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Original Articles are reports on findings from original unpublished research. Preference

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Please indicate the corresponding author and provide the affiliation, full postal address and email.

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Describe your selection of the observational or experimental subjects (patients or experimental animals, including controls) clearly, identify the methods, apparatus (manufacturer's name and address in parenthesis), and procedures in sufficient detail to allow other workers to reproduce the results. Give references to established methods, including statistical methods; provide references and brief descriptions of methods that have been published but are not well-known; describe new or substantially modified methods, give reasons for using them and evaluate their limitations.

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Present your results in logical sequence in the text, tables and illustrations. Do not repeat in the text all the data in the tables or illustrations, or both: emphasise or summarise only important observations in the text.

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Acknowledgements:

Acknowledgements of general support, grants, technical assistance, etc., should be indicated. Authors are responsible for obtaining the consent of those being acknowledged.

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Example references Journals:

Standard Journal Article

Rampal L and Liew BS. Coronavirus disease (COVID-19) pandemic. *Med J Malaysia* 2020; 75(2): 95-7.

Rampal L, Liew BS, Choolani M, Ganasegeran K, Pramanick A, Vallibhakara SA, et al.

Battling COVID-19 pandemic waves in six South-East Asian countries: A real-time consensus review. *Med J Malaysia* 2020; 75(6): 613-25.

NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants. *Lancet* 2021; 11; 398(10304): 957-80.

Books and Other Monographs:

Personal Author(s)

Goodman NW, Edwards MB. 2014. *Medical Writing: A Prescription for Clarity*. 4 th Edition. Cambridge University Press.

Chapter in Book

McFarland D, Holland JC. Distress, adjustments, and anxiety disorders. In: Watson M, Kissane D, Editors. *Management of clinical depression and anxiety*. Oxford University Press; 2017: 1-22.

Corporate Author

World Health Organization, Geneva. 2019. WHO Study Group on Tobacco Product Regulation. Report on the scientific basis of tobacco product regulation: seventh report of a WHO study group. WHO Technical Report Series, No. 1015.

NCD Risk Factor Collaboration (NCD-RisC). Rising rural body-mass index is the main driver of the global obesity epidemic in adults. *Nature* 2019; 569: 260-64.

World Health Organization. Novel Coronavirus (2019-nCoV) Situation Report 85, April 14, 2020. [cited April 2020] Accessed from: <https://www.who.int/docs/defaultsource/coronavirus/situationreports/20200414-sitrep-85-covid-19>.

Online articles

Webpage: Webpage are referenced with their URL and access date, and as much other information as is available. Cited date is important as webpage can be updated and URLs change. The "cited" should contain the month and year accessed.

Ministry of Health Malaysia. Press Release: Status of preparedness and response by the ministry of health in and event of outbreak of Ebola in Malaysia 2014 [cited Dec 2014]. Available from: http://www.moh.gov.my/english.php/database_stores/store_view_page/21/437.

Other Articles:

Newspaper Article

Panirchellvum V. 'No outdoor activities if weather too hot'. *the Sun*. 2016; March 18: 9(col. 1-3).

Magazine Article

Rampal L. World No Tobacco Day 2021 -Tobacco Control in Malaysia. *Berita MMA*. 2021; May: 21-22.

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Case report: Stroke in an 11-year old by a mass in the heart

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¹Department of Cardiothoracic Surgery, Hospital Sultan Idris Shah, Serdang, Malaysia, ²Department of Cardiothoracic Anaesthesia & Perfusion, Hospital Sultan Idris Shah, Serdang, Malaysia

ABSTRACT

A local case study of successful excision of left atrial myxoma presenting with post-embolic stroke in an 11-year-old child. Cardiac myxoma represents the most common primary cardiac tumors, commonly originating from the atrial endocardium but is very infrequent in the paediatric population. Despite its benign nature, its likelihood to cause severe morbidity and mortality necessitates comprehensive understanding. The precise etiology of cardiac myxomas remains elusive, although sporadic and familial occurrences have been documented. The clinical presentation of cardiac myxomas varies widely, ranging from asymptomatic incidental findings to life-threatening complications such as embolic events or intracardiac obstruction for example in this case. Surgical resection remains the cornerstone of management for symptomatic cardiac myxomas, aiming for complete excision while preserving cardiac function with the aid of cardiopulmonary bypass. Cardiac myxomas poses both diagnostic and therapeutic challenges necessitating a multidisciplinary approach encompassing the fields of cardiology, cardiothoracic surgery, intensive care and anaesthesiology. This case report aims to enhance the learning of the possible clinical presentation of cardiac tumors, investigations and surgical options for resection. Through collaborative efforts, optimal outcomes can be achieved, minimizing morbidity and improving the prognosis for patients with cardiac myxomas.

A study of the factors influencing tb contacts' attendance for screening appointments

Kartik Kaliyana Sundram¹, Divya Shankar², Retneswari Masilamani³, Victor Chee Wai Abdullah¹

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ABSTRACT

Introduction: Contact screening is crucial for TB control in Malaysia, aiming to detect TB and latent infection among contacts of TB patients. However, attendance at screening appointments remains low despite government efforts to reduce transmission among TB patients' contacts. **Objective:** This study aims to determine the prevalence of TB contacts attending screening, and the factors influencing them to completion. **Methods:** This study comprised two parts. First, a retrospective study data analysed from the Malaysian Tuberculosis (MyTB) database, encompassing all TB contacts in the Marang district from January 2013 to December 2018. The second part involved a descriptive and analytical cross-sectional study on knowledge, attitudes, and perceptions (KAP) related to retention in care. Univariate and multivariate regression tests were employed to assess the associations between questionnaire responses and screening completion. **Results:** Out of 5193 identified contacts, only 15% completed screening appointments. Attendance dropped from 82% at the first appointment to 15% at the fourth. 4% of those screened tested positive for TB. Factors associated with higher completion rates included living within three km of the clinic, having less committed jobs, being a close contact, being single, perceiving screening as beneficial, and visiting the clinic 3-4 weeks after symptoms. Close contacts, single status, and delayed clinic visits remained significant predictors in multivariate analysis **Conclusion:** This study pinpoints the factors affecting TB contact screening attendance in Malaysia. The findings will hopefully guide stakeholders and healthcare providers to enhance the screening system, supporting the Health Ministry's goal to end TB by 2030

Case report: Nailed it! an unusual presentation of penetrating traumatic injury - A successful extraction of a 12-year-old nail from the skull

Amyrul Azman¹, Adlina Abdullah²

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ABSTRACT

A local case study on a successful surgical removal of a left high parietal foreign body in a 17-year-old female patient, who presented with an incidental finding of a nail on her plain skull X-ray during her Emergency Department visit following an alleged motor vehicle accident. Detailed clinical examination, imaging studies including computed tomography (CT) scan and neurosurgical intervention were performed. This case report aims to present a rare case of a single nail found penetrated into the skull and subsequent successful extraction, highlighting the diagnostic and therapeutic challenges encountered. The procedure was challenging due to the precise localization of the nail and proximity to critical neurovascular structures. However, careful dissection and extraction techniques were employed, resulting in successful removal without significant complications or neurological sequelae. Penetrating head injuries caused by foreign objects such as nails are uncommon but can lead to serious complications if not managed effectively. This case underscores the importance of a multidisciplinary approach involving emergency physicians, neurosurgeons, and radiologists in the diagnosis and management of such rare injuries. Early recognition, thorough evaluation, and a well-planned surgical intervention are crucial for optimal outcomes in cases of nail penetration into the skull.

