

**24TH MEDICAL & HEALTH
RESEARCH WEEK**



**UNIVERSITI
VATAN KITA**

FACULTY OF MEDICINE
THE NATIONAL UNIVERSITY OF MALAYSIA



24th MEDICAL & HEALTH RESEARCH WEEK

“Transitioning to New Norms towards Research Excellence”

PROGRAM & ABSTRACT BOOK

8 - 19 August 2022

Organized by

Secretariat of Research & Innovation
Faculty of Medicine, Universiti Kebangsaan Malaysia

24th Medical & Health Research Week

*'Transitioning to New Norms
towards Research Excellence'*

8-19th August 2022

Secretariat of Research & Innovation,
Faculty of Medicine, UKM

C2

The Feasibility of Pectoralis Major Myocutaneous Flap Post Right Hemimandibulectomy in A Case of Advance Mandibular Carcinoma- A Case Report

ASSIKIN M¹, ADZIM P², KHAIRUL ANWAR AR¹

¹*Department of General Surgery, Faculty of Medicine and Health Sciences, Universiti Kebangsaan Malaysia*

²*Department of Plastic and Reconstructive Surgery, Faculty of Medicine and Health Sciences, Universiti Kebangsaan Malaysia*

ABSTRACT

Introduction: Pectoralis Major Myocutaneous Flap (PMMF) is a regional flap which is frequently used in the reconstruction of head and neck defects. However, since the era of the free flap and the development of microvascular surgery, the drawbacks of PMMF reconstruction were magnified and its popularity decreased in recent decades. Nonetheless, there are specific circumstances that require PMMF as a primary choice to reconstruct head and neck defects over a free flap.

Method: Case report

Results: A 74-year-old Malay male, a chronic heavy smoker, presented with a 3 months history of painless swelling over the right mandible which rapidly increased in size. It was associated with dysphagia, loss of appetite and significant unintentional weight loss. On examination, the patient was cachexic. There is a tumour was a right mandibular mass measuring 15cm x 10cm which is lobular in shape, non-mobile and hard. Intraoral examination showed an ill-fitting lower jaw denture associated with swelling of the lower alveolus. Contrast Enhanced Computed Tomography (CECT) showed a right mandibular mass causing destruction of the body of the mandible with local infiltration to the masseter, hyoglossus and temporalis muscles, as well as parotid and submandibular glands. An incisional biopsy confirmed well-differentiated squamous cell carcinoma. He underwent tracheostomy followed by right modified radical neck dissection and right hemimandibulectomy. The large tissue defect was covered with Pectoralis Major Myocutaneous Flap (PMMF) with preservation of thoracoacromial vessels, which preoperatively confirmed a triphasic waveform using a handheld doppler. The donor site was covered with a Split Skin Graft (SSG) harvested from the right anterior aspect of the thigh. Intermediate postoperative recovery was complicated with orocutaneous fistula which was treated with vacuum Assisted Dressing (VAD).

He was subsequently discharged on day 14 after surgery with overall gaining good wound healing and successful PMMF.

Conclusion: Despite free flap superiority over PMMF in general, there are specific circumstances that require PMMF as the primary choice for reconstruction of head and neck defects over free flap.

C4

The Effects of Self-Management Program as Adjunctive to Usual Rehabilitation Exercise on Pain and Functional Outcomes for Patients with Knee Osteoarthritis: A Randomized Controlled Trial

MOHD AZZUAN A^{1,2}, ASHRIL Y², MOHAMAD SHARIFF AH³, FAIZUL HAFIZ ZA¹, SITI SALWANA K⁴, DEVINDER KAS⁵

¹*Physiotherapy Program & Centre for Rehabilitation and Special Needs Studies, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, 50300, Kuala Lumpur, Malaysia*

²*Centre for Sport and Exercise Sciences, Universiti Malaya, 50603, Kuala Lumpur, Malaysia*

³*Sports Medicine Unit, Faculty of Medicine, Universiti Malaya Medical Centre, 59100, Kuala Lumpur, Malaysia*

⁴*Department of Physical Rehabilitation Sciences, Faculty of Allied Health Sciences, International Islamic University Malaysia, 25200, Pahang, Malaysia*

⁵*Physiotherapy Program & Centre for Healthy Ageing and Wellness, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, 50300, Kuala Lumpur, Malaysia*

ABSTRACT

Introduction: Self-management interventions such as home-based exercise (HBE) and patient education (EDU) have been shown as beneficial additions to usual physiotherapy care in the management of knee osteoarthritis (KOA) rehabilitation. However, previous trials mostly examined the effects of HBE and EDU separately.

Objective: This study aimed to examine the effects of a structured combined home-based exercise and patient education program (HBE+EDU) as an adjunct to usual KOA rehabilitation on pain score, functional mobility and disability level.

Methods: Thirty adults with KOA were randomly allocated to experimental (n = 15) and control (n = 15) groups. All participants underwent their usual weekly physiotherapy treatments. The experimental group received a structured HBE+EDU program to their usual care, while the control group performed home stretching exercises to equate treatment time. The Knee Injury and Osteoarthritis Outcome Score (KOOS), visual analogue scale (VAS) for pain, and timed-up-and-go (TUG) for mobility were measured pre-post intervention.

Results: After eight weeks, the experimental group demonstrated significant improvements in the pain VAS, TUG and KOOS scores compared to baseline ($P <$

0.05); meanwhile, no significant changes were observed in the control. Relative to the control, the experimental group presented higher improvements ($P < 0.05$) by 43% for pain VAS, 16% for TUG, and 41% for KOOS.

Conclusion: Integrating the HBE+EDU program into usual rehabilitation reduces pain and disability and improves functional mobility. Plausibly, the HBE+EDU program improves participants' efficacy in KOA self-management, resulting in these positive outcomes.

C5

A Pilot Study Assessing the Internal Consistency Reliability of The Job Demand Inventory, Physicians' Lack of Professional Autonomy and Health Professions Stress Inventory (HPSI) Questionnaires Among Malaysian Primary Care Doctors

MUHAMMAD SHAH S, MOHAMED-SYARIF MY, NIK MUNIRAH NMN

Department of Primary Care Medicine, Universiti Teknologi MARA, Sungai Buloh Campus, Jalan Hospital, 47000 Sungai Buloh, Selangor, Malaysia.

ABSTRACT

Introduction: Work-related stress is a significant issue among doctors.

Objectives: This study aimed to determine the internal consistency reliability of the Job Demand Inventory (JDI), Physicians' Lack of Professional Autonomy (PLPA) and Health Professions Stress Inventory (HPSI) questionnaires, to evaluate work-related stress during the COVID-19 pandemic among primary care doctors (PCDs) in Malaysia.

Methods: This was an online cross-sectional psychometric study involving 19 PCDs in a university-based primary care clinic. This study included PCDs who had worked six or more months in a primary care setting in Malaysia and excluded those who had active depressive disorders. A Google Forms™ (Google LLC, California, USA) link was sent via Whatsapp™ (Meta Platforms, Inc., California, USA) to the study participants and the completed responses were analyzed using SPSS version 28. The internal consistency (Cronbach alpha coefficient) was calculated for all three questionnaires.

Results: The mean age of the respondents was 34.1 ± 2.3 years old. The majority were females (52.6%) and Malay (100%). Four respondents (21.1%) had postgraduate qualifications in Family Medicine. The overall Cronbach alpha values for the JDI, PLPA and HPSI questionnaires were 0.87, 0.78, and 0.96, respectively. The Cronbach alpha values for the two subscales of PLPA were 0.69 for 'clinical autonomy', and 0.80 for 'administrative autonomy'. The Cronbach's alpha values for the four domains of HPSI which were 'professional recognition', 'patient care responsibilities', 'job conflicts' and 'professional uncertainty' were 0.88, 0.81, 0.86, and 0.91, respectively.

Conclusion: The JDI, PLPA, and HPSI questionnaires and their subscales were found to have moderate to good internal consistency reliability among Malaysian PCDs in this study.

C6

Sinonasal Tumour “A Red Herring Story”

XIN GEN N¹, JESSICA MPT¹, SITI SABRINA S², EE LING A¹

¹*Department of Ophthalmology, Hospital Pulau Pinang*

²*Department of Pathology, Hospital Pulau Pinang*

ABSTRACT

Introduction: Cavernous sinus syndrome is a condition caused by any pathology involving the cavernous sinus present with unilateral ophthalmoplegia (cranial nerve (CN) III, IV, VI), horner syndrome or sensory CN V₁- CN V₂ loss.

Case report: An 81-year-old Chinese male with underlying normotensive glaucoma and hypertension, presented with right eye (RE) progressive drooping of the eyelid for 3 months. It was associated with shooting pain from tooth to periorbital region, swelling over the right medial canthus and tearing. On examination, the relative afferent pupillary defect was negative. RE vision was 6/24, and left eye (LE) vision was 6/18. There was proptosis and ptosis of RE. The RE deviated outwards and downwards and extraocular movement was limited involving cranial nerves 3, 4, 5, 6. LE anterior segment findings were normal. The bilateral eye (BE) was pseudophakic. The intraocular pressure of the RE was 20, LE was 14. The posterior segment of BE has a pink optic disc with a cup disc ratio of 0.8, surrounded by peripapillary atrophy. BE fundus had multiple dot-blot haemorrhages. Computed tomography of brain and orbit showed a large heterogeneous mass involving the right nasal cavity, frontal and ethmoid sinuses, and medial extraconal space of right orbit with intracranial extension. C-reactive protein and white blood cell counts were elevated. Biopsy taken showed features of moderately differentiated squamous cell carcinoma. The patient was diagnosed with sinonasal tumour stage 4a and was co-managed with the otorhinolaryngology and neurosurgical team. He was planned for radiotherapy and surgical excision of the mass.

Conclusion: On occasion, certain sinonasal masses may present atypically. It is of great importance to have a high index of clinical suspicion.

C7

Validity and Reliability of the Bahasa Malaysia Version of the Lymphedema Functioning, Disability and Health Questionnaire for Upper Limb Lymphedema (Lymph-ICF-UL BM) in Patients with Breast Cancer-Related Lymphedema

ESTU M, ASFARINA Z, NOR AZLIN MN

Physiotherapy Programme, Centre for Rehabilitation and Special Needs Studies, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Breast cancer-related lymphedema (BCRL) is a perturbing morbidity that occurs following treatment for breast cancer. Patients with BCRL can suffer from various problems in physical, social, and mental functioning, which subsequently mitigate their quality of life (QoL). The Lymph-ICF-UL is a valid and reliable instrument for assessing QoL in patients with BCRL. However, the Bahasa Malaysia (BM) version of it is not available yet.

Objective: This study aimed to produce and validate the Lymph-ICF-UL BM.

Methods: A forward and backward translation process from the original language (English) and the target language (BM) was conducted. Psychometric properties such as the face, content, construct validity, internal consistency and test-retest reliability were assessed in 120 participants.

Results: Two items were eliminated as per suggestions by the experts and patients, which resulted in 27 items of Lymph-ICF-UL BM. Face validity was very good because all patients (100%) found the scoring system and the items clear and relevant. Content validity was confirmed by sufficient item-level, scale-level indices and modified kappa values. Confirmatory factor analysis showed acceptable fit indices, which indicated good construct validity. Cronbach's alpha ranged from 0.670 to 0.952, indicating a good internal consistency. Test-retest reliability was proven by interclass correlation coefficient (ICC = 0.888 – 0.985) and Bland-Altman plot that demonstrated an agreement between the two test occasions.

Conclusion: The Lymph-ICF-UL BM has good validity and reliability in assessing the QoL of patients with BCRL. In order to further support the evidence on the psychometric properties of the Lymph-ICF-UL BM, future studies that assess its responsiveness are needed.

C8

A Case of Mucinous Breast Carcinoma with Micropapillary Clusters

NURWAHYUNA R, NAIM SYAHIDAH Z, REENA RAHAYU MZ

Department of Pathology, Faculty of Medicine, Hospital Canselor Tuanku Muhriz, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia.

ABSTRACT

Introduction: Mucinous carcinoma with micropapillary pattern (MCMP) is a rare type of breast carcinoma which exhibits dual histological features comprising pure mucinous carcinoma (MC) and invasive micropapillary carcinoma of the breast (IPMC). We present a case of MCMP to bring awareness to its aggressive tumour behaviour.

