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Embracing Evidence, Envisioning Eminence

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ABSTRACTS

001

THE EFFICACY AND SAFETY OF AUTOMATED CLOSED-LOOP VENTILATOR VERSUS CONVENTIONAL OPEN-LOOP VENTILATOR, A SINGLE-CENTRE PROSPECTIVE INTERVENTIONAL RANDOMIZED CONTROLLED TRIAL IN MECHANICALLY VENTILATED PATIENTS IN THE EMERGENCY DEPARTMENT (AVAC)

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Introduction: Closed-loop ventilators (CLVs) are advanced mechanical ventilation modes that automatically adjust settings based on real-time patient feedback. Unlike conventional open-loop ventilators (OLVs), which require continuous clinician adjustments, CLVs optimize ventilator parameters dynamically. This automation has the potential to alleviate the clinical cognitive load in overcrowded emergency departments (EDs), where resource constraints and high patient volumes challenge optimal ventilatory management.

Methodology: This single-center, prospective, interventional randomized controlled trial compared CLVs to OLVs in mechanically ventilated ED patients. Patients were randomized into CLV or OLV groups and ventilated for four hours. The primary outcome was the duration within optimal ventilatory parameters (tidal volume, end-tidal CO_2, oxygen saturation, plateau pressure). Secondary outcomes included manual adjustment frequency, arterial blood gas (ABG) parameters, vital signs, and clinical outcomes such as ED and ICU length of stay and mortality.

Results: Thirty-eight patients were enrolled, with 19 in each group. CLVs successfully maintained all four ventilatory parameters within optimal ranges, demonstrating efficacy comparable to OLVs. Notably, CLV provided better CO_2 regulation, maintaining optimal end-tidal CO_2 levels significantly longer than OLV ($p = 0.025$). Additionally, CLV required fewer manual adjustments (median 1.0 vs. 3.0, $p = 0.057$). No significant differences were observed in mortality rates, ED and ICU length of stay, or hospital duration, confirming the safety of CLVs with no added complications.

Discussion: CLV matched OLV efficacy by maintaining all key ventilatory parameters within optimal ranges while enhancing CO_2 control. The reduction in manual adjustments suggests a shift toward automation without compromising safety. Additionally, CLVs demonstrated improved hemodynamic stability, reducing the variability in mean arterial pressure over time. The ability to sustain optimal ventilation without increasing complications reinforces their reliability in high-acuity settings. These findings highlight CLVs as a viable alternative to conventional ventilators in the ED, potentially improving workflow efficiency and clinician focus on other aspect of critical patient needs.

Conclusion: CLVs offer a promising and potential alternative to OLVs, achieving comparable efficacy and safety. The clinician's role transitions from "presetting" to "targeting" ventilator parameters. This study serves as a foundation for integrating artificial intelligence into ED ventilatory management, paving the way for future innovations in critical care automation.

Keywords: closed-loop ventilator, open-loop ventilator, artificial intelligence, adaptive support ventilation

002

THE NECK PAIN THAT STOPPED A HEART: A CASE OF CERVICAL SPINAL CORD INFARCTION

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Introduction: Spinal cord infarction (SCI) is a rare but serious neurological emergency, accounting for only 0.3–1% of all strokes. It results from the disruption of blood flow to the spinal cord, leading to ischemia, infarction, and acute neurological dysfunction. The condition is often misdiagnosed due to its rarity and variable presentation. Anterior spinal artery infarction, the most common form, typically presents with acute motor deficits, sensory disturbances, and autonomic dysfunction. This case highlights a cervical anterior spinal cord infarction, emphasizing diagnostic and management challenges.

Case Description: A middle-aged female presented with sudden-onset severe neck pain, followed by progressive quadriparesis. Shortly after arrival, she developed respiratory distress and suffered cardiac arrest due to ventilatory failure. Cardiopulmonary resuscitation (CPR) was performed, achieving return of spontaneous circulation (ROSC). Clinical reassessment revealed respiratory muscle paralysis, necessitating prolonged ventilatory support. She also developed hypotension and bradycardia due to neurogenic shock, requiring inotropic support. Initial CT imaging of the brain and cervical spine was unremarkable. However, MRI of the spine confirmed anterior spinal artery infarction at the cervical region. The patient was managed with anticoagulation (low molecular weight heparin) and antiplatelet (aspirin), inotropic support, and intensive care admission.

Discussion: Diagnosing SCI can be challenging due to its rare and nonspecific presentation. Simple neck pain may be easily overlooked, yet in certain cases, it warrants thorough evaluation. In this case, the rapid progression to quadriparesis, respiratory failure, and shock created a diagnostic dilemma, mimicking stroke, spinal trauma, and pulmonary embolism. Emergency management is crucial. Ventilatory support is necessary for respiratory muscle paralysis, while inotropic support helps stabilize neurogenic shock. Early recognition prevents further deterioration. MRI is the gold standard for diagnosis but is not routinely performed in the ED. However, in cases with worsening neurological deficits, early MRI should be considered to guide the acute management.

Conclusion: SCI, though rare, can have devastating consequences, especially with cervical involvement. ED clinician plays a key role in optimizing ventilatory and inotropic support. This case underscores the importance of early suspicion, timely imaging, and aggressive supportive care particularly in managing the acute part of SCI in ED settings where immediate intervention can improve patient outcomes.

Keywords: spinal cord infarction, anterior spinal artery, spine stroke, anterior cord syndrome

003

A LETHAL MIX-UP: FATAL NEUROLOGICAL CONSEQUENCES OF ACCIDENTAL RODENTICIDE INGESTION

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Introduction: Bromadiolone, a potent rodenticide known as a superwarfarin, typically causes multi-organ hemorrhage in cases of acute poisoning. Rarely, acute intoxication can lead to neurological symptoms ranging from mild dizziness to life-threatening status epilepticus.

Case Description: A 19-year-old Myanmar male with no known medical history presented after the acute ingestion of rodenticide. The patient had ingested two sachets of bromadiolone-containing rodenticide, followed by episodes of vomiting and decreased consciousness. Patient was brought to emergency department 2 hours post-ingestion and initial assessment noted patient was restless, drowsy, exhibiting hypertension, tachycardia, tachypnea, and hypoxemia. Lung examination revealed transmitted sounds, but cardiovascular, abdominal, and musculoskeletal examinations were unremarkable. After 20 minutes arrival to ED patient experienced refractory generalized tonic-clonic seizures not resolving with anti-epileptic and further decrease in Glasgow Coma Scale(GCS) score, necessitating intubation for airway and cerebral protection. Initial laboratory investigations revealed significant leukocytosis, polycythemia, severe metabolic acidosis with hyperlactatemia, acute kidney injury, elevated creatine kinase, and transaminitis. Initial coagulation profile on arrival was within normal parameter and unremarkable radiological examinations. Activated charcoal was administered via ryles tube with aggressive hydration with 4 liters of normal saline and vitamin K infusion. Patient shows significant improvement of blood gas samples (initial pH of 6.915, HCO3 of 8.6 to pH of 7.290 HCO3 18.8) and improved lactatemia (initial lactate 24.0 to 1.4) after the initial resuscitation. Patient was further planned for plasma transfusion and MRI of the brain, however despite the initial positive response, the patient's condition deteriorated, leading to refractory seizures and ultimately death due to the severe tissue toxicity.

Discussion: Neurological manifestations, though rare, are life-threatening complications following acute bromadiolone intoxication. Wang et al. and Jia et al. reported cases where central nervous system symptoms ranged from mild to severe following acute intoxication, with both cases indicating acute demyelination in the corpus callosum. Immediate resuscitation and vitamin K administration are crucial for addressing both neuropathology and coagulopathy.

Conclusion: Early identification of toxic exposure is critical for diagnosis and improving patient outcomes. Vitamin K and plasma transfusion are effective treatments for countering both coagulopathy and central nervous system disorders resulting from bromadiolone poisoning.

Keywords: Rodenticide, status epilepticus, vitamin K

004

CRISPY BUT COSTLY: A RARE CASE OF ESOPHAGEAL PERFORATION FOLLOWING FISH CRACKER INGESTION

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Introduction: Esophageal perforation is a rare but life-threatening condition that can lead to mediastinitis. Causes include trauma, foreign body ingestion, or medical procedures. Early diagnosis and intervention are crucial in preventing severe outcomes. We present a case of esophageal perforation in a 31-year-old man following fish cracker ingestion, resulting in mediastinitis and required intensive monitoring.

Case Description: A 31-year-old Malay man with diabetes mellitus, gouty arthritis, and a history of chronic smoking presented with a four-day history of worsening throat pain, dysphagia and odynophagia after consuming fish cracker. His symptoms, initially accompanied by fever prompted an evaluation at a hospital, where leukocytosis was noted. He was discharged with symptomatic treatment but later sought treatment at SASMEC@IIUM's Emergency Department due to worsening dysphagia, bloating, and pooling of saliva. Flexible nasoendoscopy revealed right vallecular swelling and arytenoid oedema, without airway obstruction. A contrast-enhanced CT scan of the neck showed esophageal dilation with air pockets and wall thickening, suggestive of esophagitis with posterior mediastinitis. He was admitted for broad spectrum antibiotic. An esophagogastroduodenoscopy (OGDS) confirmed two esophageal perforations at 15–20 cm from the incisors and started on total parenteral nutrition feeding. A repeat OGDS revealed an esophageal laceration at 30 cm with granulation tissue. A nasojejunal (NJ) tube was inserted for enteral feeding but later became dislodged. A repeated CT scan during the admission showed resolution of esophageal dilation and mediastinitis. The patient improved clinically and was discharged on a soft diet. Subsequent OGDS post-discharge showed healing perforations, and barium swallow test a month later confirmed complete recovery.

Discussion: Esophageal perforation is a medical emergency requiring prompt diagnosis and intervention. In this case, ingestion of sharp-edged food likely caused mucosal injury, leading to perforation and mediastinitis. Conservative management with NJ tube feeding and close monitoring proved effective, highlighting the role of individualized and multidisciplinary care.

Conclusion: This case emphasizes the importance of considering esophageal perforation in patients with persistent dysphagia and throat pain after consuming hard or sharp food. Early imaging, timely referral, and a multidisciplinary approach are crucial for optimal outcomes, with conservative management being a viable option in selected cases.

Keywords: Esophageal perforation, mediastinitis

005

UNVEILING THE UNEXPECTED: A RARE CASE OF HYDROPNEUMOTHORAX MANAGED CONSERVATIVELY

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Introduction: Hydropneumothorax, the simultaneous presence of air and fluid in the pleural space, arises from trauma, procedural complications, bronchopleural or esophagopleural fistulas, and infections. Management typically involves intercostal drainage. We report a case of conservatively managed hydropneumothorax in a 35-year-old woman who returned from Makkah with a one-week history of cough and fever.

Case Description: A 35-year-old nulliparous woman with no comorbidities presented with shortness of breath, preceded by fever and cough. She had received a broad-spectrum antibiotic at a private clinic but experienced worsening symptoms. Her sister, an Umrah companion, was hospitalized with pneumonia but tested negative for MERS-CoV. On examination, auscultation revealed reduced air entry in the right lung. A chest radiograph revealed a right pneumothorax (2.5cm) with an air-fluid level, suggestive of pleural effusion and collapsed consolidation. Laboratory and infective markers were unremarkable. A respiratory physician initially considered Rocket chest drainage but abandoned it due to the lack of a safe puncture site based on ultrasound guided, minimizing the risk of parenchymal injury. The patient was admitted with nasal prong oxygen and broad-spectrum antibiotics. Serial chest radiographs showed resolution of pleural effusion and pneumothorax reduction (2.5cm to 1.5cm by day two). By day three, she was asymptomatic and had negative bacterial cultures. A prior chest radiograph (2023) revealed a pre-existing right pneumothorax (1.6 cm). She was discharged after five-days in stable condition. A follow-up CT thorax one-month later revealed a persistent right pneumothorax, a right upper lobe bulla, and bilateral fibrosis. Tumor markers were normal. She remains under annual respiratory follow-up.

Discussion: Hydropneumothorax requires careful evaluation to avoid misdiagnosis as consolidation. Management varies from conservative therapy to surgical intervention, depending on severity. Infection including tuberculosis, is a frequent cause and can lead to significant morbidity. The presence of a pre-existing pneumothorax suggests an underlying predisposition, necessitating long-term follow-up to monitor progression and prevent recurrence.

Conclusion: This case underscores the importance of recognizing hydropneumothorax and highlights the efficacy of conservative management in select patients. The detection of a pre-existing pneumothorax emphasizes the need for ongoing monitoring to assess underlying lung pathology and reduce recurrence risk.

Keywords: Hydropneumothorax

006

BRADYCARDIA IN THE BELLY: GASTROCARDIAC SYNDROME

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Introduction: Bradycardia is defined as heart rate of less than 60 beats per minute and is a common presentation in the emergency department. It is most commonly linked to cardiac related disorder. This case report highlights a rare case of bradycardia attributed to gastro-cardiac syndrome.

Case Description: A 52 years old, Malay, gentleman with no known medical illness, presented with severe epigastric pain, described as sudden onset, colicky in nature, and non radiating. He denied any chest pain or shortness of breath. His vital signs were normal. Abdominal examination revealed tenderness over epigastric region. Cardiovascular examination unremarkable. ECG revealed junctional bradycardia with heart rate of 45 beats per minute. Routine blood test including Troponin I was within normal range. He was given IV Atropine 0.5mg at ED and heart rate subsequently raised to 70 beats per minute. Patient was admitted to ward, and subsequent OGDS showed evidence of Grade I hiatal hernia with bile gastritis. He received standard treatment of gastritis that leads to resolution of the bradycardia.

Discussion: Gastrocardiac Syndrome or Roemheld Syndrome is defined as cardiovascular manifestation stimulated by gastrointestinal trigger such as mechanical, inflammation, or hormonal. Mechanical compression via hiatal hernia and gastric inflammation that causes stomach distension may lead to stimulation of vagal nerve that traverses the diaphragm between the chest and the abdomen. Subsequent stimulation of vagal nerve leads to reduced firing rate of sinoatrial node of the heart, manifesting as bradycardia. Gastric decompression with Proton Pump Inhibitors may address the inflammatory and mechanical irritation of the esophageal plexus leading to the resolution of bradycardia. Several case reports at various points have also demonstrated the correlation between gastrointestinal symptoms and vagal nerve stimulation induced bradycardia

Conclusion: This case underlined the importance for physician to consider non cardiac causes when confronted with unexplained bradycardia in patients without other cardiac symptoms. Understanding the possible association between bradycardia and gastrointestinal disorder could help in determining the correct diagnosis and treatment as well as preventing unnecessary cardiac assessment for the patient especially in resource-limited emergency setting.

Keywords: Bradycardia, vagal nerve, hiatal hernia, proton pump inhibitor

007

A HEAD FULL OF AIR: THE PERILS OF TENSION PNEUMOCEPHALUS

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Introduction: Tension pneumocephalus is an uncommon yet life-threatening condition caused by the accumulation of air within the cranial cavity, leading to a significant increase in intracranial pressure. This condition arises from a one-way valve where air enters the cranial cavity through a dural tear and becomes trapped, leading to mass effect on brain parenchyma. Post-skull-based surgery and neurosurgical intervention may show this as a late complication; however, acute blunt head trauma can cause a similar condition.

Case Description: We report the case of a 15-year-old boy who presented with severe headache, retrograde amnesia, vomiting, and rhinorrhoea after allegedly falling from the second floor of his hostel. Upon arrival at a district hospital, he exhibited signs of increased intracranial pressure with a subsequent decline in consciousness level. Initial skull X-ray revealed extensive pneumocranium, prompting urgent referral to a tertiary centre. Cranial CT imaging confirmed a basal skull fracture and extensive bi-frontal pneumocephalus with the characteristic "Mount Fuji" sign, exerting a significant mass effect on the brain. The neurosurgical team performed emergent decompression and dural repair, resulting in clinical improvement.