Cardiomyopathy following a ruptured ectopic pregnancy: A case report

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ABSTRACT

Introduction: Takotsubo cardiomyopathy is a transient left ventricular dysfunction following acute emotional or physical stress that has been reported in peri-operative period in cardiac and non-cardiac surgeries. **Case Description:** A 35-year-old woman presented to the emergency department with sudden onset of generalized abdominal pain and per vaginal bleed. Blood investigations showed a haemoglobin of 4.5g/dL with a positive urine pregnancy test. Bedside ultrasound abdomen revealed floating uterus, free fluid up to Morrison's pouch and left adnexal mass 4.4cm x 4.9cm. Fluid resuscitation and massive transfusion protocol was started and the surgeons subsequently proceeded with emergency laparotomy and salpingectomy. 16 hours post operatively, she developed acute pulmonary oedema requiring high ventilatory support and diuretics. Urgent echocardiogram showed poor left ventricular function with ejection fraction 15% with dilated left ventricle, regional wall motion abnormality over interventricular septum, septal, anterior, and apical akinesia with hypokinesia over other walls. Otherwise, no valvular lesions or intramural thrombus was seen. Case was referred to the cardiac centre for extracorporeal membrane oxygenation (ECMO) in view of multiorgan failure, needing double inotropic support. Patient recuperated well with the treatment given. Her repeated echocardiogram one month later showed recovered left ventricular ejection fraction of 60% with no wall motion abnormality. **Discussion:** Further investigations need to be done to explain the exact aetiology of transient cardiomyopathy. However, it is possible that the patient had Takotsubo cardiomyopathy following the ruptured ectopic pregnancy.

Keywords: cardiomyopathy, ectopic pregnancy, ECMO

Distribution and antifungal susceptibility profile of four medically important *Candida* species isolated from blood cultures in a tertiary medical centre in Kuala Lumpur

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ABSTRACT

Objectives: To investigate the distribution and antifungal susceptibility patterns of major *Candida* species causing candidemia in HCTM. **Methods:** Sixty-six *Candida* isolates were obtained from blood cultures between March 2021 and January 2022. Identity of species were determined by VITEK 2 YST and confirmed by PCR amplification of the internal transcribed spacer regions 1 (ITS1) and 2 (ITS2), including the 5.8S rRNA. Antifungal susceptibility was determined by Sensititre YeastOne YO-10. **Results:** Out of 66 isolates, non-albicans *Candida* (NAC) species were the most prevalent (66.7%). However, as a single species, *C.albicans* was still the most common organism (n = 22, 33.3%), followed by *C.glabrata* (n = 17, 25.8%), *C.tropicalis* (n = 15, 22.7%) and *C.parapsilosis* (n = 12, 18.2%). In comparison with *C.albicans* which had only one isolate showing resistance (only to flucytosine), NACs were far more resistant. *C.glabrata* had only one isolate susceptible to itraconazole, none to fluconazole and 94.1% to echinocandins. *C.tropicalis* showed low susceptibility to azoles, with 33%, 20% and 60% to voriconazole, itraconazole and fluconazole, respectively. Azole susceptibility in *C.parapsilosis* isolates were 91.7% to voriconazole and itraconazole, and 83% to fluconazole. All isolates remained susceptible to amphotericin B with minimum inhibitory concentrations of 0.25-1 µg/ml. **Conclusions:** Majority of candidemia cases were caused by the more resistant NAC species. *C.albicans* remained susceptible to antifungal agents, while *C.glabrata* and *C.tropicalis* showed resistance to triazoles at a concerning rate. This may warrant the usage of echinocandins as empirical treatment for NACs before finalisation of antifungal susceptibility test result, especially in high-risk patients.

Keywords: candidemia, antifungal susceptibility, non-albicans *Candida* species

Case studies: Differentials diagnosis of raised troponin level in emergency setting

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ABSTRACT

Introduction: This case report highlights the potential for misdiagnosis of acute medical conditions, particularly in emergency settings, where reliance on common biomarkers like troponin T may overshadow other underlying causes. Despite troponin T being a sensitive indicator of cardiac injury, its elevation can sometimes lead to overlooking alternative diagnoses. **Case Studies:** Mr. M, a 36-year-old active smoker with a history of epilepsy, presented with worsening central chest pain and reduced effort tolerance for the past 5 days. Apart from that, he had suffered from a right ankle fracture three weeks ago which renders him partial immobilized. Troponin levels were elevated at 450 ng/L, prompting a diagnosis of NSTEMI and ACS treatments are commenced. However, subsequent desaturation led to suspicion of acute pulmonary embolism (PE). Confirmatory imaging via CTPA revealed extensive PE, necessitating thrombectomy. Further evaluation for antiphospholipid syndrome was initiated. **Discussion:** This case underscores the importance of a thorough history-taking and clinical suspicion, especially in acute settings. Despite the commonality of certain diagnoses, such as myocardial infarction in the presence of elevated troponin, overlooking alternative conditions like PE can lead to delays in appropriate treatment and potential harm to the patient. Healthcare providers must remain vigilant and consider a broad differential diagnosis to ensure optimal patient care and outcomes.

Superior mesenteric artery syndrome in an adolescent female with anorexia nervosa

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ABSTRACT

Introduction: Superior mesenteric artery (SMA) syndrome is a rare complication of restrictive eating disorder, characterized by compression of the third duodenum between the aorta and the superior mesenteric artery. **Case Description:** We report a case of a female adolescent with anorexia nervosa, complicated by SMA syndrome. A 15 year old Chinese girl with underlying major depressive disorder and obsessive-compulsive disorder, presented with primary amenorrhea and restrictive eating which fulfils the DSM V criteria for Anorexia Nervosa. Her weight on admission was 27.4kg with a BMI of 11.7 kg/m². She experienced sudden abdominal distension with no bowel opening for two days. Fluoroscopy studies showed signs of SMA syndrome, i.e. delayed progression of contrast in D3 duodenum. Refeeding of milk was commenced with perfusor feeding for weight restoration via the insertion of a Naso-jejunal tube (NJ tube). NJ tube was removed after six weeks. Repeated ultrasound of the abdomen showed good angle between SMA and duodenum. Patient recovered well and has attained menarche. **Discussion:** Awareness of the association between SMA and anorexia nervosa can help healthcare providers to remain vigilant of its clinical presentation to establish a diagnosis and provide timely intervention.