Case report: A 60-year-old woman underwent a left mastectomy with left axillary dissection for a progressively enlarging left breast lump. Macroscopic examination of the left breast revealed a gelatinous tumour measuring 80 mm. Histologically, the tumour is formed by clusters of malignant epithelial cells forming a micropapillary pattern, suspended in abundant extracellular mucin walled by delicate fibrous septa. The micropapillary clusters exhibit characteristic reverse polarity features, highlighted by stromal-facing surface staining with EMA immunostain. Six out of 13 lymph nodes showed infiltration by micropapillary clusters surrounded by mucin. A final diagnosis of mucinous carcinoma, Grade 1 and stage pT3 N2a was rendered. She is currently on tamoxifen and remains recurrence-free, 2 years after the initial presentation of her breast lump.

Conclusion: Mucinous carcinoma (MC) and invasive micropapillary carcinoma of the breast (IPMC) are two distinct entities which differ in histomorphological features, behaviour and prognosis. IPMC exhibits an increased incidence of lymphovascular invasion and a higher rate of lymph node metastasis. The recognition of micropapillary features in otherwise a subtype of invasive breast carcinoma with a good prognosis is worth to be paid more attention to as it may contribute to the unfavourable behaviour and malignant potential, thus impacting clinical management.

C9

Activities of Daily Living Skills Caregiver Training Module for Children with Special Needs in Malaysia: Development and Validation for Home Module Program

CHAO YEE L, NOR AFIFI R, MASNE K

Occupational Therapy Program, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Children with special needs often face difficulties in performing their daily living activities (ADL) and occupational therapy (OT) treatment is important to improve their ADL performance. However, due to COVID-19, less physical intervention can be performed in a clinical setting.

Objective: This study aimed to develop and validate a Malay ADL caregiver training module for children with special needs aged from birth to six years old as a home module programme.

Methods: The ADL training module consisted of six domains: i) feeding, ii) dressing and undressing, iii) bathing, iv) toileting, v) toothbrushing and vi) handwashing. Each domain included general ADL introduction, checklists and interventions. The ADL training module was validated using focus group discussion (FGD), Content Validation Index (CVI) and cognitive interview. Eight expert panels with at least one year of experience in OT paediatric settings were recruited for FGD by using a purposive sampling method. All expert panellists were asked to rate CVI based on relevance, clarity, simplicity and ambiguity on a four-point Likert scale. Four caregivers with at least one special need child were recruited for cognitive interviews.

Results: The module obtained an excellent content validity in which both item-level CVI (I-CVI) and scale-level CVI (S-CVI) scored 1.00. Cognitive interview with four caregivers reported that all items in the module were appropriate, easily understood and helpful with suggestions in module organization, steps simplification and additional illustrations.

Conclusion: The module is valid and feasible for caregivers in conducting ADL training for their children with special needs at home.

C10

A Case of Primary Aldosteronism with An Insignificant Aldosterone-Renin Ratio

NURUL ZAWANI Z¹, AMIRAH FARHANAH A¹, IZZATUL ALIAA B¹,
HANITA O¹, NORASYIKIN AW², ELENA AISHA A²

¹Department of Pathology, UKM Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur

²Endocrine Unit, Medical Department, Faculty of Medicine, Hospital Canselor Tuanku Muhriz, Jalan Yaacob Latif, Bandar Tun Razak, Kuala Lumpur, Malaysia

ABSTRACT

Background: Primary aldosteronism (PA) is a condition with an autonomous release of aldosterone causing secondary hypertension. Diagnosing PA involves a cascade of investigations that starts with the screening via the aldosterone to renin ratio (ARR) test. However, a negative ARR shall not be used to conclude that a PA is unlikely. Here, we report a case of resistant hypertension and persistent hypokalaemia with recurrent negative ARR, which delayed the PA diagnosis.

Case report: A 69-year-old woman with long-standing hypertension presented with puffy, bilateral pitting oedema of the leg up to the knee level. Despite the maximum dosage of four antihypertensive medications, the blood pressure was persistently elevated, ranging from 140 to 240 (systolic) and 92 to 105 (diastolic). Investigations of secondary hypertension revealed normal thyroid function and cortisol measurement, intact catecholamine secretion, and renal artery doppler. Screening for PA was commenced in view of resistant hypertension with persistent mild hypokalaemia, ranging from 3.0 to 3.4 mmol/L (Reference range: 3.5-5.1 mmol/L). The ARR test was done twice and resulted in 15.7 and 35.8 (Reference range >75: Intermediate, >100: Positive), which was not suggestive of hyperaldosteronism. The fludrocortisone Suppression Test (FST) was decided after the incongruence between the negative ARR and the high clinical suspicions of PA. Surprisingly, the FST revealed autonomous aldosterone production with aldosterone of 966 pmol/L (Reference range: <170 pmol/L) making PA likely. Hence, an adrenal computed tomography is planned to localise any adrenal lesion.

Conclusions: Both the aldosterone and renin measurement are easily subjected to various preanalytical factors. Therefore, the diagnosis of PA should be based on constellations of the patients' medication and clinical conditions with comprehensive analysis and interpretation of the biochemical tests.

C11

The Development and Validation of Social Skills and Cognitive Development Module: Focus on Children with Special Needs in Malaysia.

NADIAH OA, NOR AFIFI R, MASNE K

Occupational Therapy Program, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Special needs children struggle with building and maintaining relationships with typical children, especially during the pandemic and post-pandemic COVID-19 which has affected their social skills and cognitive development due to the implementation of lockdowns and social distancing.

Objective: This study aimed to develop and validate the use of the Social Skills and Cognitive Development module for children with special needs between birth to six-year-old in Malaysia.

Methods: The Social Skills and Cognitive Development module consists of three domains which include an introduction, assessment and intervention. Purposive sampling was used to recruit eight expert panels with a background in occupational therapy, having at least one year of experience in the paediatric setting. The module was reviewed during Focus Group Discussion, with the panel being required to rate in terms of relevance, clarity, simplicity and ambiguity for content validation index (CVI), using a 4-Likert Scale. A cognitive interview (CI) was carried out with four parents that had at least one special needs child.

Results: The finding reported both excellent item and scale content validity. The relevance, simplicity, clarity, and ambiguity of I-CVI, S-CVI/Ave and S-CVI/UA for all items in the domain were at 1.00. All four parents reported that all domains in the module were appropriate, relevant, and easy to follow with feedback on module organization, steps simplification and additional illustrations.

Conclusion: The excellent finding of content validity indicated that the module was valid and feasible to be used by parents in conducting social skills and cognitive development activities for special needs children in a home setting.

C13

A Case Report of Delayed Suprachoroidal Haemorrhage Post-vitreectomy and It's Risk Factors

NUR AISYAH Z, RONA ASNIDA N, CHENG TC, JEMAIMA CH,
BASTION MLC

*Department of Ophthalmology, Faculty of Medicine, Hospital Canselor Tuanku Muhriz,
Universiti Kebangsaan Malaysia, Jalan Yaacob Latif, Cheras, Kuala Lumpur, Malaysia*

ABSTRACT

Introduction: Suprachoroidal haemorrhage (SCH) is a rare but potentially blinding complication of intra-ocular surgery. The incidence of delayed SCH (DSCH) varies from 1.6% to 6.1%, depending on the type of surgery performed and associated risk factors.

Objective: To highlight the risk factors in developing DSCH in this case and the visual outcome.

Method: Case report.

Results: A 61 years-old lady with a background of type 2 diabetes mellitus (HbA1c = 11.1%), hypertension and dyslipidaemia presented with the right eye (RE) central blurring of vision and metamorphopsia with visual acuity of 6/60. She was diagnosed as RE full thickness macula hole with myopia and underwent 23G pars-plana-vitreectomy, epiretinal membrane and internal limiting membrane peeling, fluid-air exchange and SF₆ 25% under local anaesthesia. Her systolic blood pressure intra-operatively ranged from 130 to 170 mmHg, and diastolic of 70 to 90 mmHg. Despite uneventful surgery, post-operatively she complained of pain and developed vitreous haemorrhage with SCH with intra-ocular pressure (IOP) of 46 mmHg. The IOP lowering medications were administered and well-controlled within a range of 15 to 16 mmHg. The SCH was managed conservatively and resolved post-operatively 8 weeks later. Although the macula hole was closed her best corrected visual acuity was maintained at 6/60 due to retinal inner segment-outer segment junction deficits.

Conclusion: This case showed evidence of uncontrolled hypertension, dyslipidaemia and myopia were the risk factors to develop SCH. Despite the DSCH being resolved conservatively, the final poor visual outcome was mainly contributed by the unhealthy macula layer.

C14

Determinant Factors of Nursing Leadership Skills among Nurse Leaders in Malaysian Teaching Hospitals: A Systematic Review

MASILAWATI MA¹, ANIZA I¹, NOR AZIMAH M², ZAINAH M³

¹*Department of Community Health, Faculty of Medicine, Hospital Canselor Tuanku Muhriz, Universiti Kebangsaan Malaysia, Jalan Yaacob Latif, Cheras, Kuala Lumpur, Malaysia*

²*Department of Family Medicine, Faculty of Medicine, Hospital Canselor Tuanku Muhriz, Universiti Kebangsaan Malaysia, Jalan Yaacob Latif, Cheras, Kuala Lumpur, Malaysia*

³*Department of Nursing, Faculty of Medicine, Hospital Canselor Tuanku Muhriz, Universiti Kebangsaan Malaysia, Jalan Yaacob Latif, Cheras, Kuala Lumpur, Malaysia*

ABSTRACT

Introduction: Leadership is fundamental for ensuring the excellence of an organization and more importantly to determine the direction of the nursing profession with the goal of improving the image, professionalism and organization of the profession. Nursing leadership skills are essential in managing issues and challenges related to staffing, supervision, and providing safe and efficient care services to patients.

Objective: The study aimed to conduct a systematic literature review of determinant factors of nursing leadership skills among nurse leaders in Malaysian teaching hospitals. Lately, the issue of the weakness of the Malaysian nursing training program has become part of an important agenda in the Malaysian health system, especially from the aspect of leadership competence of trainers. The approach is capable of producing quality nurse leaders in an organization.

Methods: A literature review search for nursing leadership skills was conducted through Web of Science, Scopus and PUBMED databases. This search involved a review of selected libraries from 2017 to 2021. The systematic literature was built based on past reviews.

Result: A total of 103 articles were retrieved, and 40 articles were included in the analysis. The majority of the studies demonstrated the determinant factors of nursing leadership skills were socio-demography, socio-economic, education level, years of experience and services, personality, training, leadership styles and competency. From the findings, a new module will be developed and implemented among nurse leaders.

Conclusion: Hospital Management teams are recommended to provide training on leadership styles in enhancing competency among nurses.

C15

The Relationship of Visual Perceptual Skills and Handwriting Performance among Children with Autism Spectrum Disorder

MAHFUZH Z^{1,2}, MASNE K¹, NOR AFIFI R¹, FARAHYAH WY¹

¹Centre for Rehabilitation & Special Needs Studies (IcaRehab), Faculty of Health Sciences, Universiti Kebangsaan Malaysia.

²Special Education Division, Ministry of Education, Malaysia.

ABSTRACT

Introduction: Children with autism spectrum disorder often struggle with handwriting difficulties. Handwriting performance is intensely impacted by visual perceptual skills. It is believed that there is a causal relationship between letter formation and visual perceptual skills.

Objective: The purpose of this study was to study the association between visual perceptual skills and handwriting performance among children with autism spectrum disorder (ASD).

Methods: This study employed a single-group experimental study design with pre- and post- outcome measures. Eighteen children with ASD aged five to nine years participated in this study. The mean age of the participant is six years, the main gender is male, level of severity is ASD Level II (requiring moderate support). All participants completed a handwriting module developed within this study for 10 weeks of intervention duration. The outcome measure for handwriting performance is The Print Tool (Olsen and Knapton, 2006). The indicator of handwriting skill deficiency is declared when the participant's overall score of TPT is below 75%. Then, the Test of Visual Perceptual Skills-4 (Martin, 2017) is used to measure visual perceptual skills. Statistical analysis used were (1) paired t-test to investigate the changes in performance after 10 weeks and (2) Pearson correlation to study the relationship between TPT and TVPS-4 performance.