Discussion: This case underscores the critical importance of early recognition, particularly in district hospital settings with limited resources. A plain skull x-ray with extensive pneumocranium can raise suspicion of this potentially life-threatening condition and facilitate prompt intervention. Characteristic CT findings include the pathognomonic "Mount Fuji" sign—where air accumulates over the anterolateral aspects of the frontal lobes, widening the interhemispheric fissure and causing bilateral frontal lobes compression. Additional findings such as the air bubble sign and pneumoventricle indicate air leaking from the fractured skull, increasing the risk of air entrapment. This mechanism can create a one-way valve effect, leading to tension pneumocephalus, analogous to tension pneumothorax in thoracic trauma.

Conclusion: Awareness and early recognition of tension pneumocephalus are crucial for enabling timely intervention in this rare but life-threatening condition. A skull X-ray can be a valuable diagnostic tool in a hospital without an advanced imaging facility, aiding early detection and referral, preventing fatal outcomes, and improving neurological prognosis.

Keywords: Tension pneumocephalus, Mount Fuji sign

008

"A TALE OF TWO SYNDROMES: CAN OKRA AND LONG BEANS TRIGGER DRESS OR STEVENS-JOHNSON SYNDROME?"

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Introduction: Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) syndrome is a rare but potentially fatal hypersensitivity reaction, often mistaken for Stevens-Johnson Syndrome (SJS) or Toxic Epidermal Necrolysis (TEN) due to overlapping symptoms

Case Description: A 27-year-old gentleman, presented with a one-month history of a generalized erythematous rash accompanied by pain, pruritus, and fever. The patient, reported onset after consuming okra and long beans but denied medication or traditional remedy use. On examination, he was alert, with stable vitals and generalized erythematous skin lesions, including mucosal involvement. Initially diagnosed with SJS or TEN. Dermatology consultation suggested mycoplasma-induced rash with mucositis, later revised to erythema multiforme secondary to suspected mycoplasma infection, complicated by DRESS syndrome based on laboratory findings.

Discussion: DRESS syndrome, a rare but potentially fatal hypersensitivity reaction, presents a diagnostic conundrum due to its clinical overlap with SJS and TEN (Husain et al., 2013). This case highlights the nuanced interplay between clinical vigilance, diagnostic uncertainty, and the socio-economic challenges that impact patient outcomes. The patient's clinical presentation, marked by a prolonged rash, mucosal involvement, and systemic features, initially suggested SJS/TEN. However, the subsequent recognition of systemic inflammation and suspected infectious etiology redirected the diagnosis to erythema multiforme complicated by DRESS syndrome. The delayed onset of symptoms, a hallmark of DRESS, underscores the importance of understanding its pathophysiology, a complex immune-mediated response often triggered by infections or medications (Begon & Roujeau, 2004) DRESS syndrome can be presented without eosinophilia despite its name as mentioned by L. Reyna Tobias et al., 2023 (R.Tobias, 2023). In this case, the patient eosinophil count has been zero for 2 consecutive samples but the diagnosis was still established as DRESS.

Conclusion: This case highlights the complexities in diagnosing DRESS syndrome, when clinical features overlap with more commonly recognized conditions such as SJS and TEN. Atypical presentation without eosinophlia does not exclude DRESS and the diagnostic process was further complicated by the absence of a clear drug trigger, emphasizing the need for heightened awareness of infectious etiologies. Early identification and management with corticosteroids and antibiotics are crucial.

Keywords: OKRA SJS TEN Eosinophils

009

WHEN TREATMENT BECOMES TROUBLE: A CASE OF TRIHEXYPHENIDYL TOXICITY

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Introduction: Trihexyphenidyl or commonly known as Artane, is a muscarinic (M1) receptor antagonist which increases dopaminergic activity by inhibiting its reuptake.1 It is commonly used in Parkinson's disease and to relieve neuroleptic-induced extrapyramidal symptoms.2,3 Adverse effects in overdose include irritability and psychomotor agitation. We report a rare occurrence of non-accidental trihexyphenidyl ingestion at our emergency department (ED).

Case Description: A 26-year-old lady with underlying schizoaffective disorder presented to ED for trihexyphenidyl ingestion. The trihexyphenidyl tablets was her own prescription which was given to treat her extrapyramidal symptoms and she took a total dose of 20mg at 8pm with suicidal intention. She presented to the ED at 1 hour post ingestion, complaining of dizziness and dry mouth. She had mild abdominal discomfort with no active gastrointestinal losses. Upon arrival, the patient was alert and able to provide good history. Her vital signs were heart rate of 64 beats per minute, blood pressure of 104/64mmHg, saturating well under room air and afebrile. Her blood glucose was 5.1. Pupils were dilated 4mm bilaterally and reactive. The patient was given activated charcoal and blood investigations taken showed normal full blood count, renal and liver profiles. Serum acetaminophen was taken to rule out possible co-ingestion and it was within normal parameters. Urine test was not remarkable. Patient was well throughout observation in ED and was admitted. She was discharged well after 24 hours observation in ward.

Discussion: Trihexyphenidyl is the most common anticholinergic drug reported for substance abuse due to its euphoric effect.1,3,4 The daily recommended dosage is 15mg per day and adverse effects of this drug are dose-dependent. Manifestation of anticholinergic toxidrome and psychosis is observed at high doses.3 While it is uncommon, a fatal case was reported in 2011 after overdose ingestion.5 The treatment for toxicity is supportive, and it is also important to rule out possibility of co-ingestion of other drugs such as tricyclic antidepressants, antihistamines and alcohol consumption as it may potentiate toxicity effects.1

Conclusion: Trihexyphenidyl overdose, though rare, poses risk of severe toxicity. This case underscores the need for rapid recognition, vigilant monitoring and psychiatric assessment in emergency setting to prevent life-threatening complications and recurrence.

Keywords: trihexyphenidyl, toxicity

010

ASCARIASIS, NEGLECTED TROPICAL DISEASE, RARE CAUSE OF UPPER GASTROINTESTINAL BLEED

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Introduction: Ascariasis, caused by the nematode Ascaris lumbricoides, is a preventable helminthic infection, particularly in tropical and subtropical regions with inadequate sanitation. It commonly affects humans who get contact with parasitic eggs. Adult worms can live in the human gastrointestinal tract for years. While many remain asymptomatic, heavy infestations lead to significant gastrointestinal complications, including rare instances of upper gastrointestinal bleeding. Hence, this is a case of UGIB with Ascaris infestation.

Case Description: A 13-year-old Orang Asli boy presented with history of lethargy, fever, and dark brown vomitus for three days, along with loose stools for one day. Upon reviewed in Emergency Department, the patient was alert, appeared pale and malnourished, with melena upon digital rectal examination. He was prescribed with IVI pantoprazole and started with packed cell transfusion. Abdominal X-ray showed faecal loaded with colitis features. Abdominal ultrasound was suboptimal due to bowel gas obscuration. On day 3 of admission, the patient expectorated a worm identified as Ascaris lumbricoides. Patient started on antihelmintic once daily for a week and discharged in stable condition on day 11.

Discussion: Gastrointestinal infestation with Ascaris lumbricoides is found in tropical countries, particularly in areas with poor sanitation. Severe infestations cause a series of illnesses, including intestinal obstruction, pancreatitis, and intussusception. It is uncommon for patient presented with hemorrhagic symptoms, as the helminth itself lacks suckers. UGIB caused by Ascaris infestation is uncommon but can occur through direct mucosal injury, vascular compromise and associated complications. In this case, diagnosis was confirmed as the patient expectorated the worm. Yet, it remains debatable whether the upper GI bleed in this case caused by the helminth or co-occurrence with another species, as the stool examination for ova and cysts was negative, and no endoscopic evidence available.

Conclusion: This case highlights the importance of considering parasitic infections as a differential diagnosis in unexplained GI bleeding, particularly in endemic areas. The role of the emergency department (ED) in the initial management is crucial in stabilizing the patient. Early recognition of potential parasitic involvement, despite absence of stool ova and cysts, allowed for timely initiation of antiparasitic treatment.

Keywords: Ascariasis, orang asli, upper gastrointestinal bleed

011

THE EFFECTS OF PATIENT-PHYSICIAN INTERACTION ON ANXIETY LEVELS AMONG PATIENTS ATTENDING THE EMERGENCY DEPARTMENT

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Introduction: Good patient-physician interaction may impact a patient's anxiety. This study evaluated patient-physician interaction and its association with anxiety levels among emergency department (ED) patients.

Methodology: The study included adult patients aged 18 years and older with low-acuity presentations (Malaysia triage scale levels 4 and 5). Satisfaction with the patient-physician interaction was assessed using the 11-item Malay-translated Medical Interview Satisfaction Scale-21(MIMS-21), referred to as the 'Skala Kepuasan Interaksi Pelanggan-11 (SKIP-11)' after the consultation. Patients' anxiety was assessed by the self-administered State-Trait Anxiety Inventory (STAI) questionnaire two times: upon ED arrival (baseline) and at the end of their ED stay.

Results: The mean SKIP-11 score was 46.51 ± 5.03, with 60.7% of participants reporting positive satisfaction (SKIP score> 44) regarding physician interaction. Among the subscales, 57.3% reported a positive experience in distress relief, 55.6% in rapport, and only 30.7% in interaction outcomes. Patients who did not require further referral were 1.6 times more likely to report positive satisfaction (OR 1.61, 95% CI: 1.002-2.596, $p<0.05$). Similarly, shorter consultation times were significantly associated with positive satisfaction (OR 0.993, 95% CI: 0.989-0.996, $p<0.05$). There was a significant reduction in anxiety at the end of the ED stay, decreasing to 31.9% from the baseline ($p<0.001$). However, despite this notable decline in anxiety levels, none of the SKIP-11 scores or subscales were significantly associated with anxiety trends.

Discussion: These findings emphasise the crucial role of effective communication in fostering positive patient-physician interaction. While satisfaction alone may not directly impact anxiety reduction, maintaining clear, efficient, and patient-centred communication remains essential for enhancing the patient experience and overall health outcomes.

Conclusion: This study demonstrates a significant reduction in anxiety levels; however, this decrease was not significantly associated with perceived satisfaction with the patient-physician interaction. Factors linked to higher satisfaction included shorter consultation times and the absence of referrals to other specialities.

Keywords: Anxiety, emergency department, patient-physician interaction

012

IMPACT OF ADDING PRERECORDED VIDEO DISCHARGE INSTRUCTIONS IN EMERGENCY DEPARTMENT ON PATIENTS' KNOWLEDGE: A SYSTEMATIC REVIEW AND META ANALYSIS

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Introduction: Nonadherence to aftercare instructions and misunderstanding discharge instructions in the emergency department (ED) present significant challenges in healthcare delivery. Video discharge instructions (VDIs) have emerged as a promising tool to improve patient comprehension and recall of essential information. This study aims to explore the impact of adding VDI on patients' knowledge of discharge instructions in the ED through a systematic review and meta-analysis.

Methodology: The research adheres to the PRISMA guidelines and includes a systematic review and meta-analysis of relevant studies from 2010 to 2023, using databases like PubMed and Scopus. The studies were selected through a multi-step process, and data extraction was performed using specialized software. The risk of bias was assessed using the Cochrane tool.

Results: This systematic review included eight studies with a total of 1,473 participants. Five studies were randomized controlled trials (RCTs), two were prospective studies, and one was quasi-experimental. Seven studies had both experimental and control arms and were included in the meta-analysis, while one study without a control arm was excluded. The analysis found that VDI significantly improved participants' knowledge of discharge instructions compared to their respective control (SMD = 0.89; 95% CI = 0.37 – 1.41; p = 0.0007). Participants also showed higher satisfaction with VDI compared to their respective control, though this effect was small and not statistically significant (SMD = 0.54; 95% CI = -0.23 – 1.32; p = 0.17). Four studies had a low risk of bias, and four had a high risk, primarily due to attrition bias and incomplete outcome data. The overall quality of evidence was rated as moderate.

Discussion: Effectiveness of VDIs: VDIs significantly improve patient understanding, which is crucial for ensuring adherence to post-discharge instructions. Patient Satisfaction: While the increase in satisfaction with VDIs was noted, the statistical significance was not strong, suggesting that the perceptual benefits of VDIs might not be as pronounced as their educational benefits. Research Implications: The findings support further research into optimizing VDI content and delivery to maximize their effectiveness. Future studies could explore different VDI formats and their impact on various patient demographics.

Conclusion: VDIs are more effective than traditional discharge instructions in improving patient knowledge in ED settings. The results suggest potential benefits of integrating VDIs into standard practice to enhance patient education and care outcomes.

Keywords: video discharge instruction, emergency department

013

BLOWN OUT: NOSE BLOW MEETS ORBIT

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Introduction: Orbital emphysema results from an abnormal accumulation of air within the orbit or eyelid due to a newly created sino-orbital communication. This case report describes a rare instance of traumatic orbital emphysema triggered by nose blowing in a patient who sustained facial trauma in a motor vehicle accident.

Case Description: A 33-year-old Malay male presented to the emergency department three hours after a motor vehicle accident. He had lost control of his motorcycle and fell face-first onto the ground. Post-accident, he developed bilateral epistaxis and a left nasal congestion. . In an attempt to relieve the congestion, he forcefully blew his nose, which resulted in sudden right periorbital swelling. The epistaxis resolved upon arrival to the ED. On examination, there was right infraorbital swelling with crepitus and a tender nasal septum. There was no diplopia or ophthalmoplegia, and the left orbital was normal. CT scan revealed a small punctate hemorrhage in the frontal lobe, minimal pneumocranium, and haemosinus in the right maxillary and ethmoid sinuses. Fractures were identified in the bilateral lamina papyracea, right maxillary sinus walls, orbital floor, and nasal structures. Air pockets were noted in the right medial extraconal space and periorbital soft tissue. No extraocular muscle entrapment was present. The patient was admitted for 24-hour observation. At a one-week follow up, the right periorbital swelling has resolved without sequalae, and the facial fractures were managed conservatively.

Discussion: Traumatic orbital emphysema is commonly associated with fractures of the orbital floor or sinuses. A less common cause is forceful nose blowing, which increases intranasal pressure, forcing air into the orbit and causing swelling. Damaged orbital tissues, particularly disrupted fatty tissue can block the air from exiting the orbit, thus acting as a one-way-valve. Clinically, orbital emphysema has a high specificity of 99.6% and a positive predictive value of 98.4% for an orbital fracture.

Conclusion: Orbital emphysema is a rare complication of facial fractures. The contribution of forceful nose blowing to its development has only been documented in a few cases. Early recognition and management are crucial to preventing complications, such as orbital infections and optic nerve compression.

Keywords: Traumatic orbital emphysema, nose blowing, orbital fracture, facial trauma

014

RETROSPECTIVE ANALYSIS OF APPROPRIATENESS IN ABDOMINAL RADIOGRAPH UTILIZATION IN A DISTRICT HOSPITAL EMERGENCY DEPARTMENT

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Introduction: Abdominal radiographs (AXRs) are frequently performed in the Emergency and Trauma Department (ETD), yet their clinical value remains uncertain. Adherence to the Royal College of Radiology (RCR) iREFER Guidelines for appropriate AXR utilization remains poor, potentially leading to unnecessary imaging.

