran ($p = 0.032$), and Temerloh ($p = 0.003$). **Conclusion:** Climate variables such as temperature, relative humidity, and surface wind speed were associated with dengue cases in Pahang. Climate plays a pivotal role in the mosquito biology, dengue virus and dengue transmission cycle. The outcome of this study is essential in planning and putting together control strategies to reduce the mortality and morbidity of dengue under the Pahang State Health Department.





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