Results: It was shown that children with ASD had both handwriting and visual perceptual skills deficiency. A significant improvement in TPT score, $t(17)=-3.54$, $p=0.03$, *Cohen's d*=0.91 and TVPS-4 score, $t(17)=-2.10$, $p=0.02$, *Cohen's d*=0.43 was seen at 10 weeks post-intervention ($p<0.05$). However, the result indicated that there is no significant correlation between both handwriting performance and visual perceptual skills among children with ASD, $r(16)=0.031$, $p=0.901$ ($p>0.05$).

Conclusion: This study supported that the developed handwriting intervention module had a positive impact on both handwriting and visual perceptual performance in ASD children. However, no significant association was found between visual perceptual skills and handwriting performance.

C16

Evaluation of Sensibility on Tooth Previously Involved with Cystic Jaw Lesions

SITI NUR AR, ARINAH MA, NABIL S, NAZIMI AJ

Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Universiti Kebangsaan Malaysia

ABSTRACT

Introduction: Odontogenic cysts are jaw pathological cavities lined by cells arising from odontogenic epithelial cells, encapsulated by fibrous connective tissue. The neighbouring teeth of an offending tooth are often radiographically found within the cyst cavities due to its expansion. Any treatment modalities have a risk of devitalizing these teeth although it has been stated that the most conservative one poses a lower risk.

Objective: To assess the impact of cyst enucleation on the “teeth associated with a cyst” specifically their sensibility post cyst enucleation.

Methods: This retrospective study examined a sample from the population of patients who were previously treated for odontogenic cysts at the Oral and Maxillofacial Surgery Department at Hospital Canselor Tuanku Muhriz Universiti Kebangsaan Malaysia from 1st January 2000 until 31st December 2021. A list of patients was obtained and included if they met the imposed inclusion criteria. Data collected included the patient’s preoperative and postoperative electric pulp testing (EPT) reading and its timing.

Results: In total, 85 individuals teeth were obtained from 19 patients. The median for changes in EPT reading in intervals after surgery for less than one month is 14.9, one to three months is 16.7, three to six months is 1.5, six to nine months is -1 and more than nine months is 2.5. Initially, there is a reduced vitality for up to 3 months, before recovery of vitality reading.

Conclusion: It is not absolute that the tooth with apices involved within a cyst cavity would be non-vital following enucleation. It is recommended that these teeth should be reassessed for a minimum of 3 months postoperatively before proceeding with root canal treatment.

C17

Efficacy of Early Incremental Supervised Resistance Training Following Cardiac Surgery via Median Sternotomy - A Pilot Safety and Feasibility Randomized Controlled Trial

**NUR AYUB MA¹, DOA EL- ANSARY^{2,6}, CHONG TZE HUAT⁵,
SURIAH A³, ZATI IWANI, Z, MUHAMMAD ISHAMUDDIN I¹,
HAIRULFAIZI H¹, MOHD RAMZISHAM AR¹, MOHD RIZAL AM⁴,
COLIN R⁶, ALISTAIR R⁶, KATIJJAHBE, MA^{2,3}**

¹*Cardiothoracic Surgery, Heart and Lungs Center, Universiti Kebangsaan Malaysia Medical Center*

²*Department of Health Professions, Faculty of Health, Arts and Design, Swinburne University of Technology, Melbourne, Australia*

³*Department of Physiotherapy, Hospital Canselor Tuanku Muhriz, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia*

⁴*Department of Surgery, Hospital Serdang, Selangor, Malaysia*

⁵*Department of Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Center, Kuala Lumpur, Malaysia*

⁶*Department of Surgery, University of Melbourne, Melbourne, Australia*

ABSTRACT

Introduction: There is evidence to support the implementation of early upper limbs (UL) activity and resistance training following cardiac surgery.

Objectives: This study aimed to examine the safety and feasibility of early-supervised incremental resistance training (ESPIRT) in improving UL function and pain following cardiac surgery.

Methods: This study is a phase II prospective, double-blinded randomized controlled trial and intention to treat analysis. Participants were randomly allocated to one of two groups days after surgery. Safety is determined by sternal wound complications. Feasibility is defined as recruitment and adherence to the intervention group. Secondary outcomes were UL function using unsupported upper limb test (UULEX) and pain scale.

Results: Forty participants were randomly recruited (20 per group) with no reported sternal complications (0%). There is also no withdrawal or drop out in this study. The retention and adherence rate was at 70%. We found no statistically significant

differences between-group differences in UL function and pain except for the height of UULEX at the baseline period ($p = 0.024$) and duration of UULEX during the early post-post-operative period ($p = 0.032$). Within-group differences for UL function and pain scale in both groups improved significantly over time ($p < 0.05$).

Conclusion: The implementation of ESPiRT soon after discharge did not cause any harm or adverse events, which is often a concern for practitioners managing people after cardiac surgery. The protocol showed the acceptability of patient recruitment and early commencement of phase II cardiac rehabilitation in improving UL function and pain following median sternotomy with low attrition bias.

C18

A Sudden Death Case Diagnostic Dilemma: Acute Myocardial Infarction with Liver Laceration.

HAFIZ WM^{1,2}, MUHAMMAD I¹, ASYRAFF MN¹, MOHAMED SWARHIB S¹, FARIDAH MN¹

¹Forensic Unit, Department of Pathology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Cheras, Kuala Lumpur, Malaysia.

²Department of Forensic Pathology, Faculty of Medicine, Sungai Buloh Campus, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia.

ABSTRACT

Introduction: An intraabdominal injury such as a liver laceration is a rare complication of cardiopulmonary resuscitation, reported occurring between 0.5 to 2.9% of the general population. Liver injury alone can cause death due to haemorrhagic shock, especially if the portal vein or inferior vena cava is involved. Diagnosis would become a challenge for a forensic practitioner if the deceased were brought in dead without proper history.

Case report: A 48-year-old male with underlying hypertension, not on proper follow-up complained of feeling unwell and sought medical attention at the private clinic. The deceased collapsed while waiting for the doctor's consultation and later was brought in dead to the hospital by his friends. Autopsy findings showed coronary occlusion with haemoperitoneum due to liver laceration, which initially raised suspicion as there was no correlation between coronary occlusion and liver injury. History of cardiopulmonary resuscitation is only obtained after a thorough investigation done by the police.

Conclusion: The liver is the most regularly injured organ in blunt abdominal trauma. Hence, a history of cardiopulmonary resuscitation was considered a very significant clue to determine the cause of death in this case.

C19

Otitis Media Effusion and Its Association with Early Childhood Caries

CHIN LL^{1,3}, NOOR DINA HASHIM¹, FARINAWATI YAZID¹

¹*Department of Otorhinolaryngology-Head and Neck Surgery, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia.*

²*Department of Pediatric Dentistry, Faculty of Dentistry, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia.*

³*Department of Otorhinolaryngology-Head and Neck Surgery, Hospital Sultanah Aminah, Johor Bahru, Johor, Malaysia.*

ABSTRACT

Introduction: This study aims to determine the association between Otitis Media Effusion (OME) and Early Childhood Caries (ECC) among preschool children.

Methods: A prospective, cross-sectional study in a tertiary academic centre involving children aged 1-6 years old with hearing impairment or speech delay and grouped as with or without OME. Demographic and socioeconomic data were obtained followed by otoscopy, anterior rhinoscopy examination and tympanometry assessment. All subjects were assessed with Caries Risk Assessment (CRA) to determine the risks of ECC. A dental examination was performed to assess the severity of ECC (mild, moderate and severe) and documented in a dental charting. Tympanometric width was analysed to measure its association with tympanic membrane appearance.

Result: 206 children were recruited. Out of 129 children diagnosed with OME; 106/129 (82.2%) were found to have ECC and 23/129 (17.8%) without ECC. 18/77 (23.4%) children without OME had ECC. CRA showed that 51.0% of children with OME carried a moderate caries risk. However, analysis of the dental charting showed the majority of these children (49.1%) were assessed to have mild ECC followed by 30.2% with moderate ECC and 20.8% with severe ECC. A significant association was demonstrated between ECC and the occurrence of OME ($p < 0.001$) among these children. Tympanometry width >200 documented an association with abnormal tympanic membrane appearance in OME ($p < 0.001$).

Conclusion: Early detection of OME with ECC can accurately be done via routine screening in preschool children using Caries Risk Assessment and a complimentary Tympanic Width measurement to improve their quality of life with prevention of complications.

C20

Association Between Patient-Reported Outcome of Dysphagia and Penetration-aspiration Scale Among Post-Radiated Nasopharyngeal Carcinoma Patients

TEY KJ^{1,2}, NOOR DINAH¹, KONG MH², AVATAR SINGH MS³

¹Department of Otorhinolaryngology-Head and Neck Surgery, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Center, Kuala Lumpur, Malaysia.

²Department of Otorhinolaryngology-Head and Neck Surgery, Pantai Hospital, Kuala Lumpur, Malaysia.

³Department Otorhinolaryngology-Head and Neck Surgery, Taiping Hospital, Taiping Perak, Malaysia

ABSTRACT

Introduction: Swallowing dysfunction remains a prime concern among post-radiated nasopharyngeal cancer (NPC) patients. Identifying a comprehensive measure of dysphagia is challenging due to the complexity of swallowing physiology.

Objective: To investigate the association between the patient-reported outcome (PRO) of dysphagia and the penetration-aspiration scale (PAS) as well as the effects of dysphagia and aspiration on the quality of life (QOL) among post-irradiated NPC patients.

Methods: A cross-sectional study was conducted at a single tertiary centre. The dysphagia PRO was evaluated using the score of DESdC (Drinking, Eating, Swallowing difficulties, and Coughing when eating/drinking) and MD Anderson Dysphagia Inventory (MDADI). Fiberoptic endoscopic evaluation of swallowing assessments was performed and the PAS was documented.

Results: Sixty post-irradiated NPC patients were recruited. 23 patients (38.3%) showed penetration or aspiration using the PAS scale. Swallowing difficulties were the most concerning disability reported from the DESdC (67.0%). However, only those who experienced cough during eating or drinking showed a significant association with PAS ($p < 0.046$). The swallowing dysfunction had affected the QOL physically (MDADI-P) the most (mean score 60.0 ± 14.5) but did not notably affect their emotion, MDADI-E (mean score $= 74.4 \pm 11.8$) or social function, MDADI-F (mean score $= 78.0 \pm 14.0$). A significant association between MDADI composite score and PAS ($p < 0.001$) was observed. Overall, the correlation between the PRO of dysphagia and PAS was poor.

Conclusion: The screening of dysphagia is beneficial in raising individual awareness and reducing physicians' tolerance in evaluating the risk of aspiration. The combination of subjective perceptions of dysphagia and objective evaluation of aspiration is recommended for post-radiated NPC patients.

C21

Psychological Interventions for Frontliners in A Malaysian Teaching Hospital: A Brief Narrative Report

NUR IWANA AT^{1,2}, LUKE SCW¹, NIK RUZYANEI NJ¹, HAJAR MSS¹,
WAI WAI Y³, CHOON LENG E¹, SURIATI MS¹, WAN SALWINA
WI¹, MARHANI M¹

¹Department of Psychiatry, ³Department of Paediatrics, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

²Department of Psychiatry, Faculty of Medicine and Health Sciences, University Malaysia Sarawak, Sarawak, Malaysia

ABSTRACT

Introduction: In the wake of the COVID-19 pandemic, Malaysia implemented a Movement Control Order (MCO) beginning on 18th March 2020. Since then, Hospital Canselor Tuanku Muhriz (HCTM) became one of the main hospitals for treating COVID-19 patients in Malaysia. Considering the increasing need for psychological support by frontliners, the Psychiatry Department of HCTM initiated multiple mental health programs during the MCO period.

Objective: This study aimed to describe the different psychological interventions and evaluate the effects of relaxation technique sessions to mitigate the psychological impact of the recent COVID-19 outbreak on medical professionals and health care workers (doctors, nurses, allied health workers, lab technicians) in UKM Medical Centre.

Methods: The Psychiatry Department of HCTM released three digital mental health initiatives namely the Psychological Support Guide electronic booklet, a portal (www.tabah.my) and the Illness Recovery & Self-Management (IRYS) chatbot on April 2020. A psychological first aid (PFA) hotline and an outreach programme for the Emergency Department and Operation Room staff were also provided. During the outreach programme, the participants were evaluated using the Kessler Psychological Distress Scale (K10) and the Mindful Attention Awareness Scale (MAAS) questionnaires before and after the intervention.