Methodology: This retrospective chart review evaluated 423 patients who underwent abdominal radiography at the Emergency and Trauma Department of Hospital Bintulu between January 1 and December 31, 2023. The appropriateness of AXR indications was determined based on the 8th Edition iREFER guidelines for plain abdominal radiography. Appropriate indications included suspected bowel obstruction, acute exacerbation of inflammatory bowel disease, palpable abdominal mass, constipation, acute or chronic pancreatitis, ingestion of sharp or toxic foreign objects, ingestion of small smooth objects (e.g., coins, batteries), and blunt or penetrating abdominal trauma.

Results: Among the abdominal radiographs (AXRs) performed, only 27.2% met the appropriateness criteria outlined in the referenced guidelines. ETD physicians had lower odds of ordering inappropriate AXRs than surgical or other departments (OR: 0.382, 95% CI: 0.204–0.715). Increasing patient age was associated with a higher likelihood of inappropriate AXR requests (OR: 1.013, 95% CI: 1.003–1.023). However, no significant association was observed between inappropriate AXR ordering and either patient gender or the requesting clinician's level of experience.

Discussion: Our findings indicate that most abdominal radiographs (AXRs) performed in the Emergency and Trauma Department (ETD) were not appropriately indicated. ETD physicians demonstrated greater adherence to AXR guidelines and awareness of its limitations compared to other medical disciplines. Notably, the higher rate of inappropriate AXR requests among older patients suggests a more lenient approach to imaging in adults than in younger populations. Contrary to expectations, clinician experience did not reduce inappropriate AXR ordering, highlighting a persistent gap in guideline adherence and a potentially ingrained culture of reliance on AXR despite its limited diagnostic utility.

Conclusion: This study highlights the overutilization of abdominal radiography, leading to unnecessary hospital expenditures and unjustified radiation exposure, with AXR delivering approximately 40 times the radiation dose of a chest radiograph. Targeted training for junior and senior physicians is essential to enhance adherence to evidence-based guidelines and optimize AXR utilization.

Keywords: Abdominal radiograph, appropriateness, retrospective analysis

015

TRAUMA-INDUCED UTERINE RUPTURE: A RARE BUT FATAL OBSTETRIC EMERGENCY

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Introduction: Uterine rupture is a rare but potentially life-threatening obstetric emergency. The prevalence of trauma-related uterine rupture is low but has been documented in cases of severe blunt abdominal trauma. It most commonly occurs in the third trimester, with 80% of uterine rupture cases reported between weeks 28 and 36 of pregnancy. The occurrence of uterine rupture in the first and second trimesters is extremely rare; however, it may occur in the presence of risk factors such as a scarred uterus. Here, we report a case of uterine rupture at 18 weeks of pregnancy following a motor vehicle accident. This case highlights a rare but serious complication of severe abdominal trauma during pregnancy.

Case Description: Miss NH, a 20-year-old woman with a history of miscarriage in 2023, was brought by ambulance to the emergency department at Hospital Klang following a motor vehicle accident. The motorcycle skidded, and as the pillion rider, she was thrown off and struck a tree by the roadside. She presented to the emergency department in Class IV hypovolemic shock. The patient exhibited poor perfusion, she was hypotensive and tachycardic. Her abdomen was distended, tense, and guarded. A pelvic X-ray revealed bilateral superior and inferior pubic rami fractures. A bedside extended focused assessment with sonography for trauma (EFAST) scan showed massive free fluid and disruption of the uterine wall, with the fetus found adjacent to the liver. The patient remained hemodynamically unstable despite aggressive resuscitation. The surgical and obstetrics and gynecology (O&G) teams were activated, and the patient was immediately taken for exploratory laparotomy and uterine repair. Intraoperative findings revealed active bleeding from a laceration on the right anterolateral uterine wall and slow oozing from the left utero-ovarian ligament. The final postoperative diagnosis was uterine rupture and fresh stillbirth. The patient was transferred to the intensive care unit (ICU) for further management. Unfortunately, she succumbed to her injuries on day three post-trauma.

Discussion: Uterine rupture is a rare but life-threatening condition that can result in the fetus entering the peritoneal cavity. Risk factors include gestational age, trauma severity, and pre-existing uterine conditions. In this case, the patient had a prior cesarean section, a high-impact injury, and significant abdominal injuries with bilateral pubic rami fractures, all of which raised the risk of uterine rupture.

Conclusion: This case highlights the importance of early pregnancy recognition in trauma patients. The possibility of rare complications such as uterine rupture should always be considered, particularly in women of reproductive age with significant injury and risk factors such as a history of cesarean section.

Keywords: uterine rupture, abdominal trauma, pregnancy

016

FROM LIMP TO LEUKAEMIA: A DIAGNOSTIC TWIST IN PAEDIATRIC EMERGENCY MEDICINE

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Introduction: Musculoskeletal complaints are common in paediatric emergency settings and are often attributed to trauma or benign orthopaedic conditions. However, leukaemia, the most common childhood malignancy, can present with musculoskeletal symptoms. We report a case of an atypical presentation of acute leukaemia in a paediatric patient.

Case Description: A previously healthy 3 year old Orang Asli boy presented with progressive bilateral lower limb pain and difficulty ambulating for three weeks following a minor fall. He had no fever, bruising, or systemic complaints. On examination, he was alert, afebrile, and mildly pale but haemodynamically stable. Neurological assessment showed normal lower limb tone, reflexes, and sensation, but reduced muscle power (3/5 bilaterally). His gait was antalgic. No meningeal signs, cranial nerve deficits, or respiratory distress were observed. Initial differentials included trauma related injuries, rickets, and spinal pathology. However, radiographs were unremarkable. CBC workup revealed pancytopenia (WBC 122,000/mm3, Hb 2.6 g/dL, platelets 22,000/mm3). Peripheral smear showed 98% blasts, highly suggestive of acute leukaemia. The oncology team was referred immediately and confirmed acute lymphoblastic leukaemia (ALL) via bone marrow aspiration.

Discussion: Leukaemia can present with limb pain due to leukemic cell infiltration, periosteal elevation, or bone infarctions. In this case, lower limb weakness was likely due to spinal cord compression or leukostasis. This atypical presentation highlights the importance of considering haematologic malignancies in children with unexplained limb pain and weakness, even in the absence of fever, weight loss, or bleeding tendencies.

Conclusion: Early recognition of atypical presentations of ALL in paediatric patients is crucial.This case highlights to have high index of suspicion in patients having persistent limb pain or weakness, as these could indicate a sinister pathology as leukaemia in this case.

Keywords: Paediatric emergencies, acute limb weakness, atypical leukaemia presentation, critical illness recognition

017

DATA-DRIVEN TRIAGE: EXPLORING AI MODELS FOR PREDICTING EMERGENCY DEPARTMENT OUTCOMES

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Introduction: Machine learning has become a significant trend in the healthcare sector recently, and its capabilities appear promising. This study aims to develop and validate four machine learning models in predicting triage outcomes in emergency departments.

Methodology: A retrospective cohort study utilising electronic health records in the emergency department of a teaching hospital, with four machine learning models to be evaluated: Random Forest (RF), Gradient Boosted Decision Tree (GBDT), K-Nearest Neighbors (KNN), and XGBoost.

Results: A total of 312 emergency patient records were acquired. The scores for accuracy, precision, recall, and F1-score were 100% for RF, GBDT, and XGBoost. The models are also able to predict a few classes accurately, potentially improving the triage process. Respiratory rate has a high impact on the decision in triaging to actual_class_5, which is the red zone (resuscitation), with an R-value of 0.36. Diastolic blood pressure and systolic blood pressure have a high correlation, as evidenced by the R-value, 0.61. Respiratory rate has a negative impact on oxygen saturation and a positive impact on body temperature, with R-values -0.49 and 0.32, respectively.

Discussion: On the performance tests of accuracy, precision, recall, and F1-score, the models (RF, GBDT and XGBoost) scored 100% for each of the tests, indicating a perfect classifier. This result indicates the overall ability of the model to improve triage by classifying accurately, as supported by Aljubran et al.'s (2023) statement that machine learning is a promising tool for improving triage decision-making. According to Elhaj, Achour, Tania, & Aciksari, (2023), in these performance tests, the models (KNN and RF) achieved the highest score overall from 9 models trained by the researchers with an accuracy of 89.1% and 88.5%, precision of 89.0% and 88.7%, recall of 89.1% and 88.7%, and F1-score of 89.0% and 88.6%, while the CatBoost model (accuracy = 0.930, recall = 0.915, precision = 0.930, F1-score = 0.930) is clinically excellent to be developed as suggested by Aljubran et al., (2023).

Conclusion: Machine learning models can accurately triage patients when properly trained, covering the possible variations of variables presented during triage. A prospective study is needed to evaluate the models' ability further.

Keywords: Machine learning; ensemble learning; triage; emergency department

018

I CAN'T BREATHE, MY BELLY IS TOO BIG. A CASE REPORT OF RESPIRATORY COMPROMISE FOLLOWING GROSS CONSTIPATION

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Introduction: Chronic constipation,if left untreated can lead to fecal impaction and fecaloma formation, which may result in complications such as intestinal obstruction and respiratory failure. We present the case of a young adult who developed respiratory compromise due to long-standing constipation, highlighting the challenges and treatment involved.

Case Description: 16 year-old boy with history of constipation since childhood, intermittently managed with laxatives presented with progressive abdominal distension, pain and worsening shortness of breath for 2 months with no bowel movement during that period. On examination, he was afebrile, normotensive but tachycardic(120bpm) and tachypneic(RR 40),with marked respiratory muscles recession and 100% saturation on high-flow oxygen. His abdomen was grossly distended, tense and digital rectal exam revealed impacted stool. Chest and abdominal radiographs showed marked elevation of both hemidiaphragm, faecal loaded with dilated large bowel leading to a diagnosis of intestinal obstruction due to Hirschsprung's disease. After unsuccessful first attempt of treatment (ryles tube, enema and manual evacuation),he remained in respiratory distress thus required intubation which was performed with aortocaval displacement technique. However he had difficult lung ventilation secondary to diaghragmatic splinting. He was then urgently transferred for CT and surgical decompression.

Discussion: Faecal impaction as a result of constipation can lead to potentially fatal complications, including respiratory compromise due to the mass effect. Many patients presented late with complications, often due to ignorance, lack of knowledge and long-term treatment of chronic constipation. Our patient had no significant bowel movement for past 2 months which was caused by faecoloma in the large bowel leading to abdominal distension. The extrinsic upward pressure imposed on the diaphragm by a full bowel can restrict the diaphragm resulting in inadequate lung expansion limiting alveolar gas filling and leading to a ventilation-perfusion mismatch causing respiratory compromise. Optimal positioning and manual leftward displacement of the abdomen for aortocaval decompression is essential before intubation. This improves venous return, blood pressure, and perfusion, which is crucial for maintaining oxygenation and circulation during the procedure.

Conclusion: Correlation between constipation and respiratory compromise is rarely discussed. This rare case emphasizes the need for prompt treatment of constipation as neglecting it can lead to serious complications. As emergency professionals, our primary focus is on initial stabilization prior to definitive management thus a clear understanding of the disease's pathophysiology is crucial for improving treatment outcomes.

Keywords: Constipation, respiratory, faecoloma

019

BEYOND THE INFARCT: CASE SERIES OF FREE WALL RUPTURE AFTER ACUTE MYOCARDIAL INFARCTION

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Introduction: Acute myocardial infarct (AMI) causes the loss of functioning ventricular wall. Free wall rupture (FWR) is a catastrophic mechanical complication of AMI, typically occurring within the first week. Studies have reported an incidence rate of 1 – 4% in AMI patients.

Case Description: We describe three cases of AMI patients who were diagnosed with cardiac tamponade due to suspected FWR. Emergency pericardiocentesis was performed in two cases; however, both patients succumbed to death. One case managed to undergo surgical intervention and improved postoperatively. Case 1: A 64-year-old female with acute inferior MI progressed to cardiac arrest. Despite hemodynamic support, she remained hypotensive and was transferred for primary PCI. An urgent median sternotomy and clot evacuation were performed, and she improved postoperatively. Case 2: A 79-year-old male with acute anteroseptal MI experienced cardiac arrest upon arrival at IJN for primary PCI. FoCUS revealed pericardial effusion, and emergency pericardiocentesis drained 80 ml of blood. Case 3: A 58-year-old male was diagnosed with acute extensive anterior myocardial infarction Killip I and was given streptokinase. He was transferred to IJN for further management. However, he developed PEA cardiac arrest while awaiting admission. During CPR, 200 ml of blood was drained by pericardial tapping.

Discussion: Clinical presentation of FWR can be sudden and severe, often leading to rapid hemodynamic deterioration. Symptoms may include recurrent or persistent chest pain, syncope and worsening dyspnea. Studies suggest risk of rupture is higher in patients receiving thrombolytic agents compared to percutaneous coronary intervention. Early recognition and prompt intervention are crucial. Emergency pericardiocentesis is indicated if fluid is visible. Diagnosis is improved by bedside focus ultrasound availability. Immediate cardiac surgery should be considered, however, most of the patients do not survive the acute phase due to the pulseless electrical activity and cardiogenic shock.

Conclusion: FWR remains a rare but fatal complication of AMI despite emergency interventions. Early detection using bedside ultrasound and surgical consideration are important, but survival remains challenging.

Keywords: Free wall rupture, acute myocardial infarction, cardiac tamponade, pericardiocentesis

020

DELAYED SYSTEMIC TOXICITY AND FATAL MULTI-ORGAN FAILURE FOLLOWING MULTIPLE BEE STINGS: A CASE REPORT

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Introduction: Hymenoptera venom contains biologically active compounds and enzymes, causing localized reactions, anaphylaxis, or, in multiple stings, toxic shock syndrome with systemic complications, occasionally leading to fatal outcomes. Understanding its pathophysiology is essential for clinical management.

Case Description: A 65-year-old male with a history of hypertension, diabetes, and chronic kidney disease presented to the emergency department after sustaining over 50 bee stings on his bilateral hands, back, and scalp. Initially hemodynamically stable, he developed acute respiratory distress and hemodynamic instability nine hours post-envenomation, accompanied by desaturation on room air. Bilateral lung crepitations were noted, and point-of-care ultrasound revealed a generalized B-profile without pleural effusion. Laboratory findings indicated acute kidney injury, acute liver failure with transaminitis, rhabdomyolysis, and severe lactic acidosis. He was subsequently intubated for airway protection and initiated on N-acetylcysteine therapy for non-paracetamol acute liver failure, triple inotropic support, and continuous renal replacement therapy (CRRT). At 26 hours post-envenomation, laboratory results demonstrated worsening multi-organ failure, coagulopathy, and hemolysis. Despite 12 hours of CRRT and maximum inotropic support, his condition deteriorated, and he succumbed 33 hours post-envenomation. This case underscores the rapid progression and high mortality risk of severe massive bee envenomation-induced multi-organ dysfunction syndrome (MODS).

Discussion: Fatal bee sting cases are rare but can result from anaphylaxis or delayed systemic toxicity. While anaphylaxis leads to sudden fatality, delayed inflammation (24–48 hours post-envenomation) due to melittin, phospholipase A2, hyaluronidase, histamine, and apamin may cause multi-organ failure, rhabdomyolysis, and coagulopathy. Aggressive hydration is essential to prevent acute kidney injury (AKI). Severe acute respiratory distress syndrome (ARDS) may necessitate advanced airway management or extracorporeal membrane oxygenation (ECMO). Early recognition and timely organ support are critical in managing severe envenomation-induced complications, as demonstrated in this case.

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Keywords: Bee envenomation, multi organ dysfunction syndrome

021

TURNS OUT, STIFFNESS ISN'T JUST FOR ACTION FIGURES

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Introduction: Tetanus, known as lockjaw, is a severe bacterial infection caused by Clostridium tetani, leading to intense muscle spasms and potentially fatal complications. Malaysia's vaccination program has made it rare in the country, with the vaccine considered nearly 100% effective. This case report highlights a rare occurrence of tetanus in a vaccinated individual, emphasizing the need for continued awareness and risk mitigation.