Comparison of suture, fibrin glue and autologous blood technique for conjunctival autograft fixation in pterygium excision

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ABSTRACT

Objectives: The most effective treatment of pterygium is surgical excision and covering the bare sclera with conjunctival autograft. Various methods are used for grafting such as suture, fibrin glue or autologous blood. The objective of this study was to compare surgical outcomes of these three methods. Duration of these study are pterygium excision done in our hospital from January 2023 until February 2024. **Methods:** A retrospective study consisting of 74 eyes with primary pterygium underwent pterygium surgery and conjunctival autologous graft was undertaken. The methods were divided into suture (33 eyes), fibrin glue (23 eyes) and autologous blood (18 eyes). The study includes the mean operative time and postoperative one week review to see if the graft is intact. **Results:** The mean operative time for suture were 57.70 min, for fibrin glue were 26.57 min and autologous blood was 50.44 min. For graft intact postoperatively one week results, suture scored 100%, fibrin glue 70% and autologous blood scored 89% **Conclusions:** The operating time is the least in fibrin glue, followed by autologous blood and suture. Suture conjunctival autograft showed the best result while fibrin glue and autologous blood is comparable. Autologous blood method is recommended in view of shorten operation time and great autologous graft intact rate. It is also cheap and easily available.

Bridging IgA vasculitis gaps – Atypical gastrointestinal manifestation as predictors of relapse

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ABSTRACT

Introduction: IgA vasculitis (IgAV), also known as Henoch-Schönlein purpura (HSP), is the most common systemic vasculitis in children. The diagnosis is made based on the presence of characteristic purpuric lesions in combination with either one of the joint, gastrointestinal, or renal manifestations. Despite having a generally excellent prognosis, 30-40% of the patients experience relapse. During relapse, purpuric lesions typically precede the other systemic symptoms that tend to manifest with a milder severity compared to the initial presentation. We report a case with atypical presentation of IgAV relapse. **Case Description:** A 7-year-old boy diagnosed with IgAV, had multiple episodes of relapse in the past three years. He developed severe gastrointestinal symptoms (rectal bleeding, colicky abdominal pain and vomiting) and was treated initially as gastritis. The diagnosis of IgAV relapse had only become evident 12 days later, after the appearance of purpuric rashes. His symptoms were unusually more severe during the relapses. **Discussion:** The presence of severe gastrointestinal manifestations without the characteristic purpuric rashes makes IgAV relapse more challenging to diagnose. This case report serves as an addition to literature where early recognition of these symptoms can act as a good indicator to diagnose IgAV relapse. High index of suspicion among the clinicians is important as delay in establishing the diagnosis may subsequently compromise further clinical outcomes.

Transnasal sphenopalatine ganglion block for postdural puncture headache refractory to conservative management in an obstetric patient complicated with cerebral venous thrombosis and subdural hemorrhage

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ABSTRACT

Introduction: Postdural puncture headache (PDPH) following accidental dural puncture is a common anesthetic complication following neuraxial block in the obstetric population. However, major neurological complications following PDPH are uncommon, and its management is yet to be established. **Case Description:** A patient experienced symptoms of PDPH (last more than 13 days) which led to further investigations revealing sagittal sinus thrombosis and extra-axial hemorrhage. Due to concern about clot expansion and worsening of cerebral venous thrombosis, SPG was offered as an alternative to autologous epidural blood patch (AEBP). Our patient showed complete resolution of PDPH and thus evaded the need for AEBP. **Discussion:** Cerebral vein thrombosis (CVT) is a rare but potentially life-threatening complication following an inadvertent dura puncture. Clinicians should consider alternative diagnoses when prolonged headaches persist despite PDPH treatment. Brain imaging should be considered in patients with refractory PDPH. While transnasal SPG block is a viable option for PDPH treatment after failure of conservative management, well conducted clinical trial is needed to study its efficacy as compared to AEBP.

A novel modified EVAR stent graft technique to seal off a perforation occurring during TEVAR

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ABSTRACT

Introduction: Thoracic endovascular aneurysm repair (TEVAR) is an interventional technique used to correct a thoracic aortic aneurysm (TAA). The objective of this case report is to discuss a novel technique using a modified EVAR stent graft to seal off a perforation occurring during TEVAR. **Case Presentation:** A 57-year-old woman presented with epigastric discomfort, of about nine months duration with chest tightness and occasional breathlessness for the last three months. On physical examination, she was noted to have dilated veins at anterior chest wall with reduced air entry over left upper and middle zones. No other clinical findings were noted. Based on the chest X-ray, CT Thorax and CTA findings a diagnosis of proximal thoracic aortic aneurysm involving the aortic arch was made. The patient was planned for a Complex Endovascular approach. During the procedure patient developed a perforation of the left iliac artery. A novel technique using a modified EVAR stent graft was used to seal of the perforation. Patient was asymptomatic on subsequent visits with a decrease in size of the aneurysm. **Discussion:** This case illustrates the possibility of using endovascular approach to manage some very complicated aortic aneurysms which carries a high risk for surgery. Conventionally, endovascular approach is not recommended for disease affecting the arch of aorta. In this case, it required the use of stents as surgery was not a viable option. Simple perforations may be managed with prolonged balloon inflations and use of covered stents. In this situation a novel technique using a modified EVAR device was used to achieve hemostasis.

Micronutrient deficiency in a child with autism spectrum disorder

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ABSTRACT

Introduction: Micronutrients deficiency is prevalent among children with autism due to sensory food aversion. Here we will describe a boy with autism and food selectivity, who presented with scurvy. **Case Description:** A 5-year-old boy with a background autism spectrum disorder (ASD) and food aversion, presented with progressive bilateral knee and hip pain for two months which led to refusal to walk. On presentation, he was hypertensive and was noted to have lower limb edema. Urinalysis and renal profile were normal ruling out the diagnosis of glomerulonephritis. He complained of pain upon extending the knees and refused to bear weight. On closer inspection, there were corkscrew hair. Echocardiogram showed evidence of mild pulmonary hypertension. Nonetheless, the tibia, knee and femur X-rays were normal. As such, we suspected scurvy and started treatment empirically with high dose vitamin C, multivitamins and other supplements. His lower limb pain resolved within 4 days and he started to ambulate after 1 week. He had complete resolution of symptoms after 2 months of treatment and repeated echocardiogram showed resolved pulmonary hypertension. In retrospect, vitamin C level came back to be <5 $\mu\text{mol/L}$ (Normal 28-120) while vitamin D was deficient at 40.5 nmol/L . Investigation for young hypertension is ongoing and he is on therapies for his ASD. **Discussion:** Vitamin C deficiency especially in children with restricted dietary intake has been under-reported and it should be suspected in those who present with musculoskeletal symptoms. Scurvy-induced pulmonary hypertension, albeit rare, is easily reversible with appropriate treatment.