Results: Among the 61 participants, the MAAS scores improved after the programme. In the matched pre- and post-test sample (N=13), the relaxation technique sessions showed statistically significant increase in MAAS scores ($Z = -2.695$, $p = 0.007$). The median post-test MAAS score was 4.8 compared with 4.1 for the pre-test.

Conclusions: The study suggested that hospital staff appreciated mindfulness better after the outreach session. The pandemic provides an opportunity to explore the use of digital technology to further expand our mental health outreach initiatives, but further studies will be required to properly analyse the effectiveness of these interventions and services.

C22

Subretinal Lens Migration after Complicated Phacoemulsification

SITI NOOR ATIKAH AR¹, SAFINAZ MK¹, AHMAD RAZIF O^{1,2},
BASTION MLC¹

¹*Department of Ophthalmology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur, Malaysia*

²*Royal Malaysian Navy Hospital, Pengkalan Tentera Laut Diraja Malaysia, 32100 Lumut, Perak, Malaysia*

ABSTRACT

Introduction: Posteriorly dislocated lens fragment is one of the most undesirable complications of phacoemulsification. Subretinal lens migration following phacoemulsification is extremely rare. Aggressive attempts to retrieve the dropped lens fragment after posterior capsule rupture may cause retinal tears as a result of vitreoretinal traction.

Objective: To report a case of dropped lens fragment during phacoemulsification with the migration of the nucleus fragment into subretinal space through a retinal tear.

Method: Case Report

Results: A 63-year-old lady with underlying diabetes, hypertension and dyslipidaemia had complicated right eye phacoemulsification with posterior capsule rupture and drop of lens fragment. Anterior vitrectomy was done and she was left aphakic. On day 4 post-surgery, we noted a U-shaped retinal tear inferiorly at 6 o'clock with lens fragments and vitreous haemorrhage seen surrounding the tear. Barricade laser photocoagulation was performed on ora serrata, and given the small fragment size, she was observed with a secondary intraocular lens planned for a later date. However, seven weeks later, lens fragments were seen in the anterior chamber. During the vitrectomy, a nuclear fragment was noted in the subretinal space near the tear intraoperatively. Subretinal and intravitreal lens fragments were then removed, followed by Endolaser top-up, and a scleral tunnel fixated intraocular lens using the Yamane technique, was implanted.

Conclusion: Aggressive attempts to retrieve dropped lens fragments through the anterior segment during anterior segment surgery may cause vitreoretinal traction leading to retinal tear and migration of lens fragments into subretinal space, which should not be missed during the repair.

C24

The Perception of Eye Healthcare Professionals towards Glaucoma Screening in Malaysia: A Qualitative Study

XIAO HUI W¹, SHARANJEET KMS², MOHD IZZUDDIN H²,
MOHD HARIMI AR², RONA AN¹, ZALEHA MI³, JEMAIMA CH¹

¹Department of Ophthalmology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia

²Optometry & Vision Science Program, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia.

³Department of Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Glaucoma is a progressive optic neuropathy that is difficult to identify since it is asymptomatic. As a result, glaucoma screening is crucial for detecting glaucoma early before it leads to blindness.

Objectives: The objective of the study was to explore the perceptions of eye healthcare professionals on glaucoma screening.

Methods: Nineteen eye healthcare professionals from Universiti Kebangsaan Malaysia Medical Centre, district health clinic and private optometry practice were interviewed using a semi-structured interview topic guide. All interviews were conducted face-to-face either via Zoom video platform or at their respective clinics. All interviews were recorded, transcribed, and analysed using thematic analysis.

Results: Thematic analysis yielded three themes which were (i): ‘Perceived importance of glaucoma screening’, (ii): ‘Current practice’ and (iii): ‘Barriers towards glaucoma screening’. All participants expressed the importance of screening in Malaysia. The current practice of glaucoma screening involved opportunistic case finding and community-based screening. The barriers to glaucoma screening practice were poor public awareness of glaucoma, perceived lack of trained primary eye care providers, and lack of standardised guidelines for glaucoma screening.

Conclusions: In conclusion, eye healthcare professionals reported a positive attitude toward glaucoma screening in Malaysia. The findings indicated several key themes that can be used to develop a glaucoma screening programme in Malaysia.

C25

Establishing Trimester-Specific Indirect Reference Intervals for Thyroid Function Tests Using Stored Data in The Laboratory System

LIYANNA SO¹, MUNIRAH MM², IZZATUL AB¹,
NORAITATULAKMA A¹, RAHANA AR³, NORASYIKIN A W⁴,
DIAN NN¹

¹*Department of Pathology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia*

²*UKM Medical Molecular Biology Institute (UMBI), The National University of Malaysia (UKM), Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia*

³*Department of Obstetrics and Gynaecology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia*

⁴*Department of Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia*

ABSTRACT

Introduction: Thyroid status undergoes dynamic changes to accommodate the ongoing physiological changes throughout the pregnancy period and is affected by racial differences. Since Malaysia is a multiracial country, it is less suitable to adopt the readily available manufacturer's reference interval.

Objective: To establish race and trimester-specific indirect reference interval (IRI) for thyroid stimulating hormone (TSH) and free thyroxine (fT4) among pregnant women.

Method: Data for TSH and fT4 between January 2012 and March 2022 were retrospectively reviewed and extracted from the integrated laboratory management system. The duplicated data were cross-checked with the participants' registration numbers and eliminated. Participants' demographic data were extracted from the Caring Hospital Enterprise System and screened. All TSH and fT4 results within the measuring range that belonged to the singleton pregnancy, without any medications and co-morbid, were analysed.

Result: A total of 969 participants comprised 87.3% Malay, 9.7% Chinese and 3.0% Indian were analysed. A significant difference in TSH and fT4 levels across the trimesters ($p < 0.001$), TSH ($p < 0.001$) in between Malay and Chinese races

($p < 0.001$), but not between Malay and Indian ($p = 0.18$), and Chinese and Indian races ($p = 1.00$) was observed. No statistically significant difference for fT4 across the races ($p = 0.49$). The IRI of TSH for first trimester was 0.01 – 1.87 mIU/mL, 0.02 – 2.07 mIU/mL for second trimester, and 0.15 – 2.99 mIU/mL for third trimester. While IRI for fT4 levels for each trimester were 10.87 – 21.34 pmol/L, 9.32 – 16.48 pmol/L and 8.54 – 14.48 pmol/L respectively.

Conclusion: It is crucial to enforce a locally-derived trimester-specific RI to make an accurate diagnosis of thyroid disorders in pregnancy to prevent complications.

C26

Death Due to Pulmonary Thromboembolism Which Presented As Asthma? A Case Report

**MUHAMMAD IZZUL J¹, WAN MOHAMMAD H^{1,2}, ASYRAFF MN¹,
MOHAMED SWARHIB S¹, FARIDAH MN¹**

¹Forensic Unit, Department of Pathology, Faculty of Medicine, Universiti Kebangsaan Malaysia, JalanYaacob Latif, Bandar Tun Razak, Cheras, 56000 Kuala Lumpur, Malaysia.

²Department of Forensic Pathology, Faculty of Medicine, Sungai Buloh Campus, Universiti Teknologi MARA, Jalan Hospital, 47000 Sungai Buloh, Selangor, Malaysia.

ABSTRACT

Introduction: Pulmonary thromboembolism is a life-threatening disease. Virchow triad is classically considered a vital contributing factor in the course of its development. However, when a patient presents with wheezing, pulmonary embolism is not usually thought of as a possible cause.

Case report: A 39-year-old lady, morbidly obese with underlying bronchial asthma, was on medical follow-up and a three-monthly injection of IM Depo-Provera for six years. She had multiple bouts of dyspnoea with wheezing for the past three days. Medical treatment was sought by a general practitioner. However, her symptoms had worsened and were not responding to multiple administrations of the Salbutamol inhaler. She collapsed after dinner and was certified dead by the paramedic. On autopsy, the body was obese with a BMI of 42.2 km/m². The conjunctivae were congested and some haemoserous discharge was emanating from both nostrils and mouth. The circumference of the right and the left calf was 48 cm and 46 cm, respectively. Internal examination showed congested lungs with areas of 'toothpaste' appearance thrombus in segmental pulmonary arteries. The right popliteal vein was occluded by a thrombus 10 cm in length. Histology of the segmental pulmonary arteries and popliteal vein revealed interdigitating areas of pale pink and red thrombus, that form 'lines of Zahn' characteristic of a thrombus.

Conclusion: The mortality rate of pulmonary thromboembolism can be as high as 30% if left undiagnosed and untreated. A high index of doubt with thorough diagnostic evaluation may promote patient survival. Pulmonary thromboembolism is truly a silent lethal entity to ponder upon.

C27

A Very Rare Encounter of an Epidermal Cyst Arising From the Epiglottis

**MUHAMMAD ADZHA M^{1,2}, IRFAN AFFANDI H¹, MARINA MB²,
MAWADDAH A²**

¹Department of Otorhinolaryngology, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia

²Department of Otorhinolaryngology-Head and Neck Surgery, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Laryngeal cysts which can either be congenital or acquired, are benign tumours with only 10% occurring at the epiglottis and vallecular region. Laryngeal cysts contribute about 4.3 to 6% of all benign laryngeal tumours. We hereby describe a very rare case of an elderly male who is diagnosed with an epidermal cyst over the epiglottis and underwent a complete surgical excision.

Objective: To describe a very rare case of epidermal cyst arising from the epiglottis and its management.

Case report: A 49-year-old male presented with a complaint of a muffled voice, dysphagia and reduced effort tolerance for the past year. Clinical examination revealed a huge cystic mass over the lingual surface of the epiglottis obscuring the view of the laryngeal inlet. The patient underwent excision of the epiglottic cyst under general anaesthesia and the histopathological examination revealed an epidermal cyst. An epidermal cyst is a very rare encounter in the larynx but it has a good prognosis with a low rate of recurrence following complete excision.

Conclusion: This case highlights the rare occurrence of an epidermal cyst of the epiglottis. The diagnosis was made by laryngoscopy and confirmed with histopathological examination. Complete endoscopic excision of the cyst is the best treatment option for epiglottic cysts with a low rate of recurrence observed.

C28

CT Pattern in Pleuroparenchymal Fibroelastosis (PPFE)

MOHD IMREE A¹, SURAYA A¹, MOHAMMAD NIZAM M²

¹Department of Radiology, Faculty of Medicine, Hospital Canselor Tuanku Muhriz, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia

²Department of Anaesthesiology & Intensive Care, Faculty of Medicine, Hospital Canselor Tuanku Muhriz, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Pleuroparenchymal fibroelastosis (PPFE) is a rare interstitial lung disease with unique clinical, pathological, and radiological features. Alveolar damage has been postulated to cause significant interstitial damage in acute or subacute lung injury. However, the pathogenesis and aetiology are still unknown. To date, there is no effective medical treatment, leaving lung transplant the only therapeutic option available.

Objective: To describe the Computed Tomography (CT) pattern of PPFE.

Methods: Case Report.

Results: We describe a case of a 76-year-old female who complained of intermittent cough for two years with worsening dyspnea for six months. There was no family history of interstitial lung disease. Her pulmonary function test revealed a restrictive pattern. Her connective tissue screening was positive for MDA5-dermatomyositis. High-resolution CT (HRCT) thorax revealed predominant lung apical disease with subpleural consolidation, platythorax and tracheal deviation to the right side of the vertebra. In addition, she also had minimal bilateral pneumothoraces. These CT findings are consistent with PPFE. There was a destruction of lung parenchyma in the middle lobe and lingula segment with dilated cystic air spaces. With these predilections, non-tuberculous mycobacterium (NTM) infection should be considered. Histopathological analysis was not performed because of the high risk in the interstitial lung disease cohort. In addition to the consensus in the multidisciplinary meeting, clinical and HRCT findings were suggestive of PPFE, likely secondary to lung infection. Currently, the patient is being planned for a bronchoscopy. Immunosuppressant therapy can be initiated for dermatomyositis if she is negative for an infection.

Conclusion: PPFE is a rare interstitial lung disease. Recognizing CT patterns is vital to support the diagnosis.