Case Description: A 78-year-old Malay man with no known medical conditions presented with jaw clenching and muscle stiffness. A week earlier, he had received a booster shot of anti-tetanus toxoid after sustaining multiple forehead lacerations and a second-degree abdominal burn from a fall. Examination revealed risus sardonicus, generalized hypertonia, poor hygiene, and inadequate wound care. His vital signs were stable initially, but he later developed oxygen desaturation, requiring supplemental oxygen. Treatment included intramuscular human tetanus immunoglobulin (TIG), intravenous benzodiazepines, and antibiotics. Laboratory tests indicated acute kidney injury with rhabdomyolysis. He was intubated for airway protection and admitted to the ICU. However, he later succumbed to complications of his condition.

Discussion: Several factors may explain why clinical tetanus occurs despite vaccination, with poor wound care being a significant contributor. In this case, inadequate wound management likely allowed Clostridium tetani to thrive, leading to infection despite a recent booster dose. Additionally, as tetanus immunization was only introduced in Malaysia in 1978, the patient may have never received the full primary vaccination series, increasing his susceptibility. The absence of a nationwide digital immunization registry for adults, unlike South Korea’s IRIS program, further complicates verification of past vaccinations. While rare, similar cases have been reported, often linked to poor wound care or uncertain vaccination history. This case highlights the critical role of proper wound management in preventing tetanus and underscores the need for comprehensive vaccination records. Further research, including case reports, is essential to better understand the causes of vaccine failure.

Conclusion: Tetanus remains a threat despite immunization, especially with inadequate wound care and unverifiable vaccination history. This case underscores the urgency of stringent wound management, comprehensive immunization, and the establishment of a national digital health registry to ensure accurate medical records and strengthen disease prevention.

Keywords: Tetanus, risus sardonicus, vaccination

022

A THIN LINE BETWEEN LIFE AND DEATH: A GASH TO THROAT

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Introduction: Airway trauma is a life-threatening condition resulting from blunt or penetrating injuries to the face, neck, and chest. The management of penetrating neck wounds requires a prompt assessment of airway patency, breathing mechanics, circulation, and potential skeletal or neurological damage before definitive operative intervention.

Case Description: A 50-year-old woman, recently discharged following treatment for organophosphate poisoning, presented to the emergency department (ED) with a self-inflicted neck wound. She had used a kitchen knife to cut her throat, sustaining a deep laceration wound over the anterior neck. Upon arrival, her GCS was E3V2M2, with RR 24 and SpO2 of 98% on room air. Examination revealed a 15 cm × 5 cm deep horizontal wound over the anterior neck (Zone II), exposing thyroid cartilage & strap muscles. Gushing air was noted persistently from the wound. Airway protection was prioritized, and video laryngoscopy-assisted intubation was successfully performed (POGO 100%). The wound was covered with wet gauze, and an urgent ENT consultation was obtained. HRCT of the neck revealed injuries to the strap muscles, thyroid cartilage, and left vocal cord, with intact major neck vessels. Emergency wound exploration, debridement, and deep laceration repair was done. Postoperatively, the patient was co-managed by ICU, ENT and psychiatry teams. She was discharged after three weeks. By 15 weeks, she passed the swallowing test successfully, albeit a flexible scope examination showed left vocal cord paresis, compensated by the right vocal cord with a small phonation gap.

Discussion: This case highlights the challenges and considerations in managing airway in penetrating neck trauma. Management depends on the anatomic zone of injury, hemodynamic stability, clinical presentation, and anticipation of complications. Open wound intubation via the exposed trachea was the ideal airway management strategy in this case, as other options, such as awake intubation and front-of-neck access (FONA), were not feasible due to the patient's condition and the extent of the injury.

Conclusion: This case reinforces the need for prompt assessment, multidisciplinary care, and long-term follow-up in managing complex airway trauma. Prompt surgical exploration and multidisciplinary management contributed to a favourable outcome, with the patient regaining adequate phonation and swallowing function over time.

Keywords: Neck trauma, airway injury, penetrating neck wound

023

THE SILENT PERIL: CHALLENGES IN DIAGNOSIS AND MANAGEMENT OF PENETRATING AORTIC ULCERS: A CASE REVIEW

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Introduction: Penetrating aortic ulcers (PAUs) are an uncommon but life-threatening form of acute aortic syndrome. Unlike aortic dissection, PAUs are often under-recognized in emergency setting.

Case Description: A 45-year-old woman with underlying hypertension presented with acute dyspnea and suprasternal pain. She was hypertensive at 194/111 mmHg, tachycardic, and hyperventilating with carpopedal spasm. Cardiovascular and lung examinations were unremarkable. ECG showed sinus tachycardia, and bedside ultrasound revealed minimal pericardial effusion, no aortic root dilation, and normal lung sliding. Chest X-ray was normal. Given her persistently elevated blood pressure and pain, a CT aortogram was performed, revealing multilevel PAUs with extensive intramural hematoma, the largest at the aortic arch, with features of impending rupture. Blood pressure control was challenging, despite maximum IV labetalol infusion and oral antihypertensives. IV glyceryl trinitrate infusion was added, leading to better control. She was admitted to ICU before transfer to a vascular centre, where she successfully underwent a thoracic endovascular aortic repair (TEVAR).

Discussion: PAUs account for 2-7% of acute aortic syndromes, often mimicking aortic dissection. They arise from ulcerated atherosclerotic plaques penetrating the intima, leading to intramural hematoma or aortic rupture. Unlike dissection, they lack a false lumen but can progress rapidly. Diagnosis may be challenging as PAUs may present with atypical chest pain and hypertension. This case highlights how subtle pericardial effusion and persistent pain with no clear cause should prompt CT angiography, the gold standard for diagnosis. Management requires strict blood pressure control (SBP <120 mmHg) with beta-blockers first, adding calcium channel blockers or vasodilators if needed, while maintaining a target heart rate of ~60 bpm to reduce aortic shear stress. TEVAR is recommended for large, symptomatic, or impending rupture cases, significantly reducing morbidity compared to open surgery.

Conclusion: Early recognition of PAUs is crucial, especially in hypertensive patients with persistent chest pain despite normal initial tests. Timely CT angiography, strict blood pressure control, and TEVAR for high-risk cases improve outcomes and prevent life-threatening complications.

Keywords: Aortic syndromes, penetrating aortic ulcers, intramural hematoma

024

THE HIDDEN CONNECTION: HYPERTHYROID PERIODIC PARALYSIS BEHIND A YOUNG MAN'S SUDDEN PARALYSIS

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Introduction: Sudden onset lower limb paralysis is a rare presentation among young patients. This case report focuses on a young gentleman with hyperthyroid periodic paralysis which was related to hypokalemia.

Case Description: A 31-year-old gentleman presented with sudden onset bilateral lower limb weakness. The weakness started when he woke up from bed after a carbohydrate-rich supper. Bilateral upper limb weakness commenced afterward. Upon arrival at the Emergency Department, he was alert and conscious. On examination, bilateral lower limbs showed no power while bilateral upper limbs have power 3 out of 5. CT BRAIN was done with no significant finding. Serum potassium was found to be 1.6 mmol/L. The ECG showed a prominent U wave, most obvious at LEAD V2-5. Upon further workup, it was noted that the thyroid function test demonstrated a picture of primary hyperthyroidism. The patient was treated with IV potassium correction and IV drip with potassium supplementation. Subsequently, the patient regained his motor function completely. He was started on carbimazole upon discharge from the medical ward.

Discussion: Hyperthyroid Periodic Paralysis (HPP) is typically presented among Asian males, aged between 20 to 40 years old. Although hyperthyroidism remained less popular among the male population, it should be ruled out when encountering patients with periodic hypokalemic paralysis of unexplained causes. Patients usually experience the paralysis in morning or after a carbohydrate-rich meal which is consistent with the history of presenting complaints in this case. Hypokalemia is caused by increased activity of Na-K-ATPase under the influence of high thyroid hormone. Elevated sodium efflux and potassium influx into cells result in hypokalemia. The presence of a prominent U wave in ECG should alert the clinician before progression into life-threatening Torsades de Pointes. Periodic paralysis recovered promptly with potassium supplementation.

Conclusion: Despite the rare presentation of Hyperthyroid Periodic Paralysis (HPP), it should be always considered in young patients with sudden onset paralysis. Timely potassium supplementation and initiation of hyperthyroidism treatment are sufficient in managing the scenario.

Keywords: Hyperthyroid periodic paralysis; hypokalemia; prominent U wave

025

THE HIGH-STAKES GAMBLE OF NEGLECT: FINANCIAL BARRIERS, SYSTEMIC FAILURES, AND THE DEADLY GAMBLE OF ANEURYSMAL CN III PALSY

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Introduction: Oculomotor nerve (cranial nerve III) palsy is a significant neuro-ophthalmic condition that can indicate life-threatening pathology, particularly posterior communicating artery (PComA) aneurysms. Timely diagnosis and intervention are crucial to prevent complications such as aneurysm rupture and long-term neurological deficits. However, access to urgent neuroimaging remains a challenge in many healthcare settings, where resource limitations and systemic inefficiencies can lead to delays in diagnosis and treatment.

Case Description: This case report discusses a 36-year-old woman who developed progressive ptosis, ophthalmoplegia, and anisocoria. Despite suggestive clinical findings, initial computed tomography (CT) imaging did not reveal a clear cause. Given the extended waiting time for government-funded magnetic resonance imaging (MRI), the patient opted for private neuroimaging, which identified a small PComA aneurysm. She was subsequently referred for urgent neurosurgical intervention. This case underscores the impact of healthcare accessibility on patient outcomes and highlights the difficult choices patients may face when seeking timely specialist care.

Discussion: While advancements in medical imaging have improved diagnostic accuracy, challenges such as high patient volume, limited imaging resources, and financial constraints can affect the speed of diagnosis, particularly in public healthcare systems. Non-invasive imaging modalities like magnetic resonance angiography (MRA) and computed tomography angiography (CTA) are useful, though their sensitivity for smaller aneurysms remains variable. Cerebral angiography, the gold standard, is not always readily available due to procedural complexities and resource demands. These factors emphasize the importance of optimizing healthcare resource distribution and ensuring equitable access to timely investigations for all patients.

Conclusion: Moving forward, continued investment in healthcare infrastructure, streamlined referral pathways, and collaborations between public and private healthcare sectors may help bridge existing gaps. Strengthening these aspects can enhance diagnostic efficiency, reduce delays, and ultimately improve patient outcomes, particularly for conditions requiring urgent intervention.

Keywords: Oculomotor nerve palsy, posterior communicating artery aneurysm, healthcare accessibility, neuroimaging

026

A QUALITY IMPROVEMENT APPROACH TO ENHANCE THE MULTIDISCIPLINARY TEAM RESPONSE TIME DURING TRAUMA TEAM ACTIVATION IN A BORNEO REGIONAL TRAUMA CENTRE

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Introduction: Time is of essence during the management of a seriously injured trauma patient. The domino effect of an effective Trauma Team Activation (TTA) starts from the arrival of multidisciplinary team members. A quality improvement project (QIP) has been undertaken to improve the multidisciplinary team members response time to be within 15 minutes from trauma team activation with a compliance rate of 80%.

Methodology: This project was carried out over a one-year period from 1 December 2021 until 31 December 2022. Analysis of the problem was aided with process mapping and Ishikawa diagram to determine the contributing factors towards a delayed response time. The model for improvement with it's Plan- Do- Study- Act cycle and a driver diagram were utilized for change implementation. 2 cycles of intervention were applied and the response time evaluated after each cycle.

Results: The median response time for multidisciplinary team members improved from baseline data with all teams exceeding 15 minutes to all teams arriving within 15 minutes following the 1st and 2nd cycle of intervention. In addition, the compliance of multidisciplinary team members towards the set standard has increased from 40% to 81-95% (after 1st cycle) and 64-92% (after 2nd cycle) through quality improvement approaches.

Discussion: The compliance rate was low (40-50%) when TTA was re- established in 2021 after the covid-19 pandemic due to the lack of familiarity and understanding towards TTA. The reduction in compliance after the 2nd cycle of intervention is due to data collection occurring during the latter half of the year during endemic phase of COVID with higher patient loads and elective operation theatres resuming full operations apart from majority (80%) of TTA occurring during out of office hours.

Conclusion: Trauma team activation (TTA) allows for early mobilization of multidisciplinary team members for a horizontal approach to be applied during resuscitation, leading to critical interventions being carried out in a timely manner. Quality improvement approaches are crucial in refining the TTA process and it can be applied to monitor as well as improve other aspects of TTA in order to achieve better patient outcome.

Keywords: Trauma team activation, multidisciplinary team response time, quality improvement

027

MASKED DANGER: FATAL ACUTE OBSTRUCTIVE HYDROCEPHALUS IN EARLY PREGNANCY INITIALLY DIAGNOSED AS HYPEREMESIS GRAVIDARUM

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Introduction: Headache, nausea, and vomiting are frequently encountered symptoms during early pregnancy and are commonly attributed to benign obstetric conditions such as hyperemesis gravidarum. However, these non-specific symptoms can occasionally mask life-threatening neurological conditions, including intracranial tumors with associated obstructive hydrocephalus. Early diagnosis in such cases is often challenging due to overlapping physiological changes of pregnancy and the perceived risks of diagnostic imaging

Case Description: We report a fatal case involving a 26-year-old Malay primigravida at 9 weeks of gestation, who presented with mild occipital headache, severe nausea, and vomiting. Initially diagnosed as hyperemesis gravidarum, she was stable at presentation and had normal neurological and obstetric examinations. However, she experienced sudden neurological deterioration with an acute drop in GCS and was intubated for cerebral and airway protection. A CT brain revealed a large posterior fossa mass with features of obstructive hydrocephalus and tonsillar herniation. Emergency burr hole decompression and EVD insertion were performed, yet the patient failed to regain brainstem function and succumbed to brainstem death.

Discussion: Headache, nausea, and vomiting are frequently encountered symptoms during early pregnancy and are commonly attributed to benign obstetric conditions such as hyperemesis gravidarum. However, these non-specific symptoms can occasionally mask life-threatening neurological conditions, including intracranial tumors with associated obstructive hydrocephalus. Posterior fossa masses are especially dangerous due to the limited anatomical space and risk of rapid decompensation. Despite concerns about fetal radiation exposure, non-contrast CT brain is considered safe and should not be delayed when maternal neurological compromise is suspected. Multidisciplinary management involving emergency, neurosurgical, obstetric, and critical care teams is essential in such complex scenarios.

Conclusion: This case highlights the need for high clinical suspicion of non-obstetric causes in pregnant patients presenting with persistent or localized headaches, especially when red flags are present. Posterior fossa masses are especially dangerous due to the limited anatomical space and risk of rapid decompensation. Despite concerns about fetal radiation exposure, non-contrast CT brain is considered safe and should not be delayed when maternal neurological compromise is suspected. Multidisciplinary management involving emergency, neurosurgical, obstetric, and critical care teams is essential in such complex scenarios.

Keywords: Pregnancy, headache, hydrocephalus, brain tumour

028

FROM PET TO PATHOGEN: A CASE OF CAT SCRATCH DISEASE WITH ATYPICAL LYMPHADENOPATHY

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Introduction: Lymph node enlargement may result from various underlying conditions, such as infections, autoimmune disorders and malignancies, necessitating a thorough history, physical examination, and diagnostic tests for accurate diagnosis. Cat scratch disease (CSD) is often under-recognized despite being primarily diagnosed clinically with a combination of typical findings, where lymphadenopathy is the hallmark of the disease and a history of exposure to feline. This case described an unusual occurrence of CSD with lymphadenopathy at an atypical site.