A Case of diabetic ketoacidosis with influenza a co-infection and refractory metabolic acidosis successfully treated with continuous venovenous hemodiafiltration

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ABSTRACT

Introduction: Diabetic Ketoacidosis (DKA) frequently heralds the onset of Type 1 Diabetes Mellitus. Severe DKA coupled with Influenza A co-infection may result in multiorgan dysfunction that may not be responsive to standard DKA therapies. Here, we describe a case with multiorgan involvement and refractory metabolic acidosis in which hemodiafiltration produced impressive results. **Case Description:** A 10-year-old girl, exhibiting polyuria, polydipsia and polyphagia for one month, presented with sudden abdominal pain, fever and tachypnea, and subsequently became unresponsive. Upon presentation, she was in respiratory distress, compensated shock, and a Glasgow Coma Scale (GCS) score of 11. Notably, her blood glucose level was measured high at 24 mmol/L alongside severe metabolic acidosis (pH 6.739, HCO₃ 3.3mEq/L). Further investigations revealed serum sodium 137 mmol/L, creatinine 100 umol/L, serum ketones 5.8 mmol/L, and troponin-I 13199 ng/L. Prompt fluid resuscitation and insulin infusion were initiated. Unfortunately, her GCS declined within five hours of admission, necessitating cerebral resuscitation and hemodynamically required triple inotropic support. Despite efforts, her renal profile deteriorated with refractory metabolic acidosis. Considering the risk associated with intravenous sodium bicarbonate, continuous venovenous hemodiafiltration (CVVHDF) was chosen as the therapeutic modality. Complete resolution of metabolic acidosis ensued after 39 hours, with discontinuation of inotropes at nine days and extubation at 11 days. CVVHDF was discontinued after nine days. **Discussion:** The patient demonstrated a favourable response to hemodiafiltration, resulting in the resolution of severe metabolic acidosis and improvement of multiorgan dysfunction, ultimately leading to survival. Hemodiafiltration emerges as a promising option for managing refractory metabolic acidosis in such cases.

Assessment of medical officers' knowledge on ai assisting patient management: A study in hospital USM

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ABSTRACT

Introduction: Improved patient care and administration are being enabled by AI in several industries, including healthcare. To properly implement AI in clinical practice, medical officials must understand its impact on patient management. This study examines Hospital USM medical staff's understanding of AI in patient care. **Methods:** A cross-sectional survey was conducted among USM's medical officials. Participants' understanding of AI in patient management was assessed using a carefully designed questionnaire. Multiple-choice questions covered AI's role in diagnosis, treatment planning, and patient monitoring throughout the poll. Data analysis included descriptive and inferential statistics. **Results:** 82% of 150 medical officers responded to the study. 88% of participants were 25-40 years old and had 2–15 years of clinical experience. Initial research reveals medical officials comprehend AI in patient management moderately. Most participants knew about AI applications like medical imaging interpretation (84%) and clinical decision support systems (70%), but not predictive analytics (42%), or tailored therapy algorithms (38%). **Conclusion:** This study shows that Hospital USM medical officers have moderate AI expertise in patient care. AI applications are well understood in some areas, although predictive analytics and personalised treatment algorithms are still underdeveloped. In order to bridge these knowledge gaps, dedicated training may help medical officers incorporate AI technology in clinical practice, improving patient care and outcomes.

Case report of a *Cupriavidus gilardii* pneumonia in an immunocompetent elderly

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ABSTRACT

Introduction: *Cupriavidus Gilardii* is an aerobic organism that has been isolated from various ecological niches. In previous reports, *Cupriavidus Gilardii* has been related to opportunistic infections. However, there are a few case reports of *Cupriavidus Gilardii* affecting patients with no obvious immunodeficiency, especially elderly. **Case Description:** A healthy 75-years-old lady, presented with one-week history of lethargy started from her family trip to Thailand. She was treated for pneumonia with intravenous ceftriaxone and oral azithromycin after return to Malaysia. Nevertheless, her condition deteriorated and intubated. Antimicrobial treatment was empirically escalated to intravenous meropenem. Blind bronchial aspiration grew *Cupriavidus Gilardii*, which was only sensitive to trimethoprim-sulfamethoxazole. Antimicrobial therapy was adjusted to intravenous colistin, and oral minocycline instead of trimethoprim-sulfamethoxazole based on previous case report antimicrobial susceptibility, as patient developed kidney injury, requiring renal replacement therapy. Unfortunately, her condition deteriorated further due to new bout of sepsis with *sternotrophomonas maltophilia* pneumonia. Antibiotics were changed to intravenous ciprofloxacin with oral minocycline based on the culture sensitivity. However, patient still succumbed to multiple bouts of sepsis. **Discussion:** There are total of 8 cases reported coupled with the case report here, 4 out of 9 patients (44%) succumbed to death. Two of the fatal case reports were associated with aspergillosis infection. The antimicrobial susceptibility varies among each case, however mostly sensitive to trimethoprim-sulfamethoxazole, levofloxacin/ ciprofloxacin. *Cupriavidus Gilardii* organisms also showed their ability to acquire resistance to antibiotics after administration. Combination of antimicrobial treatment should be further evaluated to prevent intrinsic antimicrobial resistance.

A case series of emerging rare pathogen: *Cedacea Lapagei*

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ABSTRACT

Introduction: *Cedacea Lapagei* is a gram-negative bacilli, associated with rare opportunistic multi drug resistance infections. The common choice of antibiotics includes third generation cephalosporin, ciprofloxacin, amikacin and vancomycin. **Case Presentations:** We report our experience managing two patients in our hospital. The first case is a 63-year-old-man who has underlying diabetes mellitus, hypertension and chronic obstructive pulmonary disease (COPD) presented with life threatening acute exacerbation COPD secondary to parainfluenza pneumonia with septic shock and acute kidney injury requiring hemodialysis. His condition was complicated with *Cedacea Lapagei* catheter related bloodstream infection (CRBSI). The second case was a 51-year-old male with known cases of poorly controlled diabetes mellitus, hypertension and chronic ischaemic cerebral infarct. He presented with acute left basal ganglia intraparenchymal haemorrhage with concurrent pneumonia and unfortunately his blood culture grew in *Cedacea Lapagei*. Both patients were treated with intravenous cefepime but subsequently succumbed. **Conclusion:** *Cedacea Lapagei* is an emerging rare opportunistic pathogen that may cause serious infection leading to mortality. Further study is needed regarding this organism and its spectrum of infections as it can cause fatal outcomes.

Factors influencing quran memorization among muslim housemen in orthopaedic department hospital Raja Permaisuri Bainun, Ipoh

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ABSTRACT

Introduction: Housemanship training presents a challenging phase in doctor's career. A lack of balance between work and social life has been identified as a significant stressor among housemen, potentially restricting their involvement in social and religious activities. Conversely, engaging in religious practice may offer valuable coping mechanism amidst their demanding schedule. This study aims to determine the capability of housemen to memorize Quran during orthopaedic posting and explore related contributing factors. **Methods:** This is a cross-sectional descriptive study involving all Muslim housemen undergoing orthopaedic posting from May 2017 to June 2022. Within the posting, each houseman was required to memorize verses from al-Quran. Each houseman underwent two tasmiiq sessions to verify the amount of their memorization; which was measured by the number of memorised lines. All data were analyzed by using SPSS. **Results:** A total of 382 housemen participated with an average of 28 lines memorized. The minimum was 4 lines, and the maximum was 202 lines. Housemen with backgrounds in religious secondary school and Arabic universities exhibited higher proficiency, memorizing 39.09 lines compared to 26.54 lines for those from conventional secondary school and non-Arabic universities background ($p < 0.05$). Additionally, those who had memorised more than one juzuk before the posting performed better, with 45.3 lines compared to 26.0 lines ($p < 0.05$). **Conclusion:** This study demonstrates that housemen were adept at Quran memorization during their orthopedic postings at HRPB. The performance were better for housemen who had memorised more than one juzuk and those with religious secondary school and Arabic universities background.