C29

Vertebral Artery Loop Causing Cervical Radiculopathy

MOHD IMREE A¹, AHMAD ZUHRI SHIN AH¹, MOHAMMAD NIZAM M²

¹*Department of Radiology, Faculty of Medicine, Hospital Canselor Tuanku Muhriz, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia*

²*Department of Anaesthesiology & Intensive Care, Faculty of Medicine, Hospital Canselor Tuanku Muhriz, Jalan Yaacob Latif, Bandar Tun Razak, 56000 Kuala Lumpur, Malaysia*

ABSTRACT

Introduction: Vertebral artery loop is a rare cause of cervical radiculopathy. It can erode the cervical nerve foramen and impinge on the nerve root, causing cervical radiculopathy. The V2 segment is the most common cause of symptomatic vertebral artery loops. The mechanism of the vertebral loop is unclear. The possible causes include haemodynamic stress, atherosclerosis, high arterial pressure, migration, and erosion of adjacent bone structures.

Objective: To demonstrate other causes of cervical radiculopathy apart from the typical degenerative disc disease.

Methods: Case Report.

Results: We describe a case of a 65-year-old female complaining of neck pain for six months. The pain radiated to bilateral upper limbs and was associated with numbness. There was no reported weakness, clumsiness, or unsteady gait. Magnetic resonance imaging (MRI) of the cervical region revealed a V2 segment of the left vertebral artery encroaching the left neural foramen, causing narrowing and abutment of the exiting left C6 nerve root. There were also disc bulges causing abutment of the right exiting C4 and C5 nerve roots. A vertebral loop can erode the vertebral foramen and directly impinge the cervical nerve root at the level of its origin, as demonstrated in our case. Symptoms are varied depending on the level of the vertebral loop. Management may include NSAID, physiotherapy or injection therapy. Surgical treatment is an option when medical treatment is unsuccessful.

Conclusion: A tortuous vertebral artery loop with bony erosion and enlarged foramen is a cause of cervical radiculopathy. MRI is an excellent modality to demonstrate these findings.

C30

Anaesthesia for Retrieval of An Aspirated Avulsed Tooth-A Case Report

**MOHAMMAD NIZAM M¹, MOHD IMRAN A², FARAH HANIM A¹,
IZZUDDIN A¹, JOANNA SU MIN O¹, RAHA AR¹**

*¹Department of Anaesthesiology & Intensive Care, Faculty of Medicine, Universiti
Kebangsaan Malaysia*

²Department of Radiology, Faculty of Medicine, Universiti Kebangsaan Malaysia

ABSTRACT

Introduction: Foreign body aspiration of avulsed teeth is commonly encountered following a maxillofacial trauma.

Objectives: To describe a case of successful bronchoscopic retrieval of an aspirated avulsed tooth

Results: We describe a case of a 22-year-old male who presented with a severe traumatic brain injury and maxillofacial trauma following a motor vehicle accident. He was intubated for airway protection and was admitted into the intensive care unit (ICU) for cerebral protection. Upon admission, oral examination revealed an avulsed incisor and initial computed tomography (CT) thorax showed the avulsed tooth located in the right main bronchus but migrated due to positive pressure ventilation into the segmental branch of the anterior segment of the right lower lobe. A bronchoscopic retrieval of the avulsed tooth was performed by the interventional pulmonology team under general anaesthesia. Early extraction of an aspirated tooth is paramount to prevent local infection of the airway. Total intravenous anaesthesia is preferred over inhalational technique as this will guarantee the delivery of an anaesthetic agent while ensuring adequate anaesthetic depth preventing awareness. This technique will also provide ideal patient conditions for bronchoscopy which include adequate pain control and obtunding airway reflexes. Good team effort and efficient communication between an experienced anaesthetist and the bronchoscopist are essential to ensure a successful procedure.

Conclusion: Prompt retrieval of an aspirated tooth may result in a favourable outcome by preventing infective complications such as pneumonia. Good coordination between the bronchoscopist and anaesthetist will ensure safety and ease throughout the procedure.

C31

Venous Thromboembolism at Diagnosis in Lymphoma Patients

WAN AWATIF WMZ, SIVAKUMAR P, CHONG GY, NOR RAFAEH

T

Clinical Haematology Unit, Department of Medicine, Hospital Canselor Tuanku Muhriz, UKM Medical Centre

ABSTRACT

Introduction: Lymphoma patients are at increased risk of thromboembolic events, but thromboprophylaxis in these patients is vastly underutilized.

Objectives: We aimed to determine the rate of venous thromboembolism (VTE) in newly diagnosed lymphoma patients and the clinicopathological characteristics in a single tertiary level hospital in Kuala Lumpur.

Methods: This cross-sectional study involved newly diagnosed lymphoma patients from April 2021 to May 2022 in Hospital Canselor Tuanku Muhriz. Data on clinicopathological characteristics were obtained at diagnosis. VTE was defined as any case of pulmonary embolism or deep vein thrombosis detected by imaging.

Results: Ten (12.8%) out of 78 patients included in this study had incidental or symptomatic VTE at diagnosis. The median age of patients was 51 years (range, 16 to 86 years). Most patients (70%) had a good performance status (ECOG 0-1). 80% had constitutional (B) symptoms. All participants had raised serum LDH with a median of 507.5 U/L (range, 230-2122 U/L), nine were in advanced stages, and six had bulky diseases. Diffuse large B-cell lymphoma was the most prevalent (60%) subtype. Three patients had mediastinal involvement.

Conclusion: Our study's rate of incidental or symptomatic VTE among newly diagnosed lymphoma patients was 12.8%. Patients with VTE had clinicopathological features reflecting high tumour burden, which include high-grade lymphoma, B symptoms, advanced stage, raised LDH, and bulky disease. These preliminary findings may help clinicians identify the risk factors for VTE in newly diagnosed lymphoma patients in our local setting who may benefit from thromboprophylaxis. These findings need to be confirmed in a larger cohort of patients.

C32

Effectiveness of Educational Intervention Towards Nurses' Knowledge of Sedation Assessment and Management

FATIMAH S¹, MASRIFAH Z^{1,3}, JALINA K⁴, PARIMALA DM³, RAHA AR⁵, HANIZA K², ROSEERVIYANA A²

¹Centre for Nursing Studies, Faculty of Health Science, UiTM Selangor, Puncak Alam Campus, 42300 Selangor.

²Hospital UiTM, Bandar Puncak Alam, 42300 Selangor

³Nursing Service Department, Hospital Canselor Tuanku Muhriz, Jln Yaakob Latif, 56000, Cheras, Kuala Lumpur, Malaysia

⁴Nursing Department, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jln Yaakob Latif, 56000, Cheras, Kuala Lumpur, Malaysia

⁵Anesthesiology and Intensive Care Department, Hospital Canselor Tuanku Muhriz, Jln Yaakob Latif, 56000, Cheras, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Sedative management is a critical task in providing comfort and minimizing pain for patients in intensive care units (ICUs) worldwide. The amount of sedation required varies according to the patient's condition and needs, making it difficult to provide an appropriate level of sedation. Nurses play an important role in ensuring the efficacy of sedation administration to reduce the risk of extended ICU stays, the development of post-ICU psychological issues, and increased care costs.

Objective: The study was conducted to determine the effect of educational intervention on nurses' knowledge of sedation assessment and management.

Methods: A quasi-experimental study was conducted in a tertiary hospital to evaluate the effectiveness of an educational intervention on ICU nurses' knowledge of sedation assessment and management. The hospitals have divided the nurses into two groups, each of which has 40 respondents. The theoretical component of the educational intervention was delivered using power point presentation and pamphlet. The effectiveness of the intervention was assessed using a self-administered questionnaire prior to pre and post-intervention, and three months later.

Results: The baseline result showed there were no differences between the groups (*t*-test: 0.27; *p*-value: 0.79) while post-intervention showed a significant increase in the level of knowledge with a *p*-value less than 0.05 (*F*: 10.84; *p*-value: 0.01) immediately after the intervention was carried out. Three months later, knowledge remained high. The level of education, year of service, particularly in ICU, and clinical specialities of nurses are associated with their level of knowledge on sedation assessment and management.

Conclusion: Educational interventions and educational approaches had a significant impact on nurses' knowledge and understanding of sedation management and should be prioritized to improve nurses' understanding of intensive care practices.

C33

The Challenges in Diagnosing Mixed Corneal Infection

SANGEETHA M¹, IVAN CEY², MENG HSIEN Y¹, WAN HASLINA WAH¹, NORSHAMSI AH MD¹

¹Department of Ophthalmology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia, Jalan Yaacob Latif, Kuala Lumpur Malaysia

²Department of Ophthalmology, Hospital Shah Alam, Persiaran Kayangan, Seksyen 7, 40000 Shah Alam, Selangor, Malaysia.

ABSTRACT

Introduction: Acanthamoeba keratitis is a contact lens-related infection caused by a free-living amoeba and Herpetic keratitis is caused by the Herpes simplex virus. We report a case that has overlapping clinical features of acanthamoeba keratitis with concurrent herpes simplex keratitis leading to difficulty in diagnosis.

Methods: A case report

Results: In a case of a 21-year-old lady, who used a contact lens presented with a painful red right eye, associated with decreased vision and lid swelling. She was unsuccessfully treated for Herpetic keratitis with T. Acyclovir 400 mg x 5/day which was tapered over 2 months. Her symptoms worsened and the progressive nature of the corneal infiltrate was highly suggestive of Acanthamoeba keratitis. She was started on anti-amoebic. However, her condition further deteriorated and subsequently planned for emergency therapeutic keratoplasty. The clinical examination revealed injected perilimbal, dense ring infiltrates centrally with overlying epithelial defect, deep and superficial 360 degree and paracentral corneal thinning. Her diagnosis was revised to an atypical corneal ulcer of mixed organisms (Acanthamoeba and Herpes Simplex virus). Anti-amoebic therapy together with a T. Acyclovir 800 mg x 5/day was commenced with additional antibacterial and antifungal medications. Her right eye healed with a scar and was planned for optical penetrating keratoplasty.

Conclusion: Acanthamoeba and Herpetic keratitis can mimic one another and if misdiagnosed, can lead to delayed diagnosis, treatment and poorer prognosis. A high clinical suspicion index is needed to diagnose to initiate prompt treatment.

C34

Deciding Cause of Death in an Adult with Rotavirus Infection: A Dual Pathology or Complication of Rotavirus Infection?

HAFIZ WM^{1,2}, MUHAMMAD I¹, ASYRAFF MN¹, MOHAMED SWARHIB S¹, FARIDAH MN¹

¹Forensic Unit, Department of Pathology, Faculty of Medicine, Universiti Kebangsaan Malaysia, JalanYaacob Latif, Bandar Tun Razak, Cheras, 56000 Kuala Lumpur, Malaysia.

²Department of Forensic Pathology, Faculty of Medicine, Sungai Buloh Campus, Universiti Teknologi MARA, Jalan Hospital, 47000 Sungai Buloh, Selangor, Malaysia.

ABSTRACT

Introduction: Rotavirus is a segmented, non-enveloped double-stranded RNA virus, one of the common viruses that cause acute gastroenteritis in young children, transmitted by the faecal-oral route. Infection in adults and older children usually results from reinfection and primarily only produces subtle symptoms or asymptomatic infection because of pre-existing immunity. However, immunocompromised children and adults are at high risk of developing complications such as dehydration, septicaemia and even death following rotavirus infection.

Objective: To report a sudden death case in an adult with rotavirus infection.

Methods: Case Report.

Results: A 20-year-old gentleman with underlying cerebral palsy had watery diarrhoea for three days associated with low-grade fever. He was later found unconscious and was certified dead upon admission to the hospital. On autopsy, he was cachexic with both upper and lower extremities showing contracture deformity. He had sunken eyeballs, reduced skin turgor and erythematous areas around the perianal area. Internal examination showed cloudy meninges with consolidation changes in the right lung. Microbiological analysis of the stool showed that it was positive for rotavirus antigen. Blood culture revealed *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Histology of the lung showed neutrophilic infiltration in the alveolar spaces. Post-mortem biochemical analysis of the vitreous humour was indicative of severe dehydration.