Case Description: A 55-year-old gentleman with no known comorbidities presented with a one-week history of fever and progressively enlarging, painful swellings over the right upper limb. He denied symptoms of infection, autoimmune disorders, tuberculosis exposure and constitutional symptoms. Further history revealed that he sustained a wound on his right middle finger from a cat scratch a month prior. On examination, his vital signs were stable. Two tender swellings (approximately 3x3 cm) were palpable on the medial aspect of his right arm, with another on the forearm. There were no skin changes, open wounds, or discharge. There were no significant findings from the systemic review. Ultrasound findings feature in keeping with lymphadenopathy, strongly suggesting CSD. The patient was referred to the medical team and was prescribed a five-day course of oral azithromycin.

Discussion: CSD is mainly caused by Bartonella henselae, which cat harbors as its natural reservoir. Following inoculation of the bacteria into humans, the organism typically causes a local infection that manifests as regional and solitary lymphadenopathy, commonly at the axillary, cervical and submandibular. This case, however, noted several lymphadenopathies with less common sites reported. CSD may scarcely involve visceral organ, neurologic and ocular manifestation. Diagnosing CSD is mainly clinical, with lymph node biopsy reserved in case of delayed resolution of systemic symptoms or an alternative diagnosis is suspected. Manifestation of the disease can be delayed for months post-exposure, which potentially causes the missed history during patient assessment or may be deemed insignificant.

Conclusion: CSD causes lymphadenopathy, a common presentation in the emergency department (ED). Knowledge of the disease may reduce unnecessary investigations, hasten therapy, and improve ED overcrowding.

Keywords: Cat scratch disease, lymphadenopathy

029

MOREL-LAVALLÉE LESION: A CASE SERIES WITH DIFFERENT CLINICAL PRESENTATIONS AND MANAGEMENT APPROACHES

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Introduction: Morel-Lavallée lesions (MLL) represent challenging post-traumatic closed degloving injuries that emergency physicians frequently misdiagnose despite their prevalence in trauma settings. First described in 1863, these lesions occur when shearing forces separate subcutaneous tissue from underlying fascia, creating fluid-filled potential spaces. We present three cases of MLL with distinct clinical presentations—early classic symptoms, severe hemorrhagic shock, and delayed diagnosis—to highlight the spectrum of this condition and emphasise the critical importance of timely recognition. Our case series demonstrates the diverse management approaches required for MLL, from conservative treatment to surgical intervention, and underscores the necessity of maintaining high clinical suspicion in trauma patients with persistent soft tissue swelling. Through these cases, we aim to increase awareness among emergency physicians about this often-overlooked condition to prevent significant morbidity through early diagnosis and appropriate management.

Case Description: We present three distinct clinical scenarios of Morel-Lavallée lesions (MLL) with varying presentations, diagnostic challenges, and management approaches. MLL represents a post-traumatic closed degloving injury characterised by the separation of subcutaneous tissue from the underlying fascia, creating a potential space filled with hemolymphatic fluid. Despite their relative frequency after trauma, clinicians frequently misdiagnose these lesions, leading to delayed treatment and possible complications. We aim to increase emergency physicians' and healthcare providers' awareness about this often-overlooked condition, emphasising the importance of high clinical suspicion, appropriate imaging, and timely intervention.

Discussion: Morel-Lavallée lesions (MLL) develop when shearing forces separate the hypodermis from underlying fascia, disrupting blood vessels and creating spaces where fluids collect. The case series highlights three distinct presentations: early classic symptoms, severe hemorrhagic shock, and delayed diagnosis after minor trauma. Diagnostic challenges are common, with clinicians misdiagnosing up to one-third of cases. Key warning signs include trauma history, persistent swelling, non-reducible masses, and ecchymosis with skin hypermobility. While ultrasound is the primary diagnostic tool in all cases, MRI remains the gold standard for comprehensive assessment. Management approaches varied across cases: Conservative management with antibiotics and monitoring medical management of hemorrhagic shock Surgical intervention with incision and drainage Treatment selection depends on lesion characteristics, chronicity, complications, patient condition, and associated injuries. Available options range from conservative management to various surgical interventions. Without proper treatment, MLL can lead to serious complications, including infection, skin necrosis, chronic pain, recurrence, and hemorrhagic shock. The case series

demonstrates that early diagnosis and appropriate management typically result in favorable outcomes with minimal long-term issues.

Conclusion: This case series highlights the diverse clinical presentations of Morel-Lavallée lesions and the importance of maintaining a high index of suspicion in trauma patients with persistent soft tissue swelling. Emergency physicians should know this entity, as early diagnosis and appropriate management can prevent significant morbidity. A multidisciplinary approach involving emergency physicians, radiologists, and surgical specialists is often necessary for optimal management of these complex lesions.

Keywords: Morel-Lavallée lesion, degloving injury, trauma, ultrasound, misdiagnosis, hemorrhagic shock

030

A CASE OF SUBGLOTTIC OEDEMA CAUSING UPPER AIRWAY OBSTRUCTION

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Introduction: Laryngeal oedema is defined as abnormal fluid and swelling accumulation in laryngeal mucosa and submucosal tissues. During acute laryngitis, laryngeal cavity in subglottic region becomes narrow and oedematous, worsen with secretion accumulation lead to airway compromise.

Case Description: 34 years old Female presented with sudden onset breathlessness preceded with 2 days history of chesty cough and fever. She was drowsy, unable to speak and stridorous in severe respiratory distress. Lungs auscultation revealed generalised silent air entry. Arterial blood gases under High flow mask 15L/min shown acute Type II respiratory failure with pH 6.989 and PCO2 115.5mmHg. Intubation was immediately initiated for airway protection. The laryngeal view grading during direct laryngoscopy was Cormack-Lehane 1, unfortunately Endotracheal tube (ETT) was unable to pass through due to oedematous vocal cords. Otorhinolaryngology and Anaesthesiology teams both activated for multidisciplinary approach. Video laryngoscope and boulgie were used with multiple ETT sizes ranging from 3 to 7mm, however still failed intubation. Placement of supraglottic device causing desaturation as well. Patient was sent to Operation Theatre for emergency tracheostomy via manual bagging. Intra-operatively tracheostomy successful but tracheoscopy shown severely oedematous vocal cords up to subglottic region. No mass or subglottic stenosis seen. She was subsequently discharged after Antibiotics completion with double-lumen tracheostomy tube.

Discussion: Viruses and bacterial infections cause larynx inflammation progresses rapidly, might eventually develop laryngeal obstruction. On the basis of presentation with fever, chesty cough and breathlessness, it was suggested that laryngitis as the precipitating factor of sudden life-threatening laryngeal oedema in this patient. In the emergency airway management algorithm, emergency cricothyroidotomy is necessary in the scenario of ‘Cannot Intubate, Cannot Oxygenate’ (CICO) in a compromised airway. This procedure had been proven from the latest Difficult Airway Society (DAS) guidelines, to cause fewer late complications than tracheostomy. However in this case, patient was still able to ventilate via manual bagging, therefore emergency tracheostomy was more feasible as a long-term airway approach in her, in case she required prolonged ventilation later.

Conclusion: Managing a difficult airway with appropriate airway management plans requires multidisciplinary teamwork. Anticipating difficult intubation early will help preservation of patient's life and prevention of hypoxic brain injury.

Keywords: Subglottic oedema, airway obstruction

031

DR, I COULDN'T STAND UP PROPERLY TODAY!

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Introduction: In stroke syndrome, gait instability is one of classic symptoms of posterior circulation infarct or cerebellar stroke. However, gait disturbance can also be seen in other common brain disorders like acute hydrocephalus.

Case Description: We presented a case of 29 years old gentleman whom brought to emergency department by his friend for having acute onset of gait disturbance. The symptom was preceded by right sided body weakness for the past 3 days. However, there are no symptoms of increased intracranial pressure. Positive neurological findings include unidirectional horizontal nystagmus and abnormal tandem gait. Nevertheless, cerebellar signs and Romberg test were negative. A computed tomography (CT) brain plain urgent showed acute communicating hydrocephalus. There is no evidence of intracranial bleed or space occupying lesion seen. Blood parameters are unremarkable.

Discussion: Acute communicating (non obstructive) hydrocephalus is a type of acquired hydrocephalus. Other than gait disturbance, it can also cause some degree of severe headache, blurry vision and papilledema due to raise in intracranial pressure. It is a life-threatening condition that required active intervention. Without proper treatment, it could lead to death due to brain herniation.

Conclusion: Hydrocephalus demographic has been well known globally in paediatric population. However, there is lack of studies regarding characteristic, demographics and spectrum of hydrocephalus in adult in Malaysia.

Keywords: Gait disturbance, communicating hydrocephalus

032

12-MONTH REVIEW OF CLINICAL OUTCOME OF ACUTE PULMONARY EMBOLISM IN INSTITUT JANTUNG NEGARA

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Introduction: Symptoms of acute pulmonary embolism (APE) often vary and can be non-specific. The management of PE has evolved significantly with the advancement in risk stratification, imaging, and treatment modalities. The usage of percutaneous and catheter-based therapies is gaining prominence.

Case Description: To evaluate the clinical characteristics, mode of therapy, and outcomes in patients with APE at Institut Jantung Negara (IJN). To increase awareness of new modalities available in the management of APE.

Discussion: Materials & Methods: Patients diagnosed with APE and admitted to IJN between January 2024 and December 2024 were retrospectively enrolled and analyzed descriptively. The clinical characteristics, mode of therapy, and outcomes were recorded. Results: 20 patients with confirmed APE diagnoses were enrolled. 11 (55%) subjects were male, and 9 (45%) were female. 2 patients were diagnosed with high-risk, 9 (45%) intermediate high-risk, 5 (25%) intermediate low-risk, and 4 (20%) low-risk. The ages range from 18 to 84 years old with the mean age being 49.6. The most common presenting symptoms are dyspnea (85%), followed by reduced effort tolerance symptoms (30%). The most frequent risk factor is prolonged immobilization. Unprovoked PE was found in 40 % of the patients. Right ventricular dysfunction was found in 9 (45%) patients. 18 (90%) have elevated NT-pro BNP and 12 (65%) hs-Troponin T, respectively. 12 out of 20 patients received minimally invasive endovascular therapy. 7 (35%) patients underwent mechanical thrombectomy (MT), and 5 (25%) patients received catheter-directed thrombolysis (CDT). 1 (5%) patient received systemic thrombolysis, and the remaining 7 (35%) patients were treated with anticoagulants only. The average length of stay was 7.7 days. 19 (95%) patients survived to discharge. The sole non-survivor was treated with systemic thrombolysis.

Conclusion: The characteristics of APE patients in IJN are comparable to other reported studies. Mechanical thrombectomy and catheter-directed thrombolysis are treatment options available in IJN and are proven safe and effective in the management of APE.

Keywords: Acute pulmonary embolism, right ventricular dysfunction in PE, mechanical thrombectomy, risk stratification in PE

033

CARDIAC TAMPONADE SECONDARY TO BURKHOLDERIA CEPACIA INFECTION: A RARE AND CHALLENGING CLINICAL PRESENTATION

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Introduction: Burkholderia cepacia is an opportunistic Gram-negative pathogen primarily associated with respiratory tract infections in individuals with cystic fibrosis or compromised immune systems. Its manifestation in immunocompetent individuals is uncommon, and progression to severe complications such as pericardial effusion or cardiac tamponade is exceedingly rare, posing significant diagnostic and therapeutic challenges.

Case Description: A 55-year-old previously healthy male presented with a three-day history of pleuritic chest pain, accompanied by a week of dry cough, fever, anorexia, and intermittent right lumbar pain. He reported recent freshwater fishing, raising concerns about exposure to aquatic pathogens. On examination, he was hypotensive with atrial tachycardia and clinical signs of pericardial effusion. Echocardiography confirmed a large circumferential pericardial effusion with right ventricular diastolic collapse, indicating cardiac tamponade. Due to the unavailability of a pericardiocentesis kit, ultrasound-guided pericardiocentesis was performed using a central line set via the left parasternal approach, draining 1.1 liters of hemoserous fluid and stabilizing the patient. Blood cultures grew Burkholderia cepacia. Imaging also revealed a mild left pleural effusion and gallbladder wall thickening with pericholecystic fluid. The patient received intravenous ceftriaxone, piperacillin-tazobactam, and ceftazidime, followed by oral trimethoprim-sulfamethoxazole. He was discharged hemodynamically stable with full symptom resolution at follow-up.

Discussion: Burkholderia cepacia is a rare cause of severe infection in immunocompetent individuals, with cardiac tamponade being an exceptionally uncommon manifestation. This case emphasizes the importance of early diagnosis and intervention, as timely pericardiocentesis and targeted antibiotic therapy were crucial for patient recovery. The patient's history of freshwater exposure suggests an environmental source, highlighting the need to consider atypical pathogens in relevant clinical contexts. The successful use of a central venous catheter set for pericardiocentesis demonstrates the necessity for adaptability in resource-limited settings. This case reinforces the need for a broad differential when evaluating pericardial effusion. It illustrates that B. cepacia, though uncommon, can lead to life-threatening complications even in otherwise healthy individuals.

Conclusion: This case highlights the importance of prompt diagnosis and early intervention in managing rare but potentially life-threatening infections such as Burkholderia cepacia. Clinical vigilance, timely therapeutic decision-making, and adaptability in resource utilization were pivotal to the successful outcome, particularly in resource-limited settings.

Keywords: Burkholderia cepacia, cardiac tamponade, parasternal approach, pericardiocentesis

034

THE VENGEANCE OF THE VENOM; DELAYED ENVENOMATION OF MALAYAN PIT VIPER BITE

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Introduction: The Malayan Pit Viper (Calloselasma rhodostoma) is a hematotoxic snake which typically causes local tissue injury, including severe pain, swelling, ecchymosis and in some cases, systemic coagulopathy. Managing such cases becomes clinically challenging, when there is a delayed onset of systemic effects.

Case Description: This report describes a case of a 41 year old gentleman presented to the emergency department (ED) in a rural area of Kedah with symptomatic anaemia secondary to systemic coagulopathy. He had initially been admitted after receiving three vials of Calloselasma rhodostoma antivenom (CRAV). He was later transferred to tertiary hospital for fasciotomy due to compartment syndrome. Postoperatively, he remained stable and was discharged with instructions for daily wound dressing. A few days later he returned to the ED department with a presyncopal attack. This event occurred six days post Malayan Pit Viper bite and five days post-fasciotomy. The ED team successfully reversed the effects after administering three vials of CRAV. The patient was subsequently admitted to ward for blood transfusion and further observation.

Discussion: This case highlights the potential of delayed envenomation following Malayan Pit Viper bite. Surgical intervention to the tissue may have disrupted the venom's diffusion process, delaying its systemic effects.

Conclusion: This case of delayed envenomation highlights the critical need for prolonged patient monitoring to prevent severe complications and potential fatality.

Keywords: Calloselasma rhodostoma, delayed envenomation, coagulopathy, antivenom

035

THE PERFORMANCE OF EMERGENCY SEVERITY INDEX AND PATIENT ACUITY CATEGORY SCALE IN GERIATRIC TRIAGE IN THE EMERGENCY DEPARTMENT

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Introduction: Geriatric patients are frailer and have more comorbidities than non-geriatric patients. Given that triage systems rarely consider age, geriatric patients often end up with poorer outcomes. We compared outcomes (Emergency Department length of stay (EDLOS) and admission rates) between geriatric and non-geriatric adults triaged with the Emergency Severity Index(ESI) and Patient Acuity Category Scale(PACS).

Methodology: A retrospective study of adult patients (≥18 years old) presenting to a tertiary ED over 4 months was conducted. Data on demographics, triage scores, EDLOS, and admission rates were collected.