A rare encounter of vertebral brown tumour causing cord compression in dialysis patient

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ABSTRACT

Introduction: Osteitis Cystica Fibrosa, commonly known as brown tumour, are benign lytic bone lesions. These tumour represent classic skeletal manifestations of primary or, more rarely, secondary hyperparathyroidism. While they may appear in any bone, they are frequently found in facial bones, jaw bones, sternum, pelvis, ribs, and femur. However, brown tumour involving the spine are very rare. We report a rare encounter of a vertebral brown tumour causing cord compression in a patient with underlying end-stage renal failure. **Case Description:** A 34-years-old woman, with end stage renal failure on haemodialysis for 7 years, presented with progressive lower extremities weakness for one-week duration. The weakness gradually progressed, eventually rendering her immobile. No prior trauma or systemic infection were reported. Physical examination revealed bilateral weakness from L2 onward. Significant blood tests showed Alkaline Phosphatase value was 923 and elevated Parathyroid Hormone (PTH) with value of 335.73 pmol/L. MRI revealed an expansile soft tissue mass involving bilateral pedicles, laminae and transverse process of T9 vertebrae body. Additionally, it affected bilateral superior articulating process and spinous processes, causing stenosis and obliteration of exit foramina. Patient underwent decompressive spine surgery followed by posterior spinal instrumentation and fusion; excising a brownish, friable extradural tumour. Postoperatively, her neurological impairment significantly improved, allowing independent ambulation. The histopathological analysis confirmed a brown tumour, prompting a scheduled total parathyroidectomy to address secondary hyperparathyroidism. **Discussion:** Brown tumours are focal bone lesions caused by increased osteoclastic activity and fibroblastic proliferation commonly found in hyperparathyroidism. Their characteristic brown colour arises from vascularity, haemorrhage, and hemosiderin deposition. The treatment approach for brown tumour is multidisciplinary and typically involves tumour resection, spine stabilization, and aggressive management of hyperparathyroidism.

Intracranial tuberculous mycotic aneurysm in a lady with multiple myeloma

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ABSTRACT

Introduction: Mycotic aneurysm is dilation of arterial wall caused by infection such as bacteria, fungus and mycobacterium spp. The risk is higher in immune-compromised patient and complications typically involve formation of pseudoaneurysm, rupture and sepsis. Here we report a case of multiple intracranial mycotic aneurysms secondary to tuberculosis in a lady with multiple myeloma. **Case Description:** A 48-year-old lady with not known medical illness, presented with shortness of breath and constitutional symptoms. She was diagnosed with tuberculosis as chest X-ray showed bilateral apical consolidation and sputum revealed scanty acid-fast bacilli. At the same time, she had deranged renal profile, anaemia and hypercalcaemia on presentation. Workup revealed Kappa light chain paraproteinaemia and she was diagnosed with multiple myeloma. She was initiated on haemodialysis as her kidney function continued to deteriorate and planned for chemotherapy. In a series of unfortunate events, she developed seizure in ward with subsequent isolated right 3rd cranial nerve palsy. Contrast CT scan of brain revealed bilateral cavernous internal carotid artery (right 1.9 x 1.5 x 1.6cm, left 1.4 x 1.1 x 0.9cm) and right middle cerebral artery bifurcation (2 x 2 x 2mm) aneurysms, likely secondary to tuberculosis as her cerebrospinal fluid TB Xpert MTB/RIF assay came back positive. She was treated conservatively with anti-tuberculous therapy as CT reassessment showed stable aneurysms with no increase in size. **Discussion:** Mycotic aneurysm is a rare and severe complication of tuberculosis with most cases reported involving aorta, femoral artery and smaller vessels such as visceral arteries, and rarely, extracranial and intracranial arteries. Treatment of intracranial tuberculous mycotic aneurysm typically involves endovascular intervention (endovascular coiling, flow-diverter stent), surgical clipping or conservative management, and anti-tuberculous therapy for tuberculosis.

Knowledge as a shield: Assessing malaria prevention insight in low, medium, and high-risk areas in Kuala Krai and Gua Musang, Kelantan

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ABSTRACT

Introduction: Malaysia has made significant progress towards malaria elimination, but the risk of reintroduction persists due to imported cases. Assessing malaria prevention knowledge across different risk areas is crucial for guiding targeted interventions and sustaining elimination efforts. This study compared malaria prevention knowledge among residents in low-, medium-, and high-risk areas in Kelantan, Malaysia. **Methods:** A cross-sectional study was conducted in Kuala Krai and Gua Musang districts, involving 159 adult residents. Participants were recruited using a multistage sampling and completed a validated 53-item questionnaire assessing malaria prevention knowledge across seven domains. Data were analysed using descriptive statistics, multi-way ANOVA, and post-hoc tests. **Results:** The analysis revealed a significant main effect for risk areas ($F(2, 155) = 8.36, p < 0.001$) on malaria prevention knowledge scores after adjusting for gender. Tukey's HSD post hoc tests indicated that high-risk area residents had significantly higher knowledge scores than low-risk residents ($p < 0.001$). Medium-risk residents had significantly higher knowledge scores than low-risk area residents ($p < 0.001$). However, there was no significant difference between medium and high-risk areas ($p > 0.927$), suggesting similar knowledge levels within these groups. The estimated mean score percentage for high-risk areas was 66.0%, followed by medium-risk areas at 64.9% and low-risk areas at 54.7%, reflecting a moderate knowledge score. **Conclusions:** This study highlights that while the residents in high-risk and medium-risk areas had significantly higher scores, there is still room for improvement. Tailored interventions to reinforce malaria prevention knowledge are crucial for sustaining Malaysia's progress towards malaria elimination.

Keywords: malaria, prevention, knowledge, cross-sectional study, risk areas, Malaysia

Melioidosis, in the heart?

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ABSTRACT

Introduction: Melioidosis is a potential fatal zoonotic disease that is caused by gram negative bacteria, *Burkholderia pseudomallei* that is endemic to Southeast Asia and Australia. It has been named as “The Great Imitator” due to its vast clinical presentation, however, an isolated cardiac involvement is uncommon. We described a case of life threatening melioidosis complicated by pericardial empyema, whom was successfully treated with antibiotics and pericardial drainage. **Case Description:** A 62-year-old cultivator gentleman with a history of poorly controlled diabetes mellitus presented with 3 weeks of fever and weight loss. Patient was persistently febrile and clinically septic shock despite of empirical intravenous Ceftazidime (Fortum). The initial workup revealed a negative blood culture. Computed tomography scan thorax showed a large multiloculated rim enhancing pericardial collection without another solid organ abscess. Diagnostic and therapeutic open thoracotomy pericardial drainage by Cardiothoracic team drained total 300cc purulent pericardial fluid. Both pus and pericardial tissue grew *Burkholderia Pseudomallei*. Antimicrobial therapy with intravenous Ceftazidime was initiated. Patient responded well to ceftazidime and subsequently switched to maintenance regimen oral trimethoprim/sulfamethoxazole upon discharge. A follow up CT scan revealed resolved pericardial collection. **Conclusion:** This case underscores the importance of early recognition, appropriate antimicrobial therapy, and aggressive management of complications in melioidosis, especially when presenting with rare manifestations like pericardial empyema. Further research is warranted to explore optimal management strategies for such challenging cases.