Conclusion: Rotavirus infection especially in an immunocompromised individual can result in a devastating outcome. A high index of suspicion with prompt diagnostic evaluation may lead to improved patient survival, and aggressive intervention should be performed as promptly as possible in patients once the diagnosis is made.

P1

Does Routine Commuting Contribute to Mental Stress and Health Problems among Klang Valley Office Workers?

DAYANA HAZWANI MSN^{1,2}, MIRA SABRINA MR³, PUTRI ANIS SYAHIRA MJ⁴, NUR ATHIRAH DIYANA MY⁵

¹*Center for Toxicology and Health Risk Studies, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia.*

²*Environmental Health and Industrial Safety Program, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia.*

³*Faculty of Health and Life Sciences, Management and Science University, Shah Alam, Selangor, Malaysia.*

⁴*Department of Environmental Engineering, Faculty of Engineering and Green Technology, Universiti Tunku Abdul Rahman, Kampar, Perak, Malaysia*

⁵*Engineering and Technology Department, Razak Faculty of Technology and Informatics, Universiti Teknologi Malaysia Kuala Lumpur, Kuala Lumpur, Malaysia.*

ABSTRACT

Introduction: Commuting workers are those who travel from their homes to their workplaces and vice versa. Commuters in European countries reported high levels of psychological stress, health complaints, and increased absenteeism due to illness. In Malaysia, there is a dearth of information on occupational stress among commuting workers.

Objective: This study aimed to determine occupational stress and health problems among commuting workers in the Klang Valley.

Methods: In this cross-sectional study, 212 workers in Klang Valley who travel by car were required to complete a validated questionnaire that contains socio-demographic information, employment information, commuting information, health complaints as well as the Depression, anxiety, and stress scale (DASS-21).

Results: A total of 42.5% of workers commuted within 16-30 km per day, spending 1-2 hours travelling to and from work (48.1%). The DASS-21 results showed mild depression (14.2 %), moderate anxiety (16 %), and mild stress (11.4%). The majority of the workers complained of health problems including sadness (74.5 %), tiredness (82.1 %), lower back pain (60.5%), sleep problems (73.1 %), gas discomfort (51.9 %), and migraine (52.4%). There was a significant relationship between commuting

distance and duration with stress score ($p < 0.01$). The commuting duration was significantly related to stress levels ($p < 0.01$). Furthermore, the commuting distance was significantly associated with lower back pain, tiredness, and sleep problems ($p < 0.05$). In addition, migraine, and gas discomfort ($p < 0.01$) were also associated with commuting duration.

Conclusion: Increased commuting time, particularly on long drives, can stress the mind and cause health problems, which must be reduced by introducing flexible working hours which then minimize traffic jams and promote the use of public transportation.

P2

Impact Of COVID-19 on Lifestyle-Related Behaviours among Students in Universiti Malaysia Sabah

ABDUL RAHMAN R¹, JIA MIN L¹, THUGASHINY SK¹,
FITZGERALDS NONG AS¹, DAYANG NURAMINAH R¹, SANDRA
LEONORA L¹, JACQUETA ANN Z¹, NAYLI SYAMIMI SH¹,
ZULKHAIRUL NAIM SIDEK A²

¹Department of Public Health Medicine, University of Malaysia Sabah, Kota Kinabalu, Sabah, Malaysia

²Department of Medical Education, University of Malaysia Sabah, Kota Kinabalu, Sabah, Malaysia

ABSTRACT

Introduction: Movement Control Order (MCO), which is commonly referred to as “lockdown” is an initiative enforced by the Malaysian Government to break the transmission of COVID-19. Due to Movement Control Order (MCO), Malaysians were advised to stay at home, and limit their activities outside the home, with school teachings temporarily transitioned to online teachings and most sectors working from home.

Objective: This study aimed to assess lifestyle change patterns and their associations with socio-demographic factors and weight change among students of Universiti Malaysia Sabah (UMS).

Methods: A cross-sectional, questionnaire-based study was conducted among the students of UMS from May 2021 to June 2021. The questionnaire gathered information on demographic data, physical activity, screen time and self-reported weight change before and during the MCO.

Results: A total of 210 UMS students responded to the questionnaire. A total of 147 (70%) students experienced a decrease in physical activity, and an increase in numbers in the low active categories from 35 (16.6%) students to 82 (39.1%) students before and during the MCO. This study shows an increase in screen time for 192 students and the majority of the reason for the increase included 117 (60.9%) boredom, learning and entertainment, 96 (45.7%) students spend 4-8 hours on their screens on weekdays and 101 (48.1%) spends more than 8 hours on their screen on weekends that indicate physical inactivity during MCO. This study found that a decrease in physical activity significantly resulted in the weight gain of students.

Conclusion: This study provided valuable insight into weight change, physical activity and screen time during the COVID-19 era among students of UMS compare to before the pandemic. Hence, coming up with a solution to reducing screen time and maintaining a healthy level of physical activity even during a pandemic among students is vital and must be held as an important factor in any future pandemics.

P3

Perceptions and Views of Occupational Therapy Lecturers and Clinicians towards Online Learning During the Covid-19 Pandemic

WEI TAT O, FARAHIYAH WY

Centre for Rehabilitation and Special Needs Studies, Occupational Therapy Programme, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur

ABSTRACT

Introduction: The Movement Control Order was implemented on 18th March 2020 to control the COVID-19 outbreak in Malaysia. Malaysia's higher education sector experienced a severe impact from the COVID-19 pandemic due to the government's policies. All teaching and learning were done synchronously and asynchronously. Immediate changes need to be done to accommodate student's learning and this contributed to several challenges in the online classes.

Objective: This study aims to explore the views of occupational therapy lecturers and clinicians toward full online teaching during the COVID-19 pandemic.

Method: Nine occupational therapy lecturers and clinicians were recruited for this qualitative study. Online in-depth interviews were conducted with the participants, and the data obtained were analysed thematically. Five main themes emerged from the interview which were: (i) the meaning and understanding of online learning, (ii) the satisfaction of online teaching, (iii) the implementation of online teaching, (iv) teaching approaches for betterment, and (v) the pros and cons of online teaching.

Results: Findings from the interview concluded that the satisfactory level in conducting online teaching is lower due to several reasons. Poor Internet connection is identified as the main difficulty faced by the participants. Students still prefer physical teaching compared to the online mode of teaching. Different teaching approaches are discussed, and more disadvantages were identified.

Conclusion: Although there are more negative aspects of online teaching and learning than positive ones, the participants still appreciate its usefulness and the experience gained.

P4

The Effect of Hydroxytyrosol in Type 2 Epithelial-Mesenchymal Transition in Human Skin Wound Healing

WAFA AB, MOHD HEIKAL MY, ADILA AH

Department of Physiology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Yaacob Latif, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Skin wound healing is a physiological process that involves many types of cells including dermal fibroblasts. Type 2 epithelial-mesenchymal transition (EMT) occurs during tissue repair in wound healing. However, occasionally this process causes abnormal healing that leads to fibrosis. Hydroxytyrosol (HT) is a phenolic compound extracted from olive oil which can delay and diminish cell proliferation, fibrogenesis and EMT.

Objective: This study aimed to determine the effect of HT in type 2 EMT in human skin wound healing via cell viability, proliferation, migration, and protein expression.

Methods: Human dermal fibroblasts (HDF) isolated from skin samples (n=5) were cultured in different concentrations of HT and EMT model induced by adding 5 ng/ml of transforming growth factor-beta1 (TGFB1) to the cells and then divided into 4 groups: control which HDF cultured in media only (FD), EMT induced (FD+TGFB1), treated with 0.2% HT (FD+TGFB1+0.2% HT) and treated 0.4% HT (FD+TGFB1+0.4% HT).

Result: Hydroxytyrosol (HT) at 0.2% and 0.4% (v/v) significantly increased the proliferation rate of HDF by 31.3% and 36% respectively compared to control. Scratch assay showed increased cell migration in cells treated with HT by 33.62 ± 11.94 compared to the TGFB1 group (P value = 0.006). In addition, HT-supplemented cells upregulate the expression and increase immunopositivity of epithelial marker E-cadherin while downregulating the expression of mesenchymal marker vimentin.

Conclusion: Hydroxytyrosol (HT) can inhibit EMT which may become useful in the inhibition of fibrosis and persistent inflammation related to skin wound healing.

P5

‘Big Belly, Small Habenula, Big Risk Taker’ – Investigation of Habenula *kiss1* mediated Fear Learning Impairment in Obesity Using Zebrafish Model

TIMOTHY YYO, ISHWAR P, SATOSHI O

*Jeffrey Cheah School of Medicine and Health Sciences, Monash University Malaysia,
Petaling Jaya, Malaysia.*

ABSTRACT

Introduction: Obesity as a public health issue presents a great global challenge with the rising trend each year. Obesity often results in cognitive impairment, an example being attenuation of reward/fear learning in obesity presents as risk-prone behaviours and favouring small immediate over large delayed rewards (delayed discounting). Such maladaptive behaviours lead to overlooking consequences (risk) of obesity and problematic relationship with food reward, forming a perpetual cycle of warped fear and reward learning-eating disorder-obesity. The habenula is where reward and fear learning intercepts energy homeostasis in various vertebrate models. Habenula *kiss1* neurons, in particular, are known to modulate fear in zebrafish, therefore we hypothesized that the habenula plays a role in obesity-related aversive learning impairment via the Kisspeptin-kiss1 mechanism in zebrafish.

Objective: This study aims to examine fear learning performance in diet-induced obese zebrafish, elucidate obese zebrafish habenula *kiss1* gene expression and examine neuron activities in obese zebrafish

Methods: Zebrafish will be divided into two diet groups, the control diet and the high-fat diet and will be fed over 8 weeks. After 8 weeks, the groups of zebrafish will undergo conditioned place avoidance (CPA) for fear learning performance, followed by a sampling of zebrafish brains and subsequent qPCR for gene expression. The neural activities of zebrafish will be examined using sliced-brain calcium imaging.

Expected results: We expect to see an alteration in habenula *kiss1* expression in high-fat diet-induced obesity in zebrafish with a different fear memory performance in CPA from the control diet.

P6

Development And Determination of Validity of Food Safety Knowledge and Practice Assessment Tool for Preschool Children in Malaysia

JOON HUA O¹, NOR AFIFI R², SITI SHAHARA Z^{1*}

¹Environmental Health and Industrial Safety Program, Centre for Toxicology and Health Risk Studies (CORE), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, 50300 Kuala Lumpur, Malaysia

²Occupational Therapy Program, Centre of Rehabilitation and Special Needs Studies, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, 50300 Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Children under five years old contributed 40% of the foodborne disease burden. Knowledge level and practices in food safety are key factors in reducing the incidence of foodborne disease and should be developing in the early stage of age. Therefore, there is a need to develop a valid assessment tool to measure food safety knowledge and practices among preschool children.

Objective: This study aimed to develop and determine the validity of a food safety knowledge and practice assessment tool for preschool children in Malaysia.

Method: This study consists of three phases which are to identify the food safety domain suitable for preschool children, develop the food safety assessment tool, and determine the validity of the assessment tool. Systematic search and scoping review, as well as in-depth interviews, were conducted to identify the food safety domain in the assessment tool. Focus group discussion and content validity index are performed to assess the validity of the newly developed assessment tool.

Results: The results from scoping review and in-depth interview identified food spoilage as the food safety domain to be used in developing an assessment tool. The questionnaire consists of four parts and 25 questions. The developed assessment tool was validated by six experts and all respondents agreed to retain all 25 questions. Meanwhile, the content validity index obtained for the assessment tool is 1.00.

Conclusion: In conclusion, the developed tool is valid to assess the level of food safety knowledge and practice among preschool children in Malaysia.

P7

Strategies to Reduce the Rate of Plate Waste in Hospitalized Patients -A Scoping Review

**SANGEETHA M^{1,2}, NURUL HUDA R², ZAHARA AM², SUZANA S²
AND ARIMI FITRI ML²**

¹Nutrition Science Programme, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, Kuala Lumpur 50300, Malaysia

²Centre for Healthy Ageing and Wellness (H-Care), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur 50300, Malaysia

ABSTRACT

Introduction: Individual plate waste refers to the quantity of food that patients leave unfinished or untouched. Malnutrition results from the patient not receiving the proper amount of energy and other nutrients, which can cause morbidity, mortality, fatigue, and prolonged hospitalisation.