Results: During the study period, 33,187 adult patients presented to the ED. Of these 9362 (28.2%) were aged 65 and above. The average age of the geriatric group was 76.4±8.33 vs 39.9±13.5 years in the non-geriatric group. Using PACS, the distribution of elderly in the various triage categories was P1: 12.3%, P2:75.8%, P3:11.9%, P4:0%. Using ESI, the distribution of elderly in the various triage categories was ESI1:10.7%, ESI2:19.3%, ESI3:56.7%, ESI4:11.6%, ESI5:0.6 %. The geriatric population had consistently longer EDLOS and higher admission rates across all triage categories except in P1 and ESI5. Overall mean EDLOS was increased in the geriatric population (308.4±246.0 vs 212.8±174.6 min, $p<0.05$). Overall admission rates were also much higher in the geriatric population (74.9% vs 32.9%, $p<0.05$).

Discussion: The results suggest that the application of a standard adult triage tool underestimates the severity of the geriatric patient's condition. The elderly present with atypical symptoms and are frailer at baseline. Vital signs may not be reflective of the severity of the disease process. Tachycardia may be masked by the use of beta-blockers and fever may not be present even in sepsis due to age or disease-related decline in their immunity. Despite a large sample size, this study is limited by its retrospective nature and lack of clinically relevant outcome measures, like morbidity and mortality, which could further shed light on the problem.

Conclusion: Geriatric patients have unique triage needs. The authors suggest a triage system that incorporates frailty scores which may serve as adjuncts for better risk stratification in the elderly. This could ensure appropriate resource allocation and avoid adverse outcomes.

Keywords: Triage, geriatric, frailty

036

THE ROLLERCOASTER EFFECT: A CASE OF DRAMATIC BLOOD PRESSURE SWINGS FOLLOWING AUTOMATIC DYSREFLEXIA. A SPLIT-SECOND DILEMMA BETWEEN INOTROPES VS ANTI-HYPERTENSIVE AGENTS

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Introduction: Autonomic dysreflexia (AD) is a critical emergency condition seen in 80% of patients with spinal cord injury (SCI) at T6 and above. This case highlights the dramatic "rollercoaster effect" of blood pressure instability in AD, emphasizing the urgency of trigger identification, timely intervention and the delicate balance needed to avoid overcorrection.

Case Description: A 43-year-old man with a history of tetraplegia due to T1 spinal cord injury was brought to Emergency Department with shortness of breath, pounding headaches and constipation for 3days. Home blood pressure monitoring revealed elevated readings. On examination, patient was found to be fully alert and conscious, flushed. Vitals revealed recurrent episodes of labile blood pressure readings from hypotension to hypertension, bradycardia, and hypothermia with other systemic examinations were unremarkable. Rapid-Ultrasound-for Shock-and Hypotension (RUSH) Exam Ultrasound Protocol and all blood parameters were showed normal result. However, after given Ravin enema to remove faecal impaction, the rollercoaster effect of blood pressure was subsided. After discussion among the Emergency Physician and Medical team, patient was not initiated any inotropes or antihypertensives and admitted under medical ward for close monitoring.

Discussion: AD is caused by an overactive sympathetic response without parasympathetic balance, leading to vasoconstriction and abrupt elevation of blood pressure followed by reflex bradycardia due to baroreceptor mediated reflex. Common trigger includes urinary retention and faecal impaction. This case underlines the "rollercoaster effect" of blood pressure swings and the importance of addressing the underlying cause over immediate medication use for a quick solution. Here, we identified faecal impaction triggered the AD, which latter resolved with an enema, highlighting the need for quick interventions. Recognizing and eliminating triggers is key to effective management. Additionally, patients with recurrent AD should be educated on self-management strategies, including regular bladder and bowel emptying as AD carries the risk of haemorrhagic stroke and death. Providing them with an alert card can help ensuring healthcare providers to be vigilant on AD allowing for a more rapid and effective respond.

Conclusion: AD is frequently missed by untrained medical staff, highlighting the need for thorough evaluation for proper diagnosis and management.

Keywords: Autonomic dysreflexia, critical, emergency

037

UNVEILING THE HIDDEN CULPRIT: OSSIFICATION POSTERIOR LONGITUDINAL LIGAMENT (OPLL) WITH CENTRAL CORD SYNDROME IN A POST - TRAUMATIC DIPARESIS PATIENT

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Introduction: Ossification of the posterior longitudinal ligament (OPLL) is an uncommon condition characterized by abnormal calcification of the ligament along the spinal column, most commonly in the cervical region. While it typically affects older adults, its presence in younger individuals is unusual and can increase the risk of spinal cord injury (SCI) even with minor trauma. This case report highlights a patient with traumatic central cord syndrome (CCS) in the context of OPLL, emphasizing the importance of early identification and management.

Case Description: A 41-year-old male immigration officer fell into a 4-foot-deep drain while restraining an immigrant, landing with neck in a hyperflexion position. He experienced immediate weakness in all four limbs, with spontaneous resolution in the lower limbs after five minutes, while upper limb weakness persisted. In the emergency department, he was hemodynamically stable, with motor weakness (left 3/5, right 4/5) and sensory deficits in the C5-T1 region. Cervical x-ray was clear. CT imaging revealed OPLL from C2 to C6, and MRI confirmed multilevel disc prolapses and spinal stenosis at the C3-C5 levels. The patient was diagnosed with traumatic CCS with underlying OPLL and underwent posterior cervical laminoplasty.

Discussion: OPLL is a well-known but often asymptomatic condition that predisposes patients to cervical spinal stenosis and increases susceptibility to SCI even after minor trauma. Although CCS is typically linked to hyperextension injuries, this case is unique due to the hyperflexion mechanism and the patient's relatively young age. The incidental finding of OPLL highlights the need for comprehensive imaging in patients with unexplained neurological deficits. Early surgical decompression has been shown to improve outcomes in patients with CCS, particularly when pre-existing spinal abnormalities are present.

Conclusion: This case underscores the importance of recognizing OPLL as a potential risk factor for traumatic SCI, even in younger patients and non-typical injury mechanisms. Early diagnosis through advanced imaging, prompt cervical immobilization, and timely surgical intervention are crucial in optimizing patient outcomes. Further research is needed to explore the underlying causes of early-onset OPLL and to facilitate earlier identification in emergency settings.

Keywords: Ossification of posterior longitudinal ligament, spinal cord injury, central cord syndrome

038

CODE MI: REDUCING DIDO FOR MYSTEMI NETWORK IN THE EMERGENCY AND TRAUMA DEPARTMENT, HTPN KAJANG

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Introduction: Delayed door-in to door-out (DIDO) time for STEMI patients requiring primary percutaneous intervention (PCI) is a global issue, including in Malaysia. The Malaysian Clinical Practice Guideline (CPG) recommends a DIDO time of ≤30 minutes, as exceeding this threshold increases in-hospital mortality risk by 56% (Yamaguchi et al., 2022). This study aims to reduce the DIDO time to ≤30 minutes for STEMI patients transferred for primary PCI within the MySTEMI network.

Methodology: This prospective interventional study involved STEMI patients eligible for primary PCI within the MySTEMI network, presenting to the Emergency and Trauma Department (ETD) at HTPN from April 2024 to March 2025. Patients undergoing rescue PCI were excluded. The study implemented the "Code MI" workflow to expedite assessment, referral, and transport to PCI-capable centers. Verbal consent was obtained from patients prior to transfer. DIDO times from January 2023 to March 2024 (pre-intervention) were compared with those from April 2024 to March 2025 (post-intervention).

Results: A total of 74 STEMI patients who underwent primary PCI between January 2023 and March 2025 were analyzed. Of these, 31 patients were in the pre-intervention period, while 43 were in the post-intervention period. The median DIDO time was significantly reduced after the implementation of Code MI (29 minutes vs. 59 minutes, p=0.021). Furthermore, the percentage of patients achieving a DIDO time of ≤30 minutes from initial presentation at ETD to transfer to a PCI-capable center also significantly increased after the intervention (55.8% vs. 25.8%, p=0.01).

Discussion: Code MI introduced a clear, yet comprehensive process workflow, from patients' initial triage at the ETD to their transfer to the ambulance and onwards to a PCI-capable center, all aimed at achieving a DIDO time of ≤30 minutes. HTPN is part of the MySTEMI network, with Pusat Jantung Serdang serving as the referral hub. The results from this pilot study can provide a foundation for developing a national CPG aimed at achieving DIDO times of ≤30 minutes across all spoke and hub hospitals.

Conclusion: Implementation of Code MI significantly reduced DIDO times and increased the percentage of patients transferred within 30 minutes from ETD to a PCI-capable center.

Keywords: Code MI, Door-in to Door-out (DIDO)

039

HAEMORRHAGE AND SURVIVAL: ORAL ANTICOAGULATION CHALLENGES IN THE EMERGENCY SETTING

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Introduction: Bleeding complications associated with warfarin and direct oral anticoagulants (DOACs) are frequently encountered in the Emergency Departments (EDs). The management of these patients requires a thorough understanding of haemorrhagic risk, reversal strategies, and associated mortality outcomes. This study aimed to compare the clinical profile, bleeding severity, and mortality outcomes among patients on warfarin versus DOAC who required anticoagulation reversal due to bleeding.

Methodology: This single-centre study analysed data from a prospective registry of anticoagulated patients with bleeding requiring reversal between June 2023 and March 2025 at a tertiary hospital. Total population sampling was used. The primary outcome was in-hospital all-cause mortality. Warfarin and DOAC groups were compared based on patient demographics, clinical characteristics, and mortality outcomes. Bleeding severity followed the International Society on Thrombosis and Haemostasis (ISTH) classification.

Results: A total of 63 patients were included, with almost equal distribution between the warfarin (n=31, 49.2%) and DOAC (n=32, 50.8%) groups. Atrial fibrillation (n=33, 52.4%) was the predominant indication for anticoagulation. Warfarin patients were significantly younger than those on DOACs (67.0 versus 74.2 years, p=0.002). Most cases involved major bleeding (n=49, 77.8%), followed by clinical-relevant non-major bleeding (n=14, 22.2%), with comparable major bleeding rates between the two groups (warfarin 80.6% versus DOACs 75.0%, p=0.590). Nearly all patients (n=62, 98.4%) received four-factor prothrombin-complex concentrate (4F-PCC), except for one dabigatran patient (1.6%) who was treated with idarucizumab. The gastrointestinal tract (n=30, 47.6%) and brain (n=20, 31.7%) were the most common bleeding sites, with no significant intergroup differences. Overall mortality was 33.3% (n=21), with comparable rates between warfarin (n=11, 35.5%) and DOAC (n=10, 31.3%) groups (p=0.722).

Discussion: Haemorrhage in anticoagulated patients poses significant challenges in the ED. Despite being younger, patients on warfarin exhibited similar bleeding severity and mortality rates compared to those on DOACs.

Conclusion: Warfarin and DOAC-related bleeding in the ED presented with comparable severity and mortality rates despite age differences. The gastrointestinal and brain were the most common sites of haemorrhage, emphasising the critical need for prompt recognition and intervention in the ED to optimise patient outcomes.

Keywords: warfarin, DOAC, bleeding, 4F-PCC

040

OPTIMISING WARFARIN REVERSAL: A PROSPECTIVE EVALUATION OF FOUR-FACTOR PROTHROMBIN COMPLEX CONCENTRATE

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Introduction: Four-factor prothrombin complex concentrate (4F-PCC) is the preferred agent for the emergency reversal of warfarin; however, dosing strategies differ across products. This study aimed to evaluate the efficacy and safety of 4F-PCC (Octaplex®) in reversing warfarin anticoagulation.

Methodology: This prospective, single-centre study included adult warfarin patients who received 4F-PCC for the anticoagulation reversal at Hospital Kuala Lumpur, which follows a weight-based dosing approach. Data were collected between June 2023 and March 2024 using purposive sampling. Study endpoints include target INR achievement, adverse drug reactions (ADRs) occurrence, and in-hospital all-cause mortality. Additionally, factors associated with target INR achievement and mortality were also analysed. Bleeding severity followed the International Society on Thrombosis and Haemostasis (ISTH) classification.

Results: A total of 34 patients were included, with a predominance of male patients (n=21, 61.8%). Most received 4F-PCC for major bleeding (n=25, 73.5%), with the brain (n=12, 35.3%) and gastrointestinal tract (n=12, 35.3%) being the most common bleeding sites. Initial INR values ranged from 1.7 to 26.2, and the median 4F-PCC dose was 35.0 (30.0 – 47.2) IU/kg. Among the 31 (91.2%) patients who had repeat coagulation assessments, all showed INR reduction, with 87.1% (n=27) achieving the target INR. The median INR was decreased from 4.3 (2.9 – 7.5) to 1.3 (1.1 – 1.5) after 4F-PCC administration ($p<0.001$). No ADRs were reported. In-hospital all-cause mortality was 32.4% (n=11), with significant associations observed for age ≥60 (p=0.025), dosing based on estimated body weight (p=0.017), major bleeding (p=0.017), and intracranial bleeding (ICB) (p=0.005). No significant factors for target INR achievement were identified.

Discussion: Weight-based 4F-PCC dosing effectively reverses warfarin without reported ADRs. However, high mortality underscores the need for early risk stratification and optimal reversal management in the ED, particularly in older adults and ICB cases.

Conclusion: This study confirms the effectiveness of weight-based 4F-PCC dosing in achieving INR reduction (87.1% success) without ADRs. However, in-hospital mortality remained high (32.4%) in warfarin-related bleeding. These findings underscore the importance of rapid recognition, accurate weight estimation, and timely 4F-PCC administration to improve patient outcomes.

Keywords: warfarin, bleeding, 4F-PCC, prothrombin complex concentrate

041

ISOLATED ACUTE RIGHT-SIDED HEART FAILURE IN PEDIATRIC SEPTIC SHOCK: A CASE REPORT

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Introduction: Septic shock in paediatric patients often presents with left ventricular (LV) dysfunction, but isolated right ventricular (RV) failure is rare and underrecognized.

Case Description: A 9-year-old boy presented with two days of vomiting, lethargy, and tachypnea. On arrival, he was lethargic with sluggish pupillary reflexes. He was hypotensive (BP 86/52 mmHg), tachycardic (HR 116 bpm), tachypneic (RR 60/min), and hypoxemic (SpO2 85%, improving with oxygen). He exhibited cool extremities and prolonged capillary refill. Bedside ultrasound revealed a hyperdynamic LV, a dilated RV with reduced systolic function, and high inferior vena cava (IVC) collapsibility. Initial labs showed severe metabolic and lactic acidosis. He received aggressive resuscitation with 60 mL/kg fluid boluses, broad-spectrum antibiotics, and maximum inotropic support. He was intubated for respiratory failure but further deteriorated and succumbed to death.

Discussion: Isolated RV failure in pediatric septic shock is rare but critical. Unlike LV dysfunction, RV failure is often overlooked despite its significant hemodynamic impact. In this case, bedside ultrasound was key in identifying isolated RV involvement. Pediatric patients may be particularly vulnerable to RV failure due to higher baseline pulmonary vascular resistance (PVR), limited RV hypertrophic adaptation, and greater dependence on heart rate for cardiac output. Sepsis-induced pulmonary hypertension from hypoxemia, acidosis, and inflammation can further increase RV afterload, leading to hemodynamic collapse. Unlike adults with chronic pulmonary hypertension, pediatric patients lack compensatory RV remodeling, worsening acute RV failure. Fluid resuscitation remains controversial. While aggressive fluid therapy is standard in septic shock, excessive volume loading can worsen RV dysfunction. Instead, early vasopressor support, PVR reduction using inhaled nitric oxide or prostaglandin E1, and cautious fluid administration should be prioritized. Extracorporeal membrane oxygenation (ECMO) may provide rescue therapy in refractory cases but carries high risks in sepsis.