Thrombocytopenia post revision total hip replacement surgery: Unexpected diagnosis of severe dengue (A case report)

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ABSTRACT

Introduction: Clinical manifestations of dengue fever vary from asymptomatic to severe plasma leakage, severe haemorrhage and organ impairment. These changes can result in severe complications, especially in post-operative patients. **Case Description:** A 47-year-old man was electively admitted for revision of right total hip replacement for ceramic liner dissociation. Pre-operative blood investigations showed haemoglobin (Hb) 12.4 g/dL; haematocrit (HCT) 37.1%; platelet (Plt) 158000/ μ L, white cell count (WCC) 4.4×10^3 / μ L and normal coagulation profile. Surgery was done under general anaesthesia. He was haemodynamically stable until day 3 post-operatively when he developed hypotension and respiratory distress. Blood investigation revealed a drop in Hb to 8.6 g/dL; HCT to 26%, and Plt of 54000/ μ L. Only on post-operative day 4, dengue serology (ELISA method) was sent. NS1 antigen and IgM were both positive. He was referred to the Intensive Care team, treated as severe dengue in critical phase. Dengue PCR reported DEN IV infection. In ICU, he received a targeted fluid regime and oxygen supplementation. Haemoglobin level was persistently low which required multiple blood transfusions. Postoperative day 7, a CT abdomen and pelvis was done which showed a hematoma at right gluteal and upper thigh with no active bleeding. General condition improved and blood parameters normalized after that. He was discharged day 22 post-surgery. **Discussion:** Diagnosing dengue fever in a postoperative patient is challenging. Signs and symptoms of dengue are nonspecific. Dengue typically follows 3 phases: febrile, critical, and convalescent. In this reported case, the patient had no obvious symptoms. A drop in haemoglobin and platelet counts after surgery can be multifactorial in causation. High degree of suspicion of dengue is important, especially in an endemic area like Malaysia

Malignant hyperthermia: A review of a case with delayed onset

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ABSTRACT

Introduction: Malignant hyperthermia(MH), albeit a rare genetic disorder can have fatal consequences. This is a case report of a 65-year-old gentleman with Squamous cell carcinoma of the tongue that was planned for an elective operation by the Oral Maxillofacial Surgical (OMFS) team. **Case Description:** Pre-anesthetic assessment revealed that the patient was fit to undergo the operation. On the day of surgery, the patient was induced by the anesthetic team and it was uneventful. He first had a tracheostomy performed and then proceeded to undergo the procedure planned by the OMFS team. However, the patient started to show worrying symptoms of hypercarbia, arrhythmias and increased body temperature four hours after the induction of anesthesia. The treating team attempted to eliminate possible differential diagnoses which included MH. They provided symptomatic relief by cooling the patient with ice cubes, turning off volatile anesthetics and triggering agents while awaiting for adequate supply of IV Dantrolene from nearby hospitals. As there are no confirmatory tests available to diagnose MH in Malaysia, the patient was suspected to have MH due to resolution of symptoms after the administration of IV Dantrolene. The patient was subsequently stabilized and transferred to ICU for continuation of care. **Discussion:** This case is crucial to highlight that more efforts should be undertaken to ensure accessibility of IV Dantrolene in healthcare facilities providing anesthetic services for early administration to reduce morbidity and mortality associated with MH.

Terminating supraventricular tachycardia with urinary bladder catheterization

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ABSTRACT

Introduction: Supraventricular tachycardia (SVT) is a pathological rapid rhythm of the heart that begins in the atria. The incidence of SVT is 35 per 10,000 person-years or 2.29 per 1000 persons and is the most common non-sinus tachydysrhythmia. Symptoms commonly associated are anxiety, palpitations, chest discomfort, light-headedness, syncope, or dyspnoea, however some remain asymptomatic. **Case Description:** A 60-year-old Malay lady with underlying dyslipidaemia presented with sudden onset of palpitation with no other associated symptoms from 12pm prior to visiting the clinic at 4pm. She denied other risk factors except for consumption of an unknown traditional medication. Examination findings were unremarkable with a blood pressure 133/65mmHg and heart rate of 184beats per minute. Continuous cardiac monitoring showed regular arrhythmia with absent p-wave and narrow QRS complex. She did not respond to the initial vagotonic manoeuvres. Prior to administration of intravenous adenosine, a urinary bladder catheterization was done and noted complete resolution of the arrhythmia on the cardiac monitor. A 12 lead ECG confirmed the findings. **Discussion:** This case demonstrates an alternative treatment to the usual treatment for SVT. Urinary catheterization stimulates the vagal nerve which reduces atrioventricular nodal conduction hence which resolves the SVT. We anticipate further knowledge sharing of this technique method of treatment for this condition.

A rare non-albicans, *Candida intermedia* bloodstream infection

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ABSTRACT

Introduction: *Candida* species are common nosocomial bloodstream infections, with non-albicans species becoming more prevalent. While common non-albicans *Candida* species such as *Candida glabrata*, *Candida parapsilosis* and *Candida tropicalis* may cause candidemia and have reduced susceptibility to antifungal agents, much less is known about *Candida intermedia*. **Case Description:** An 83-year-old woman, who was admitted for an elective endoscopic retrograde cholangiopancreatography, developed septic shock from a duodenal perforation leading to multiple surgeries and intensive care unit admission. Initial blood cultures isolated *Candida krusei*, and she was treated with anidulafungin. Despite this and multiple other empiric antibiotics, her condition remained unchanged. Additional blood cultures confirmed the presence of *Candida intermedia* by MALDI-TOF MS. An empirical amphotericin B therapy was started. Unfortunately, she passed away on the second day of amphotericin B treatment due to sepsis, worsened by acute respiratory distress syndrome resulting from ventilator-associated pneumonia. **Discussion:** *Candida intermedia*, commonly found in environmental sources such as cheese surfaces, presents a challenge in bloodstream infections due to its infrequent occurrence. However, its detection in this patient undergoing multiple surgeries and extended hospitalization raises concerns regarding its pathogenic potential. Various identification methods, including gram stain, culture, and MALDI-TOF-MS, confirmed the presence of the isolate. Risk factors for candidemia, including prolonged hospital stays, antimicrobial use, immunosuppressive therapy, and invasive procedures, may contribute to its development. Given the limited knowledge about its clinical implications, further research is necessary to better understand its clinical impact.

Keywords: *Candida intermedia*, non-albicans *Candida*, candidemia, bloodstream infection.