Objective: This review aims to map the current strategies that have been implemented and to classify the types of strategies to reduce the rate of plate waste in hospitals.

Methods: The search was conducted in 3 selected databases following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses for the scoping review process (PRISMA-ScR).

Results: The duplicate articles were removed (n= 80), and a total (n=441) remained for the title and abstract screening. After a total of (n=400) was excluded, 41 full-text articles were assessed for eligibility criteria. Of these, full articles were excluded for reasons (n=29). Only (n=9) articles were finally included in the review to demonstrate that strategies such as menu modification, implementation of room service model, improvement in menu presentation and meal serving system and the use of dietary monitoring tool.

Conclusion: This review suggests that many strategies have the potential to reduce the rate of plate waste in hospitals. However, staff training is not yet part of an intervention strategy to combat the plate waste problem. In the future, training for both kitchen and ward staff could be explored and should include a discussion on the obligations and duties placed on them in food service operations.

P8

Understanding The Mode of Transduction of Integrase-Free Lentivirus Vectors in The Establishment of Human-induced Pluripotent Stem Cells

AMIRAH SJ¹, FAZLINA N¹, ANGELA NMH¹, DANIEL LJX¹, TYE GJ²,
WAN SAFWANI WKZ³

¹Centre for Tissue Engineering and Regenerative Medicine (CTERM), Universiti Kebangsaan Malaysia Medical Centre (UKMMC), 56000 Kuala Lumpur, Malaysia

²Institute for Research in Molecular Medicine (INFORMM), Universiti Sains Malaysia (USM), 11800 Gelugor, Malaysia

³Department of Biomedical Engineering, Faculty of Engineering, Universiti Malaya, 50603 Kuala Lumpur, Malaysia

ABSTRACT

Introduction: The ability to reprogramme primary cells into pluripotent stem cells holds great promise in the area of regenerative medicine and disease modelling. However, the current practice of using viral vectors for cell reprogramming results in the integration of the genes into the genome that can have unintended consequences including dysregulated cell growth and altered cell functions. Hence, non-integrating viral vectors are predicted to have a safer profile and are highly desirable for clinical applications.

Objective: To investigate the mode of transduction of non-integrated lentiviral vectors encoding for the transcription factors (KLF4, OCT-3/4, and SOX2) in establishing human-induced pluripotent stem cells (hiPSCs) from CD133+/CD34+ primary cells.

Methods: This study will isolate haematopoietic stem cells (HSC) from whole blood and further transduced them with a cocktail of integrase-free lentiviruses encoding the said reprogramming factors (KLF4, OCT-3/4, and SOX2).

Expected outcome: Reprogramming of HSC into hiPSCs can be done using non-integrated lentiviral vectors encoding transcription factors (KLF4, OCT-3/4, and SOX2).

Conclusion: The iPSCs derived using this strategy can potentially be differentiated into any cell type and transplanted for treatment purposes without the risk of unknown genomic alteration.

P9

Prevalence of Infertility and Its Associated Factors among Married Women in Kuala Lumpur

ZALEHA MI¹, SYAHIRAH H¹, RAHANA AR², BANU NISA AH³

¹*Department of Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Yaacob Latif, Cheras, Kuala Lumpur Malaysia*

²*Department of Obstetrics and Gynaecology, Hospital Canselor Tuanku Muhriz, Jalan Yaacob Latif, Cheras, Kuala Lumpur Malaysia*

³*Klinik Kesihatan Kuala Lumpur, Jalan Temerloh, Titiwangsa, Kuala Lumpur, Malaysia*

ABSTRACT

Introduction: Infertility is clinically defined as the inability to conceive after 12 months or more with regular unprotected sexual intercourse. Previous studies have shown that fertility rates in Malaysia are declining.

Objective: This study aims to determine the prevalence of infertility and its associated factors among married women.

Method: In this cross-sectional study, a questionnaire was distributed to married women attending outpatient clinics at Kuala Lumpur Health Clinic.

Results: A total of 750 women participated in this research. The prevalence of infertility was 12.3%. Those aged below 40 (OR 2.308, 95%CI 1.007 – 5.289, $p=0.048$), obtained higher education level (OR 3.226, 95%CI 1.056 – 9.851, $p=0.040$), have gynaecological illnesses (OR 5.827, 95%CI 3.453 – 9.831, $p<0.001$), unsure of having gynaecological illnesses (OR 2.699, 95%CI 1.356 – 5.373, $p=0.005$), obese (OR 1.898, 95%CI 1.122 – 3.210, $p=0.017$), and smoking ($X^2=7.600$, $p=0.022$), were significantly associated with infertility. Active smokers (OR 2.479, 95%CI 0.596 – 10.311, $p=0.212$) have a higher odds of having infertility compared to passive smokers (OR 1.629, 95%CI 0.939 – 2.825, $p=0.082$). Even though not significant, there was a trend of association between infertility, stress level and genistein intake. Women who experienced high-stress levels were more likely to suffer from infertility (15.0%) compared to those with moderate-stress levels (12.6%) and low-stress levels (7.9%) ($X^2=1.700$, $p=0.427$). Low genistein intake (OR 1.356, 95%CI 0.845 – 2.175, $p=0.207$) also can potentially cause infertility.

Conclusion: Age below 40, higher education level, presence of gynaecological illness, being obese, and smoking were significantly associated with infertility among women in Kuala Lumpur.

P10

Patient Involvement in Healthcare Decision Making: A Review

RAMESH J^{1,2}, JASMEET K^{3,4}

¹Department of Occupational Safety and Health, Hospital Taiping, Taiping, Perak, Malaysia

²Department of Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia, Cheras, Kuala Lumpur, Malaysia

³Department of Medicine, Hospital Taiping, Taiping, Perak, Malaysia

⁴Department of Medicine, Faculty of Medicine, University Malaya, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: The growing emphasis in health care on patient-centred care, patient involvement, and shared decision-making presents doctors with an opportunity to examine current clinical decision-making processes. Such an assessment is not merely theoretical; patients have expressed a desire for shared decision-making and called for reimbursement to be related to evidence of shared decision-making in practice.

Objective: Given the significance of patient involvement in healthcare decision-making, which empowers patients while also enhancing services and health outcomes, this study was conducted to review previous research on patient participation in healthcare decision-making.

Methods: In this study, a thorough literature evaluation was conducted to collect data on healthcare decision-making in Malaysia. The extent to which patient involvement has been incorporated into medical curricula, healthcare policy, and regulations were examined.

Results: In Malaysia, there has been very little research on patient engagement in decision-making. Existing research found that while clinicians were aware of informed consent, few practised shared decision-making. There was a shortage of accurate and accessible health information for patients, as well as a lack of training in shared decision-making in undergraduate and postgraduate curricula. Furthermore, peer support groups and expert patient programmes were insufficient. Professional medical organisations supported patient engagement in decision-making, but no concrete implementation plan was in place.

Conclusion: In conclusion, it appears that there was minimal training or study on collaborative decision-making in Malaysia. More research in this area is needed, including baseline data on preferred and actual decision-making responsibilities. It is recommended to effectively implement shared decision-making in Malaysia.

P11

Genipin-Crosslinked Ovine Tendon Collagen Type I (OTC-I) with Antimicrobial Coating by Carvone for the Rapid Treatment of Diabetes-related Ulcer Wounds

NOR AMIRRAH I¹, FAUZI MB¹, MOHD FARHANULHAKIM MRW²

¹*Centre for Tissue Engineering and Regenerative Medicine (CTERM), Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Yaacob Latiff, Bandar Tun Razak, 56000 Cheras, Kuala Lumpur, Malaysia*

²*Institute of Microengineering and Nanoelectronics (IMEN), Level 4, Research Complex, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia*

ABSTRACT

Introduction: An antimicrobial approach is important in combating chronic infection in diabetic ulcer wounds. Current treatment requires multiple processing steps which reportedly slows the wound healing rate as well as lacks angiogenesis and tissue regeneration, leading to infection.

Objective: This study has fabricated and characterised the ovine tendon collagen type I (OTC-I) bio scaffold followed by carvone incorporation.

Method: The gross appearance, physicochemical characterisation, biodegradation, angiogenesis, and antibacterial efficacy were assessed. Briefly, genipin was used to crosslink OTC-I carvone integration, which was performed by surface coating via plasma polymerisation after lyophilisation (GNPppCar).

Results: Results showed that GNPppCar had suitable physicochemical properties as a biomaterial compared to the control group. Carvone coating prevented more than 60% of gram-negative *E. coli* and gram-positive *S. aureus*. There was positive tubule formation of HUVEC cells post carvone coating compared to control. More than 80% cell attachment after 24 hours was validated with FESEM and live/dead viability test post-seeded of human dermal fibroblasts (HDF). After seven days, the proliferation assay indicated a 20% increment of growth.

Conclusion: GNPppCar has a high potential to effectively provide rapid treatment for diabetic foot ulcers and prevent reinfection.

P13

Gender Differences in The Prevalence of Body Constitution Based on Chinese Medicine Evaluation Among Adults in The Community of Serdang, Malaysia

FOONG LENG N¹, CHAI NIENF², YANG MOOI L³

¹*Department of Chinese Medicine, M. Kandiah Faculty of Medicine and Health Sciences, Universiti Tunku Abdul Rahman, PT21144, Jalan Sungai Long, Bandar Sungai Long, 43000 Kajang, Selangor, Malaysia*

²*Department of Population Medicine, M. Kandiah Faculty of Medicine and Health Sciences, Universiti Tunku Abdul Rahman, PT21144, Jalan Sungai Long, Bandar Sungai Long, 43000 Kajang, Selangor, Malaysia*

³*Department of Pre-clinical Sciences, M. Kandiah Faculty of Medicine and Health Sciences, Universiti Tunku Abdul Rahman, PT21144, Jalan Sungai Long, Bandar Sungai Long, 43000 Kajang, Selangor, Malaysia*

ABSTRACT

Introduction: The practice of body constitution in Chinese Medicine is the cornerstone of the clinical assessment of health status and disease prevention.

Objective: This study aimed to determine the gender differences in the odds of balanced, qi-deficiency, yang-deficiency, yin-deficiency, phlegm-dampness, damp-heat, blood-stasis, qi-stagnation, and inherited-special constitutions.

Methods: A cross-sectional study design was carried out in the community of Serdang, Malaysia. A total of 229 Malaysian adults (≥ 18 years old) were recruited. A structured and validated Constitution in Chinese Medicine Questionnaire (CCMQ), comprising 60 items with 9 sub-scales, was used in this study. Chi-square tests and independent sample t-tests were used to determine the association between socio-demographic characteristics and body constitution.

Results: The prevalence of unbalanced constitution among adults in the community of Serdang was 83.8%. The prevalence in females (61.9%) was significantly higher than in males (38.1%). Females had significantly higher blood-stasis and qi-stagnation constitutions than males (15.6% vs. 1.5% and 12.8% vs. 7.5%, respectively). Females had a higher tendency to have blood-stasis (OR (crude) =3.64, 95% CI [1.71-7.73]) and qi-stagnation (OR (crude) =2.64, 95% CI [1.40-5.01]) constitutions as compared to males.

Conclusion: Disease prevention programs in Malaysia should be gender-focused, especially toward Malaysian females with unbalanced constitutions which should receive more attention based on their higher prevalence of unbalanced constitutions in Chinese Medicine. Future studies should be conducted to explore the associated risk factors in the prevalence of blood-stasis and qi-stagnation constitutions.

P14

Development and Content Validity of the Driving Ergonomic Screening Form

WEN XIN L, HANIF FARHAN MR, DZALANI H

*Occupational Therapy Programme, Center for Rehabilitation & Special Needs (iCaRehab),
Faculty of Health Sciences, Universiti Kebangsaan Malaysia (UKM)*

ABSTRACT

Introduction: The ergonomics of driving can generally be described as the suitability of the vehicle for the driver. This aspect of driving is essential in reducing the risk of musculoskeletal disorders. Therefore, a comprehensive, valid, and consistent assessment is vital to assess the driving ergonomics accurately.

Objective: This study aims to develop and test the validity of the Driving Ergonomic Screening Form (SEP).

Methods: This study was conducted using the exploratory sequential design of a mixed-method approach. In this study, the SEP was developed based on a literature review and a focus group discussion (FGD) with ten professionals in the field of driving rehabilitation or ergonomics. The recorded data from FGD were transcribed and analysed using thematic analysis. The content validity of the SEP was also determined.