Conclusion: Isolated RV failure is a life-threatening complication of pediatric septic shock. Early recognition with bedside echocardiography and tailored management strategies are essential to improving outcomes.

Keywords: Septic shock, right ventricular failure, echocardiography, pulmonary hypertension

042

DEADLY INTUBATION IN EXTENSIVE MASSIVE PULMONARY EMBOLISM

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Introduction: Pulmonary embolism (PE) the third most common cardiovascular event. Our case highlights an unstable PE whom rapidly deteriorated post elective intubation.

Case Description: A 69-year-old woman with underlying myeloproliferative neoplasm, post 2 weeks of spinal laminectomy presented with 2 days of dyspnea and 4 episodes of diarrhoea. Upon examination, patient is hypotensive 80/45 mmHg, HR 107 beats/min and Spo2 93% under room. Face mask oxygen was applied and her saturation improved. Lungs and abdominal examination was unremarkable. She was resuscitated with 2 pints of crystalloid. POCUS revealed dilated RA/RV, with clot in situ extending up till main pulmonary artery, distended IVC and 4-point compression test compressible. She was started on noradrenaline infusion. Patient is contraindicated for thrombolysis due to recent spinal intervention, and she was referred to interventional radiology (IR) team for thrombectomy. Patient was electively intubated in operation theatre (OT) prior to thrombectomy. Patient developed cardiorespiratory arrest immediately post intubation.

Discussion: Larger clots in pulmonary artery (PA) can significantly raise the PA pressure, putting a strain to the right ventricle (RV) causes acute right heart failure. Echocardiography is useful to identify RV dysfunction, which is sufficient for reperfusion treatment in those with high index of suspicion for PE.2 Intubation can be challenging due to risk of severe hypotension from induction and positive pressure ventilation (PPV). PPV can worsen low cardiac output (CO) due to RV failure, thus PEEP should be applied with caution. Thrombolysis can be administered in massive PE however clinicians have to consider bleeding risks. Mechanical thrombectomy is performed if thrombolysis is contraindicated.

Conclusion: This case highlights an atypical chief complaint of massive pulmonary embolism which we may potentially missed without the aid of bedside POCUS. The complexities of the case also shown us to approach pulmonary embolism thoughtfully and introducing positive point ventilation with caution. Small changes in management may change the course of outcome.

Keywords: Embolism, thrombectomy, intubation, rv dysfunction

043

THE UNSEEN PERIL: UNRAVELLING A CASE OF LITHIUM TOXICITY IN THE EMERGENCY DEPARTMENT

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Introduction: Lithium is a potent antimanic agent and a widely used mood stabilizer for bipolar disorder. However, its narrow therapeutic index increases the risk of toxicity, which can have serious effects on multiple organ systems. Severe lithium neurotoxicity is a critical condition resulting from excessive lithium buildup in the brain. Here we present a case of lithium toxicity at Hospital Tuaran.

Case Description: A 61-year-old woman with bipolar disorder, maintained on lithium and quetiapine, presented to the emergency department with a several-day history of lethargy, muscle twitching, and reduced oral intake. Two weeks prior, her lithium dosage had been increased from 300 mg twice daily to 450 mg twice daily due to persistent symptoms and bipolar relapse. On presentation, the patient had stable vital signs, but a neurological examination revealed disorientation and mild cognitive impairment. A CT brain scan was unremarkable. However, after a few days, she suddenly became unresponsive, requiring intubation and inotropic support. Blood tests indicated severe lithium toxicity with a serum level of 2.7 mmol/L, along with elevated septic markers, acute kidney injury, and hypernatremia. She was started on intravenous hydration and transferred to a tertiary hospital for urgent haemodialysis. Haemodialysis was instituted and Lithium was discontinued, and serum levels gradually declined. Due to poor GCS recovery, a tracheostomy was performed.

Discussion: The nervous system is highly sensitive to lithium. Severe lithium neurotoxicity is a critical condition resulting from excessive lithium accumulation in the central nervous system associated with serum lithium levels ≥2.5 mmol/L. Lithium toxicity symptoms range from mild tremors, gastrointestinal issues, and lethargy to severe neurological effects like seizures, agitation, and altered mental status, as observed in this patient. Lithium is highly dialyzable. Timely haemodialysis was crucial in lowering lithium levels, improving the patient's condition, and prevent long-term complications such as SILENT (Syndrome of Irreversible Effectuated Neurotoxicity) syndrome.

Conclusion: This case underscores the importance of closely monitoring lithium levels and early intervention in the emergency department. Early detection and management, including cessation of lithium, enhance lithium elimination by hydration and haemodialysis, and supportive care for airway protection are crucial for better outcomes.

Keywords: Lithium, neurotoxicity

044

PREHOSPITAL ASPIRIN ADMINISTRATION COMPLIANCE IN SUSPECTED ACUTE CORONARY SYNDROME PATIENTS IN EMERGENCY DEPARTMENT HOSPITAL CANSELOR TUANKU MUHRIZ

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Introduction: Acute Coronary Syndrome (ACS) is a prevalent, life-threatening condition in Malaysia where timely aspirin administration significantly improves outcomes. Despite its proven benefits, prehospital aspirin usage remains at a low rate. This study evaluated the compliance rate of prehospital aspirin administration and examined the reasons for non-compliance.

Methodology: A prospective observational study was conducted from December 1, 2023, to November 31, 2024, at Hospital Canselor Tuanku Muhriz. The study enrolled patients over 17 years old with suspected ACS attended by the Prehospital Care (PHC) team. Exclusion criteria were aspirin allergy, recent self-administration of 300 mg aspirin within 24 hours, history of peptic ulcer disease, bleeding tendencies, traumatic chest pain, concurrent oral anticoagulant use, and elevated blood pressure (above 160/100 mmHg) with other end-organ symptoms. Data collected included patient demographics, compliance rate of aspirin administration, and reasons for non-compliance. Descriptive statistics were analysed using SPSS version 29.

Results: Out of 135 cases, 39 were excluded as per exclusion criteria. The final sample comprised of 96 patients ranging from 20 to 84 years old with mean age 52(16). Sample were predominantly male and of Malay ethnicity. The PHC team's compliance rate for aspirin administration was 61.5%(59/96 patients). Reasons for non-compliance included chest pain perceive as non-cardiogenic (n=25/37; 67.6%), chest pain subside (n=6/37;16.2%). Notably, among those with chest pain perceive as non-cardiogenic (n=7/25; 28%) eventually received a final diagnosis of ACS.

Discussion: The observed compliance rate of 61.5% is lower than the National KPI of 75% set by Kementerian Kesihatan Malaysia (KKM) but slightly higher than reported rates in Pakistan (38%) and Sweden (58%). Misclassification of chest pain emerged as the leading cause of non-compliance, highlighting challenges in prehospital decision-making. These findings underscore the necessity for targeted, continuous education and training for PHC personnel to improve ACS identification and adherence to guidelines.

Conclusion: Prehospital aspirin administration by PHC teams is both feasible and safe, considering that the protocol was implemented just one year prior to the study, enhancing the identification of ACS, particularly unstable angina and Non-ST elevation MI, is essential to boost compliance and improve patient outcomes

Keywords: Prehospital care, acute coronary syndrome, aspirin compliance

045

ADRENALINE: THE FINAL DEFENSE IN COPD EXACERBATIONS

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Introduction: Chronic Obstructive Pulmonary Disease (COPD) is a commonly seen obstructive airway disease worldwide and was the 4th leading cause of death globally in 2021. Management of life-threatening acute exacerbation COPD (AECOPD) is challenging, the use of adrenaline in AECOPD remains controversial.

Case Description: A 76-year-old male with underlying COPD presented with cough and worsening dyspnea despite multiple doses of metered-dose inhaler (MDI) salbutamol. He was then found unresponsive by family members and brought to the hospital. On arrival, he was in asystole and apneic, requiring immediate cardiopulmonary resuscitation (CPR). Return of spontaneous circulation (ROSC) was achieved after four cycles of CPR. Post-intubation, ventilation was challenging, with absence of bilateral chest rise and silent lungs. Bedside ultrasonography revealed the absence of sliding sign on the right lung. Chest X-ray showed no pneumothorax. Suspecting a mucous plug, reintubation was performed, but ventilation remained difficult. The lungs remain tight with poor air entry despite continuous nebulization of bronchodilators and several drug administration such as hydrocortisone, magnesium sulphate, augmentin and even infusion of salbutamol and ketamine. Intramuscular adrenaline 0.5mg were then administered, resulting in significant improvement in air entry and ventilation. Bronchospasm miraculously disappeared. The patient was stabilized and subsequently transferred to the intensive care unit (ICU) for further management.

Discussion: According to the Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines, the management of AECOPD includes bronchodilators, corticosteroids, antibiotics, and oxygen therapy. Bronchodilators include short-acting muscarinic antagonists, short-acting beta-agonists, and combination therapy. Adrenaline use is not commonly practiced or recommended by GOLD guidelines due to concerns about complications such as hypertension and arrhythmias, especially in patients with underlying cardiovascular disease. However, there have been a few case reports and studies suggesting that adrenaline use should be considered in life-threatening COPD due to its potent effect as a stimulant of alpha and beta-adrenergic receptors.

Conclusion: This case highlights the potential role of adrenaline use in refractory bronchospasm during life-threatening AECOPD. Adrenaline use in life threatening AECOPD should be considered when we exhausted all other possible options.

Keywords: Adrenaline, COPD

046

TORN APART, HELD TOGETHER: EARLY HAEMORRHAGE CONTROL & HAEMOSTATIC RESUSCITATION IN A CATASTROPHIC CHEST DEGLOVING INJURY

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Introduction: This case highlights critical importance of early haemorrhage control and rapid transfusion using a Level 1 Rapid Infuser and Massive Transfusion Protocol (MTP) activation to stabilize patient with degloving injury and catastrophic bleed requiring haemostatic resuscitation.

Case Description: A 21-year-old male motorcyclist hit a divider and had degloving injury over right upper chest region with exposed bone and vascular bundle along with catastrophic bleeding. He was brought to resus zone by Paramedic with continuous direct pressure compression over the bleeding site. Upon arrival to ED, Patient was hypotensive (BP 85/40 mmHg), tachycardic (HR 120), and right radial pulse absent. Direct pressure over the bleeding site was continued with 2 Combat Gauze till bleeding stopped. Blood transfusion initiated using Level 1 Rapid Infuser with 4 Safe-O Units and Thawed Plasmas. MTP activated with total transfusion of 6-Units Packed Red Blood Cells, 8-Fresh Frozen Plasma, 8-Cryoprecipitate, 8-Platelets. IV Tranexamic Acid 1gram stat dose and maintenance along with IV Calcium Gluconate 30cc served. Proceeded for further CT Imaging only after haemodynamically stabilised.

Discussion: The first-line intervention for catastrophic bleeding is direct pressure compression with combat gauze—a haemostatic dressing infused with kaolin to enhance clot stabilization. Severe blood loss can quickly lead to haemorrhagic shock requiring blood transfusion. Level 1 Rapid Infuser device capable to deliver large volumes of warmed blood product efficiently. Safe-O bloods transfusion restore perfusion and alongside with Thawed Plasma enables balanced resuscitation strategy to support coagulation. MTP which includes red blood cells, plasma, platelets, and cryoprecipitate is crucial in preventing dilutional coagulopathy and mitigating the lethal triad of trauma such as hypothermia, acidosis, and coagulopathy. Additionally, tranexamic acid prevents fibrinolysis while calcium gluconate counteracts citrate-induced hypocalcaemia resulting from blood transfusion.

Conclusion: Haemorrhage control and blood product transfusion is part of Damage Control Resuscitation (DCR). We advocate the use of haemostatic dressings, Level 1 rapid infuser, balanced resuscitation, tranexamic acid, and calcium gluconate to prevent coagulopathy and enhance perfusion thus ensuring patient survival.

Keywords: Catastrophic bleed, haemostatic resuscitation. massive transfusion protocol, damage control resuscitation

047

RASMUSSEN ANEURYSM: A RARE BUT LIFE-THREATENING COMPLICATION OF PULMONARY TUBERCULOSIS

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Introduction: Haemoptysis is a well-known clinical manifestation of pulmonary tuberculosis (PTB). However, in cases of massive haemoptysis, Rasmussen aneurysm must be considered promptly as a potential cause. Early identification via computed tomography angiography (CTA) and timely arterial embolization are crucial to reduce morbidity and mortality.

Case Description: We present a case of a 71-year-old male with a history of diabetes mellitus and newly diagnosed PTB who came with worsening shortness of breath and haemoptysis. Clinical examination revealed tachypnoea (RR 30) and hypoxia (SpO_2 67% on room air), with bilateral coarse crepitations. The patient was intubated due to impending respiratory failure. Blood tests were unremarkable except for a mildly elevated INR (1.32). Serial chest radiographs revealed new patchy consolidations. Despite treatment with IV and nebulised tranexamic acid, the patient continued to experience massive haemoptysis, leading to an asystolic event requiring two cycles of CPR before return of spontaneous circulation (ROSC). The patient was then transferred to Hospital Queen Elizabeth for advanced care, where bilateral pneumothoraces were noted. A CTA thorax subsequently confirmed the presence of a Rasmussen aneurysm involving the posterior segmental branch of the right lower lobe pulmonary artery. Arterial embolization was successfully performed, and the patient was managed in the ICU.

Discussion: Rasmussen aneurysm, is a rare but potentially fatal complication, occurring in approximately 5% of cavitary lesions. CTA remains the gold standard for diagnosis. Management typically involves bronchial artery embolization, though surgical resection may be necessary in select cases. Globally, reports of Rasmussen aneurysm are limited. To date, there are no published Malaysian case reports, despite rising TB incidence — with Sabah recording the highest number (5,814 cases). Massive haemoptysis lacks a universally accepted volume-based definition. A clinically pragmatic approach is to define it by its physiological impact — including airway obstruction, hemodynamic instability, or significant blood loss — rather than volume alone.

Conclusion: Rasmussen aneurysm, though rare, should be considered in TB patients presenting with massive haemoptysis. Early recognition and a multidisciplinary, intensive care approach are vital to improving patient outcomes. In regions with high TB prevalence, increased clinical awareness may lead to better detection and timely intervention.

Keywords: Rasmussen’s aneurysm, pulmonary tuberculosis

048

NEONATAL RETROPERITONEAL TERATOMA: A RARE CASE OF ABDOMINAL DISTENSION IN INFANCY

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Introduction: Teratomas are congenital germ cell tumors characterized by the presence of tissues derived from all three germ cell layers, with an average diagnosis age of three years. They most commonly occur in gonadal regions but can also present extragonadally, particularly in children.

Case Description: This report describes a case involving a 3-month-old male infant who presented with progressive abdominal distension and increased irritability due to a retroperitoneal teratoma. Physical examination and imaging revealed an 8 cm × 6 cm palpable mass causing significant hydronephrosis and compressing major intra-abdominal vessels. Further evaluation through ultrasound and CT confirmed a heterogeneous, contrast-enhanced mass with cystic components and calcifications, indicating a mature teratoma.

Discussion: A review of teratomatous cases in pediatric patients in Malaysia highlighted the rarity of primary retroperitoneal teratomas, accounting for 3-5% of childhood tumors, with symptoms often stemming from mass effects on adjacent organs, leading to complications such as obstructive uropathy. Diagnoses are typically supported by imaging, where ultrasound serves as the first-line investigation, while CT scans provide insights into the tumor's extent and vascular relationships. Due to their resistance to chemotherapy, surgical resection remains the primary treatment option, and complete excision is critical to mitigate the risk of malignant transformation. The prognosis for patients with neonatal teratomas post-surgical removal is generally favorable, with survival rates nearing 80-100%.