Silent and hidden hazards: A case report of button battery ingestion

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ABSTRACT

Introduction: Button battery ingestion is rare among the usual type of foreign body ingestion in children. Early recognition of symptoms and signs should be followed by urgent referral for appropriate investigation and intervention. Removal of button battery should be done by an experienced surgeon as soon as possible to prevent possible life-threatening complications. **Case Description:** This case report describes a child who allegedly swallowed a button battery, and subsequently had vomited food particles with upper back pain, but had no hematemesis, fever or respiratory distress. Chest radiograph revealed a circular radiopaque shadow with halo sign at upper esophagus region. The button battery was removed by an experienced otorhinolaryngologist using endoscopic assisted rigid esophagoscopy and crocodile forceps. The patient recovered uneventfully. **Discussion:** Button battery ingestion is rare, ranging from 4.2% to 7.5% among all types of foreign body ingestion. Healthcare workers should recognise early symptoms and signs of button battery ingestion, including vomiting, dysphagia, fever, drooling of saliva, coughing, and a sore throat. Early investigation and intervention is crucial. The recommended time for button battery removal is between 2 to 6 hours to prevent complications. Complications of button battery ingestion can range from mild to severe, and is potentially life-threatening.

Tracking dengue transmission: A spatial -temporal epidemiological analysis of dengue distribution in bentong over five years

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ABSTRACT

Introduction: Dengue poses a significant public health challenge in tropical regions like Bentong, Malaysia. Analyzing the spatial and temporal distribution of cases is crucial for guiding prevention strategies. This study aimed to characterize the epidemiology of dengue in Bentong from 2019 to 2023 by analyzing case distributions based on location, year, and demographic factors. **Methods:** The cases were geocoded, and maps were generated to investigate spatial and temporal patterns. Furthermore, the study analyzed annual incidence trends in terms of both space and time, and also conducted sociodemographic profiling of the cases. **Results:** A retrospective analysis of dengue surveillance data from the Pejabat Kesihatan Daerah (PKD) Bentong revealed 426 reported cases over the 5-year period, with varying annual incidences and spatial patterns. Certain areas consistently reported higher case numbers, with localized outbreaks occurring in specific communities during certain years. The majority of infections were among male Malays aged 18-40, with notable representation among private sector workers and students. **Conclusion:** This study highlights the importance of targeted prevention strategies based on epidemiological insights to optimize dengue control efforts in Bentong.

Keywords: Dengue Fever, Disease Outbreaks, Epidemiology, Descriptive, Geographical Information Systems, Risk Factors

Artificial intelligence, practical psychiatric implementations; a narrative review

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ABSTRACT

Introduction: In Malaysia, a lack of Psychiatrists nationwide and the disproportionate burden of mental illnesses to the availability of resources has only widened since the advent of COVID-19. Could the integration of artificial intelligence into the field of Psychiatry offer a promising avenue in mitigating this challenge? This narrative review provides an overview of the current landscape of AI applications in psychiatry - highlighting key developments, implications, ethical challenges, and future directions. **Methods:** We conducted a search on PubMed to search on AI and Psychiatry and selected three articles for review, published within the timeframe of 2019 – 2022, to address this question. **Results:** Recent AI studies in mental health demonstrated high accuracies in predicting and assessing illnesses like depression and schizophrenia using diverse data sources such as predictive modelling and image analysis. AI suggests a potential benefit in overcoming diagnostic challenges in Psychiatry which often arise from the subjectivity and complexity of overlapping symptomology. Furthermore, technologies such as chatbots and novel monitoring system offer options for objective redefinition of mental illnesses and personalized treatments tailored to an individual's unique characteristics. However, ethical considerations of embodied AI in mental health care highlight also raises concerns regarding harm prevention and data ethics. **Conclusions:** The application of AI in the field of Psychiatry could pose as a promising answer to the challenges of resource limitation. Continued research efforts are needed to bridge the gap between AI innovation and clinical practice, ultimately enabling the effective integration of AI technologies to improve mental health outcomes and patient care.

Multidisciplinary management of melioidosis, acute renal failure, and metastatic prostatic carcinoma in hospital keningau: A case study on the syndemic intersection in a district hospital setting in Malaysia

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ABSTRACT

Introduction: Melioidosis is a potentially fatal tropical infection caused by *Burkholderia pseudomallei* which is commonly found in soil in endemic areas. We report a case of disseminated melioidosis presenting with sepsis, acute kidney injury, and metastatic prostatic carcinoma diagnosed in a Malaysian district hospital. **Case Description:** A 62-year-old Malay farmer with history of chronic kidney disease, hypertension and benign prostatic hyperplasia, presented with fever, cough, shortness of breath and loss of appetite for four days. On examination, he was febrile, tachycardic, tachypneic but hemodynamically stable. Investigations revealed leukocytosis, anemia, acute kidney injury, metabolic acidosis and elevated liver enzymes. Blood culture grew *Burkholderia pseudomallei*. Imaging showed heterogenous opacities in the right lung, hepatomegaly with liver lesions, prostatic enlargement with infiltration, and a right lentiform nucleus brain lesion. Liver biopsy confirmed metastatic prostatic carcinoma. The patient was treated with parenteral meropenem for 2 months followed by oral maintenance antibiotics. He required urgent hemodialysis and nephrostomy tube placement. Multidisciplinary care was provided by internal medicine, infectious disease and urology teams. **Discussion:** This case highlighted the importance for having high index of suspicion of melioidosis in patient with risk factors such as chronic kidney disease and occupational exposure to soil. This can enable prompt initiation of appropriate antibiotics. Carbapenems are the treatment of choice for the intensive phase, followed by oral eradication therapy. Melioidosis can cause disseminated infection with multi-organ involvement. Multidisciplinary approach should be practised although in district setting. In addition, the co-occurrence of melioidosis and prostate cancer warrants future research.

Case report on myotonic dystrophy type 1 (DM1) complicating pregnancy in a rural Malaysia setting: Complex challengers and neuromuscular insights

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ABSTRACT

Introduction: This abstract detail the intricate case of Myotonic Dystrophy Type 1 (DM1) diagnosed during her first pregnancy, illustrating the critical need for awareness and early diagnosis of neuromuscular disorders in maternal healthcare. Given the rarity of DM1, particularly in Malaysia, this case underscores the challenges and implications of managing such genetic conditions. **Case Description:** A 34-year-old Malay woman, gravida 1 para 0, was admitted to a district hospital at 32 weeks of gestation with symptoms indicative of pneumonia, with background history of bronchial asthma, polyhydramnios, and elevated creatinine kinase and LDH levels. Notably, she exhibited symptoms such as bilateral ptosis and muscle weakness, with a family history suggestive of a neuromuscular disorder. Electromyography (EMG) revealed motor and sensory axonal neuropathy with dive bomber myotonic discharges, leading to a DM1 diagnosis confirmed by genetic testing with TP-PCR. The pregnancy was complicated by fetal distress, necessitating emergency caesarean delivery. **Discussion:** The underdiagnosis in Malaysia should prompt a discussion on the necessity of improved screening and diagnostic capabilities, especially in rural areas. This case emphasizes the importance of early diagnosis and the application of consensus-based care recommendations for managing DM1 during pregnancy, addressing potential complications, and ensuring comprehensive postnatal care.