Results: The SEP version 1.0 contains six sections: Personal Information, Health Information, Driving and Vehicle Information, Body Symptoms, Driving Ergonomic Screening as well as Results and Recommendations. The content validity for each section of SEP had excellent content validity based on the content validity index (S-CVI/Ave: 0.96 – 1.00) and modified *kappa* (*kappa*: 0.93 - 1.00).

Conclusion: The SEP version 1.0 has shown to be a valid ergonomic screening tool for drivers. This tool can be used in clinical settings to assist in the prevention of musculoskeletal problems among drivers. For future studies, establishing the reliability of SEP is recommended.

P15

Microscopic Detection Revealed High Prevalence of Intestinal Parasitic Infections among Orang Asli Community in Gua Musang, Kelantan.

ZARITH SURAYA S¹, NOOR WANIE H¹, NURAFFINI G¹,
NATASHA NUR AFIQAH MNF¹, ANIZAH R², SYAMSA RIZAL A¹,
ZULKARNAIN MI¹, EMELIA O¹

¹Department of Parasitology and Medical Entomology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur 56000, Malaysia

²Institute for Research in Molecular Medicine (INFORMM), Universiti Sains Malaysia, USM Pulau Pinang 11800, Malaysia

ABSTRACT

Introduction: In most countries, the indigenous population generally exhibited poorer health outcomes than the general population with no exception to the Orang Asli of Peninsular Malaysia. Due to being underprivileged and having an unhygienic lifestyle, the Orang Asli community is susceptible to intestinal parasitic infections which have further exacerbated their health conditions.

Objective: This study aims to investigate the prevalence of intestinal parasitic infections among the Orang Asli community at Pos Kuala Betis, Gua Musang, Kelantan.

Methods: A total of 138 faecal samples were collected from the Orang Asli aged seven years old and above. All faecal samples were examined microscopically using direct faecal smear, trichrome stain, modified Ziehl Neelsen stain, Gram-chromotrope Kinyoun stain, Harada Mori and modified agar plate culture techniques.

Results: Overall, 68.1% of the Orang Asli were found to be infected by at least one parasite species. Of these, 56.4% of them had polyparasitism. The overall prevalence of *Trichuris trichiura*, *Ascaris lumbricoides*, hookworm, *Blastocystis hominis*, *Giardia lamblia*, *Entamoeba coli*, *Entamoeba complex*, *Iodamoeba buetschlii*, *Endolimax nana* and *Chilomastix mesnili* were 35.5%, 15.9%, 13%, 19.6%, 13.8%, 21%, 15.2%, 2.9%, 4.4% and 1.5%, respectively. None of the faecal samples were positive for microsporidia, *Cryptosporidium* spp. and *Strongyloides* spp.

Conclusion: This study revealed that intestinal parasitic infections are highly prevalent among the Orang Asli community. Hence, community awareness and effective control measures are essential to reduce the prevalence and consequences of infection in the community.

P16

Content Validation and Internal Consistency of The Occupational Therapy Telehealth Practice Questionnaire (OTPQ)

DZALANI H, HANIF FARHAN MR, EE SHAN L

Occupational Therapy Program, Center for Rehabilitation & Special Needs Studies, Faculty of Health Science, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, Kuala Lumpur, Malaysia.

ABSTRACT

Introduction: Occupational therapy services were abruptly transitioned to telehealth practice due to the intensification of the 2020 Coronavirus (COVID-19). However, the characteristics of the telehealth practice and how occupational therapists (OTs) perceive their telehealth practice is still not well known. In addition, there are limited validated published tools to report the occupational therapy telehealth practice.

Objective: This study aimed to determine the validity and reliability of the Occupational Therapy Telehealth Practice Questionnaire (OTPQ).

Methods: This is 2 phase online cross-sectional study. The 1st phase (validation of OTPQ), involved 10 expert panels with at least 1 year of telehealth practice experience. The relevance, simplicity, clarity and ambiguity of the OTPQ items were assessed using a content validation form. The 2nd phase was the OTPQ reliability testing involving 30 Malaysian OTs who had practised telehealth using Google Forms. Data were analysed using Microsoft Excel and IBM Statistical Package for Social Sciences (SPSS) software version 26.0.

Results: All items of the OTPQ for criteria relevance, simplicity, clarity and ambiguity showed excellent content validity for I-CVI (0.80 to 1.00); S-CVI/Ave (0.98 to 0.99), and the modified kappa value (more than 0.74). Both satisfactory level and perception, and barriers and challenges constructs had excellent internal consistency as Cronbach's alpha value α with 0.9207 and 0.9735, respectively.

Conclusion: The OTPQ proved as a valid and reliable tool to examine the OTs' practice characteristics in Malaysia and their level of satisfaction and perception and barriers and challenges in delivering telehealth services. Further psychometric test of OTPQ is recommended.

P17

Knowledge and Attitude towards HIV/AIDS Patients among Medical Faculty Students in Universiti Kebangsaan Malaysia

ASLINA MY¹, HUSSIEN SZ¹, CHIA SC¹, PHAN R¹, NORSYAFIQAH HIDAYAH SB¹, NOOR MN^{1,2}

¹Department of Nursing, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Yaacob Latiff, Kuala Lumpur, Malaysia

²Department of Physiology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Yaacob Latiff, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: HIV/AIDS patients are often stigmatised, discriminated against or neglected by the community including healthcare providers, particularly when they seek treatment within healthcare settings.

Objective: This study was carried out to determine the level of knowledge and attitude among medical faculty students towards HIV/AIDS patients as well as the relationship between knowledge and attitude and between socio-demographic data and attitude.

Methods: The cross-sectional study was conducted among 222 students by stratified random sampling. Data were collected using validated HIV/AIDS questionnaires.

Results: The majority of the students had moderate knowledge (70.3%) and a positive attitude (85.1%) towards HIV/AIDS patients. The attitude towards HIV/AIDS patients was found to be significantly related to knowledge of HIV/AIDS ($r = -0.373$, $p < 0.001$) and sociodemographic data of ethnicity ($p < 0.001$) except for age and gender.

Conclusion: In short, by providing insight on the level of knowledge and attitude of these students towards HIV/AIDS patients, early clinical practice exposure and knowledge, particularly on health education and health promotion related to HIV/AIDS were necessary to be implemented to reduce student's stigmatisation when providing treatment and care for these patients in the future.

P18

A Preliminary Analysis of Social Media Usage, Loneliness and Problematic Eating Behaviour Levels in University Students During the COVID -19 Pandemic in Malaysia

GERALDINE P^{1,2}, CHIN YY^{1,3}, NUR AFIFAH MZ¹, NURUL FARHANA R¹, SITI KHADIJAH H^{1,4}, NORAI DATULAKMA A^{1,5}

¹Faculty of Health Sciences, Universiti Kebangsaan Malaysia (UKM), 50300 Kuala Lumpur, Malaysia

²Faculty of Creative Industries, Universiti Tunku Abdul Rahman (UTAR), 43000, Bandar Sungai Long, Kajang, Malaysia

³School of Nutrition and Dietetics, Faculty of Health Sciences, Universiti Sultan Zainal Abidin, Gong Badak Campus, Kuala Nerus, Terengganu, Malaysia

⁴Radiotherapy & Oncology Department, Hospital Canselor Tunku Muhriz, Cheras Kuala Lumpur

⁵UKM Medical Molecular Biology Institute (UMBI), Universiti Kebangsaan Malaysia (UKM), 56000 Kuala Lumpur, Malaysia.

ABSTRACT

Introduction: Loneliness and eating disorders represent significant clinical and mental health issues, particularly among undergraduate students in Malaysia during the COVID-19 pandemic. Social media has acted as one possible mode of coping with these emotional and psychological difficulties during the pandemic, with a stark increase in social media usage during the pandemic noted among young adults.

Objective: This study aims to explore the levels of social media usage and loneliness as well as problematic eating behaviours among undergraduate university students in Malaysia.

Result: A total of 174 undergraduate students, of which 77% were female and 23% were male, participated in this study. The undergraduate students were from public (52.9%) and private (47.1%) universities in Malaysia. This cross-sectional study was conducted through an online platform with four parts of questions which were, i) Socio-demographic; ii) Social media usage (19 items); iii) Loneliness (20 items), and iv) Problematic Eating behaviours (26 items). The majority of respondents used social media for entertainment (81.3%), followed by academics (75.0%), informativeness

(71.4%), and socialization (67.3%). 50.0 % of respondents reported a high level of loneliness, followed by 35.6% at a moderate level and 14.4% at a no/low level of loneliness. Finally, only 20.7% of the participants were found to have problematic eating behaviours. A significant association between the level of loneliness and gender ($p < 0.05$) was found, with females reporting a higher level of loneliness than males.

Conclusion: Exploring depression and anxiety levels in relation to social media usage could lead to possible explanations for using social media as a coping mechanism.

P20

Translation and Validation of the Malay Version Health Belief Model Questionnaire

JACQUELINE TING YL¹, AYESHA MZ¹, MUSHAWIAHTI M², WAN HASLINA WAN AH¹

¹Department of Ophthalmology, Pusat Perubatan Universiti Kebangsaan Malaysia

²KPJ Ampang Puteri Specialist Hospital, Kuala Lumpur

ABSTRACT

Introduction: Diabetes mellitus (DM) is a major public health concern in Malaysia. Diabetes macula oedema (DME) is one of the complications of the disease and has become one of the leading causes of blindness worldwide with a significant impact on quality of life. Health Belief Model (HBM) is widely used to explain a patient's adherence to treatment. Nevertheless, there is a lack of questionnaires in the Malay language which can be used among the Malaysian population. Translated and validated Malay version will allow further study on patient's adherence to treatment.

Objective: The purpose of this study is to translate and validate the HBM questionnaire in the Malay language.

Methods: Forward and backward translation of the questionnaire was conducted by 2 translators from the Malaysian Institute of Translation & Books. The forward and backward discrepancies were evaluated to produce the final version. Content validity was done by 3 experts in Ophthalmology followed by face validity through 5 respondents of different backgrounds. Reliability testing was done on 30 adults and Cronbach's alpha was used to examine the internal consistency.

Results: The Malay version of HBM showed a content validity index and face validity index of 1.00 for all of the domains after improvements were made based on the experts' suggestions. Cronbach alpha value of at least 0.8 was obtained for all domains and considered adequate for validation.

Conclusion:

This study found the Malay version of the HBM questionnaire to be a valid and reliable instrument. It may be used in a future study to identify the adherence of patients in order to improve treatment plans.

P21

Stability Study of The Different Storage Conditions of Dermal Fibroblast Conditioned Medium on *in Vitro* Fibroblast Behavioural Properties

VINOOTHINI K, MH BUSRA F, YOGESWARAN L, ANGELA MHN,
MANIRA M

Centre of Tissue Engineering and Regenerative Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia, 56000 Cheras Kuala Lumpur Malaysia

ABSTRACT

Introduction: Dermal Fibroblast Conditioned Medium supplemented with a keratinocyte-specific medium (DFCM-KM) plays a major role in wound healing *in vitro* and *vivo* study. However, the stability of the protein secreted remains undiscovered.

Objective: This study aimed to conduct the stability study of the DFCM-KM stored in different storage conditions for fibroblast properties.

Methods: Human dermal fibroblast was cultured up to passage 3 and the confluence cells were incubated at 37°C in a 5% CO₂ incubator for 72 h with a fresh serum-free keratinocyte-specific medium with growth supplement (EpiLife™; Gibco, USA) (referred as KM), and the waste medium was collected as DFCM-KM. The DFCM-KM was stored in different storage temperatures (room temperature, 4°C, -20°C and -80°C) and storage times (1 month, 3 months, 6 months). The protein profile and effect on biological behaviours were studied.

Results: DFCM-KM stored at -80°C maintained the protein level and the protein degradation rate was low for up to 6 months. The DFCM-KM stored at -20°C and room temperature has enhanced the fibroblast's rate of attachment, proliferation and migration. DFCM-KM stored at -80°C showed a higher healing rate compared to other temperatures.

Conclusion: This study concludes that the stability of secreted proteins of DFCM-KM stored at a lower temperature ($\leq 4^\circ\text{C}$) was well maintained for up to 6 months.