Empirical management of tuberculous pericarditis: An insightful case report on the resolution of pericardial effusion in a diabetic murut elderly

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ABSTRACT

Introduction: Tuberculous pericarditis (TBP) presents diagnostic and therapeutic challenges, especially in endemic regions such as Sabah, Malaysia. This case report explores the empirical management of TBP, highlighting the pivotal role of early intervention in the resolution of pericardial effusion in an elderly diabetic Murut patient. **Case Description:** A 71-year-old Murut woman with uncontrolled diabetes mellitus (HbA1c: 14.6%), hypertension, and dyslipidemia presented with persistent epigastric pain, orthopnea, and paroxysmal nocturnal dyspnea. Echocardiography revealed significant pericardial effusion of 40mm. The presence of high levels of adenosine deaminase (ADA) at 47.94 U/L and an abnormal increase in lymphocytes in the pericardial fluid resulted in the administration of empirical antituberculosis therapy for a duration of 6 months. The empirical treatment led to a significant clinical improvement and complete resolution of the pericardial effusion. **Discussion:** The successful resolution of pericardial effusion in this diabetic patient underscores the significance of a high index of suspicion for TBP in endemic regions. Elevated ADA levels were crucial for the empirical management decision, demonstrating the importance of integrating clinical judgment with diagnostic indicators. This case highlights the efficacy of antituberculosis therapy in the absence of microbiological confirmation and the necessity of a multidisciplinary approach in the management of TBP.

Anaesthetic management of a cut-throat surgery

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ABSTRACT

Introduction: Tracheal stenosis is a relatively rare complication of tracheal intubation and can present as a potentially life-threatening emergency. Tracheal resection with primary re-anastomosis is a well-defined life-saving procedure for severe tracheal stenosis refractory to balloon dilatation where anaesthetic management is crucial in ensuring a favourable outcome. These two cases aimed to report the overwhelming challenges in anaesthetic management during tracheal resection for severe tracheal stenosis. **Cases Description:** *Case 1:* A 39-year-old man with a complex medical history of liver cirrhosis, bronchiectasis and recurrent chest infections requiring multiple intubations presented with shortness of breath. He was diagnosed to have tracheal stenosis at the level of C5/C6. *Case 2:* A 45-year-old man with underlying major depressive and anxiety disorder required intubation for benzodiazepine overdose. He presented with worsening dyspnoea five months post-intubation and was diagnosed to have tracheal stenosis at the level of C7/T1. Both patients had successful tracheal resection and reconstruction surgeries with a comprehensive peri-operative management; pre-operative counselling, extensive outline of cross field ventilation and a multi-disciplinary post-operative care. Both patients were able to be weaned within 24 hours, extubated and had an uncomplicated post operative recovery period. **Discussion:** The success in maintaining anaesthesia and securing airway whilst aiming to provide a good surgical access in complex cases such as tracheal resection relies on extensive pre-operative planning, communication and teamwork between the anaesthetist and the surgeon. Cross field ventilation technique is a safe modality, proven to be successful in tracheal resection surgery negating the need of extracorporeal membrane oxygenation (ECMO) or cardiopulmonary bypass (CPB) despite the demonstrated success of these two alternatives Cross field ventilation technique is associated with less perioperative blood loss compared to surgery done utilizing ECMO or CPB.

The role of thalassaemic red cell in the mechanism process of hypercoagulable state in thalassemia intermedia and major patient

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ABSTRACT

Introduction: Thromboembolic events (TEEs) resulting from a hypercoagulable condition are a relatively new complication in beta-thalassemia patients. Many mechanisms are postulated for thrombosis events, such as RBC membrane disruption, chronic platelet activation and defect in the coagulation pathway. This study aims to compare the percentage of fragmented red blood cells (FRCs) and measured hypercoagulable markers (protein C, free protein S, anti-thrombin III (ATIII), and erythrocyte phosphatidylserine (PS)) exposure in patients with Thalassemia Intermedia, Thalassemia Major, and the control group. **Methods:** This prospective case-control study was conducted over 12 months in HUSM involving a total of 44 subjects: 21 patients from Major Thalassemia, 13 from Intermedia Thalassemia and 10 from the control group. The mean percentage of FRCs, protein C, free protein S, antithrombin III and erythrocyte PS exposure were measured and analysed. **Results:** The percentage of FRCs, and erythrocyte PS exposure was significantly lower (0.10 IQR 0.37 and 0.15 IQR 0.13 respectively) in controls as compared to Thalassemia Major groups (5.68 IQR 6.99 and 0.74 IQR 1.80) and Thalassemia Intermedia groups (6.25 IQR 5.55 and 0.22 IQR 1.74). The mean protein C and free protein S levels were significantly lower ($55.00 \pm 10.20\%$ and $65.77 \pm 8.66\%$ respectively) in Thalassemia Major and in Thalassemia Intermedia patients ($61.23 \pm 16.99\%$ and $61.11 \pm 14.65\%$ respectively) as compared to normal controls ($101.60 \pm 18.97\%$ and $95.12 \pm 23.57\%$ respectively), whereas mean antithrombin III levels were similar. **Conclusions:** The PS exposure, protein C, and protein S levels were significantly difference in the thalassemia groups than controls. This should push for the establishment of early prophylactic policy against TEE for the vulnerable groups.

Keywords: Thalassemia Major, Thalassemia Intermedia, Hypercoagulable, Fragmented RBCs, Phosphatidyl serine (PS) exposure, Protein C, Protein S, Antithrombin III

Role of cell activation parameters in predicting severity of COVID-19 patients in Kelantan

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ABSTRACT

Introduction: Timely recognition and prompt intervention of critically severe COVID-19 patient is important in the reduction of COVID-19 infection mortality rates. This study aimed to identify extensive haematological parameters (Hemoglobin, Neutrophils, NLR, IG, RET, etc) including cell activation parameters (AS-LYMP, RE-LYMPH, NEUT-RI, NEUT-GI) in predicting the severity of COVID-19 infection hence to expand its use as predictive biomarkers. **Methods:** This study was a prospective cohort study involving 118 COVID-19 patients admitted to Hospital Universiti Sains Malaysia and Hospital Raja Perempuan Zainab 2, from November 2022 till December 2023. For this study, blood samples from COVID-19 patients were collected in an EDTA vacutainer tube. Receiver operating characteristics were used to estimate the performance of the evaluated parameters in predicting the ICU admission. Logistic regression test was used to determine the association between cell activation parameters and patients' survival. **Results:** NEUT-RI and NLR emerge as the most promising predictor for ICU admission (AUC:0.719 and AUC:0.760 respectively), both with $p < 0.05$. NEUT-RI displayed borderline significance for patients' survival in the univariable model ($p = 0.050$) but was not significant in the multivariable model. Both NLR and IG emerged as significant predictors of the survival, maintaining their significance in univariable models ($p < 0.001$ and $p = 0.048$ respectively). Other cell activation parameters did not reveal significant associations in either model. **Conclusions:** NLR is the best marker for predicting ICU admission for COVID-19 patients, followed by NEUT-RI, Neutrophils and IG. NEUT-RI, NLR and IG are shown to be the most significant markers that helps in predicting patient's survival among COVID-19 patients.