Conclusion: In conclusion, accurate and early diagnosis of retroperitoneal cystic mature teratomas in infants is essential. This case underscores the importance of considering such tumors in the differential diagnosis of abdominal distension and highlights the necessity of timely surgical intervention to ensure successful outcomes.

Keywords: Retroperitoneal teratoma, peadiatric germ cell tumour,abdominal mass in infants, teratoma diagnosis, ultrasound in teratoma

049

ANTERIOR MYOCARDIAL PSEUDOINFARCTION IN A PATIENT WITH NORMOKALEMIC DIABETES KETOACIDOSIS COMPLICATED WITH SEVERE PNEUMONIA

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Introduction: Diabetic Ketoacidosis (DKA) is a life-threatening complication of diabetes mellitus (DM). While DKA has been associated with various cardiovascular complications, pseudo myocardial infarction is a rare and often overlooked, and misdiagnosis may result inappropriate thrombolytic therapy in the emergency department.

Case Description: A 67-year-old male with history of DM, hypertension, and dyslipidemia presented with altered consciousness, shortness of breath, and vomiting. Examination revealed he was tachypneic requiring bi-level positive airway pressure (BiPAP) with compensated shock. Respiratory examinations revealed crackles over right lung with reduced air entry. Results showed glucose 32 mmol/L, high serum ketones, and severe high anion gap metabolic acidosis. Electrocardiography (ECG) showed ST-segment elevation in V2-V6, lead I and aVL with reciprocal changes in inferior leads. Chest x-ray revealed right lobar consolidation with pleural effusion. Bedside echocardiography showed poor heart contractility and hypokinetic segments over anterior wall. Investigations showed WBC 13,600 /uL, potassium 5.3 mmol/L, creatinine 164 mmol/L, high-sensitivity troponin I 24,641 ng/ml. Patient was started on modest fluid resuscitation with intermittent reassessment, fixed-scale insulin therapy, and potassium replacement. Patient was thrombolysed with streptokinase with initial diagnosis of extensive antero-lateral STEMI complicated with DKA. However, post-thrombolysis ECG showed no ST-segment resolution. In ward, DKA therapy was continued, and he was administered intravenous tazoscin for a week. Despite treatment, he succumbed on day 4 of admission due to severe pneumonia.

Discussion: Pseudoinfarction pattern in DKA can be due to acid-base disturbances, hyperkalemia, increased blood viscosity, and the direct effects of ketone bodies on myocardial cells. In previous reports, there was no echocardiographic or angiographic evidence to suggest occlusion myocardial infarction. The management of pseudo myocardial infarction in DKA primarily involves the correction of metabolic derangements, with close monitoring for resolution of ECG changes and improvement in cardiac biomarkers. In some cases, a coronary angiogram may be needed to exclude occlusive myocardial infarction

Conclusion: Clinician should aware the uncommon electrocardiographic alterations in a patient with severe DKA which can mimic myocardial infarction in order to avoid unnecessary treatments.

Keywords: Diabetic ketoacidosis, myocardial infarction, diabetes mellitus, hyperkalemia

050

A BITE OF CONFUSION: WHEN ENVENOMATION MIMICS ANAPHYLAXIS

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Introduction: Snakebites contribute significantly to morbidity and mortality worldwide, particularly in tropical regions. Malaysia is home to over 200 snake species, with approximately 20% classified as medically significant.

Case Description: A 60-year-old woman was bitten by a snake while cooking in her kitchen. She initially experienced pain and swelling at the bite site, followed by vomiting, palpitations and dizziness. Upon arrival at the emergency department, she was tachypneic with an oxygen saturation of 81% and had generalized rhonchi on lung auscultation. She was treated for suspected anaphylaxis with nebulized salbutamol and intramuscular adrenaline. However, her condition rapidly deteriorated. The swelling over her leg was extending proximally and she began to develop ptosis with persistent shortness of breath. Hence requiring intubation for airway protection. Antivenom was subsequently administered, and she was admitted to the intensive care unit. She made a full recovery and was discharged after five days.

Discussion: Snakebite envenomation is a medical emergency that can cause cytotoxic, hemotoxic, or neurotoxic effects. Diagnosis is challenging, especially when symptoms overlap with anaphylaxis, such as bronchospasm and airway compromise, potentially delaying life-saving antivenom. Guidelines recommend administering antivenom within four hours of the bite or as soon as systemic envenomation is identified to prevent progression. In this case, anaphylaxis was initially suspected due to bronchospasm and hypoxia; however, the lack of response to adrenaline and the development of ptosis and respiratory failure indicated neurotoxic envenomation, warranting antivenom. Even in delayed presentations, evidence supports antivenom's continued benefit. Another key challenge was the inability to identify the snake species. This uncertainty requires weighing the risks and benefits of antivenom, which itself carries a risk of anaphylaxis. While its role in reversing systemic envenomation is well-documented, clinicians must remain vigilant for adverse reactions and be prepared to manage them.

Conclusion: In conclusion, this case highlights the diagnostic challenge of distinguishing between snakebite envenomation and anaphylaxis, especially when respiratory distress is a prominent feature. It is crucial for early recognition that warrants timely antivenom administration for the best outcomes for patients.

Keywords: Snake bite, envenomation, antivenom, anaphylaxis

051

THE FALL THAT ALMOST KILLED: DELAYED ADRENAL HEMORRHAGE IN BLUNT ABDOMINAL TRAUMA

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Introduction: Adrenal gland injuries are uncommon in blunt abdominal trauma, with an incidence of 2-3% in major trauma cases.

Case Description: 48-year-old man with diabetes and hypertension presented to the emergency department in peri-cardiac arrest. He collapsed while transferring to bed, requiring cardiopulmonary resuscitation (CPR), with return of spontaneous circulation (ROSC) achieved after five cycles. History revealed a fall in the bathroom a day before under alcohol influence, followed by left-sided chest pain. He initially sought care at a private clinic, where he was given analgesics after a chest X-ray. Extended focus assessment with sonography in trauma (e-FAST) detected free fluid in Morrison's pouch and he was in hemorrhagic shock, prompting massive transfusion protocol (MTP) activation. A whole-body computed tomography (WBCT) showed a large mixed-density hematoma in the left upper abdomen, though the source was unclear. Emergency surgery revealed a left adrenal adenoma injury and splenic injury. The patient made a full recovery and was discharged after two months.

Discussion: A high index of suspicion is necessary in trauma patients with unexplained hemodynamic instability. In this case, e-FAST identified intra-abdominal free fluid, prompting a WBCT. However, the WBCT failed to locate an active bleeding source, leaving the cause of hemorrhagic shock undetermined. Given the patient's ongoing instability, the decision was made for emergent damage control surgery. Intraoperatively, a left adrenal hematoma with active bleeding and a splenic injury were identified as the primary sources of hemorrhage—findings not apparent on initial imaging. The delayed presentation in this patient suggests that the adrenal injury initially might be a contained hematoma, which subsequently ruptured, leading to rapid decompensation. Additionally, consideration of early corticosteroid therapy in adrenal trauma may be beneficial, particularly in preventing adrenal insufficiency in cases of significant hemorrhage.

Conclusion: This case underscores the limitations of CT in detecting adrenal injuries and highlights the critical role of clinical judgment in guiding emergency surgical intervention. This case reinforce the need for early suspicion, serial imaging, and prompt surgical exploration in cases of trauma of unexplained hemorrhagic shock.

Keywords: Adrenal gland injury, WBCT, blunt trauma, limitations

052

THE UNSEEN AIR ESCAPE: A RARE TRINITY IN TRAUMA

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Introduction: The Unseen Air Escape, A Rare Trinity of Pneumopericardium, Pneumomediastinum, and Bilateral Pneumothorax Without Tracheobronchial injury. The simultaneous occurrence of pneumopericardium, pneumomediastinum, and bilateral pneumothorax in blunt trauma in the absence of tracheobronchial injury is uncommon. We report an unusual case of a trauma patient presenting with this triad, likely attributed to the Macklin effect, emphasizing the importance of thorough imaging and conservative management in stable patients.

Case Description: A 70-year-old male with underlying diabetes, hypertension, and hyperlipidemia was involved in a motor vehicle accident without a helmet with unsure mechanism of injury. He sustained a scalp laceration, brief loss of consciousness, and retrograde amnesia. On arrival, he had three episodes of vomiting and a progressive drop in Glasgow Coma Scale (GCS) and requiring intubation for cerebral resuscitation and airway protection. Initial E-FAST ultrasound revealed bilateral barcode signs suggestive of pneumothorax. Chest X-ray detected pneumopericardium and pneumomediastinum without clear pneumothorax or rib fractures. There is no subcutaneousemphysema. CT thorax confirmed bilateral pneumothorax, pneumopericardium, and pneumomediastinum, with no evidence of tracheobronchial injury.

Discussion: The absence of subcutaneous emphysema and clinical signs of tracheobronchial injury highlights the diagnostic challenge of this triad. The Macklin effect explains the air escape, where alveolar rupture leads to air dissecting along bronchovascular sheaths into the mediastinum, pericardium, and pleural space. While blunt trauma, vomiting, or coughing can trigger this phenomenon, its occurrence without airway disruption remains uncommon. However, the patient remained hemodynamically stable, and conservative management with close monitoring, mechanical ventilation, and supportive care led to complete recovery without surgical intervention.

Conclusion: This case underscores the importance of detailed imaging and high clinical suspicion in managing thoracic trauma. It adds to the growing evidence that conservative treatment can be effective in hemodynamically stable patients with air leak syndromes, even in the absence of direct airway injury.

Keywords: Pneumopericardium, pneumomediastinum, pneumothorax, macklin effect

053

URETHRAL HIRUDINIASIS: A FISHY SITUATION TURNED BLOODY NIGHTMARE

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Introduction: Hirudo, a genus of hematophagous leeches, is known to cause hirudiniasis by adhering to host tissues and extracting blood. Urethral infestations are exceedingly rare, with only four Medline-indexed cases reported over the past 40 years, primarily focusing on vesical hirudiniasis. These infestations can result in severe complications, including acute hemorrhage, local tissue reactions, and life-threatening coagulopathies. This case report will explore the rare occurrence of urethral hirudiniasis in a schoolboy, shedding light on its clinical challenges and complications.

Case Description: A 9-year-old boy experienced penile pain while fishing and observed a leech entering his urethra. Upon presentation to the emergency department (ED), his penis was swollen, and he developed urticaria and pruritus with no anaphylaxis. Initial treatment included analgesics, antihistamines, and steroids, which provided symptomatic relief. While awaiting the pediatric surgical team, the leech's tail became visible at the penile meatus and was successfully removed using forceps, resulting in minimal bleeding. Subsequently, in the ward, patient developed hematuria and severe coagulopathy (INR 7.8), necessitating fresh frozen plasma (FFP) transfusion. His condition improved with treatment, and the INR normalized to 1.14 before discharge from hospital. Follow up appointment 3 days later confirmed resolution of symptoms without additional complications.

Discussion: Uncommon presentations of leech infestations, such as urethral hirudiniasis, pose clinical challenges due to the leech's anticoagulant properties. Hirudin, being one of its contents, able to precipitate significant bleeding, such as hematuria and coagulopathy. Timely removal of the leech and supportive interventions, including anticoagulation reversal, are pivotal for favorable outcomes. In this case, manual extraction using forceps was successful. Alternative techniques, such as local anesthetic application (4% lidocaine gel) or saline infusion into the urinary bladder, may obviate the need for invasive procedures like cystoscopy. Additionally, the allergic reaction observed, characterized by urticaria and pruritus, was likely triggered by Aeromonas hydrophila, a bacterium present in leech secretions. The urethra's delicate epithelium increases susceptibility to infections, necessitating close monitoring and follow-up to prevent progression.

Conclusion: Urethral hirudiniasis represents a rare but emergent condition requiring prompt identification and management to mitigate complications, including life-threatening hemorrhage and coagulopathy, pain, allergic reactions, and infections, thereby ensuring positive clinical outcomes.

Keywords: Urethral hirudiniasis, coagulopathy, allergic reaction, extraction

054

WHEN CURIOSITY BECOMES A CRISIS: INCIDENTAL PETROL INGESTION LEADING TO CHEMICAL PNEUMONITIS IN A TODDLER

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Introduction: Accidental hydrocarbon ingestion is a significant paediatric emergency with potentially severe respiratory complications. This abstract highlights the emergency management following a case of petrol ingestion in a young child.

Case Description: A 1-year and 4-month-old boy presented with multiple episodes of vomiting following the ingestion of an unknown quantity of RON 95 petrol. The petrol had been poorly stored in a 1-litre plastic bottle within the household. The child arrived 15 minutes post incident, alert, but irritable, exhibiting bouts of cough and vomiting. His vital signs: blood pressure 111/78 mmHg, pulse rate 164 beats per minute, respiratory rate 32 breaths per minute, and oxygen saturation 100% on room air. Initial lung examination noted no remarkable findings. Laboratory investigation revealed significant leukocytosis (30 x10^9/L) and thrombocytosis (755 x10^9/L) with haemoglobin 12.2 g/dL. Blood gas showed metabolic acidosis with pH of 7.21, pCO2 51 mmHg, lactate 3 mmol/L and bicarbonate 17.3 mmol/L. The patient was given supportive oxygen therapy via face mask and commenced with intravenous fluid. Subsequently he was admitted to Paediatric Ward for close monitoring.

Discussion: Petrol ingestion is common due to its water-like appearance and child's exploratory behaviour. Once ingested, it's low viscosity and high volatility cause surfactant disruption and epithelial injury, leading to alveolar instability and ventilation-perfusion mismatch. Almost immediately upon aspiration, there are signs of tracheobronchial irritation, manifested as coughing and choking. Management prioritises airway protection and respiratory support. In severe cases, intubation may be warranted. As for the imaging, it is very common to see involvement of the right middle lobe. Initial investigation may show leucocytosis which could denote the development of chemical pneumonitis. Additionally, metabolic acidosis could be due to production of organic acid during hydrocarbon metabolism.[3] In these cases, induction of vomiting is not recommended as it may cause further aspiration. Activated charcoal is also not advisable it does not effectively absorb petroleum distillate.

Conclusion: This case highlights the rapid onset of chemical pneumonitis following accidental petrol ingestion. Aggressive respiratory support and multidisciplinary care are crucial for a successful outcome. Most importantly, public should be educated on safe storage of hazardous substance.

Keywords: Petrol ingestion, chemical pneumonitis, hydrocarbon toxicity

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MISPLACED URINARY CATHETER BALLOON

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Introduction: A urinary catheter is a flexible tube used to empty the bladder and collect urine in a drainage bag. The procedure for the insertion of the catheter includes inflating the balloon in urinary bladder. In male, the procedure is more complicated compared to female as male's urethra is longer.This case report discuss the complication of misplacing the balloon which can be missed as other emergency conditioned.

Case Description: A 77 years old male with known case of Benign Prostatic Hyperplasia on indwelling urinary catheter for the past 1 year. Patient regularly changed his urinary catheter biweekly at "Klinik Kesihatan". He presented at emergency department (ED) with reduced consciousness level back at his home. Further history from family member, patient had been lethargic for the past 2 days and complaint of abdominal discomfort. They noted pus inside the urine bag on the day of presentation to ED, claimed the catheter was changed 2 days prior to onset of symptoms. Upon examination, his abdomen was distended with generalized tenderness but more at lower abdomen and palpable bladder. Also noted about 150cc pyurea inside the urine bag. Blood investigation and UFEME show urinary tract infection (UTI) with acute kidney injury.His blood sugar level is 2.6 and patient subsequently fully regained consciousness after given 50cc of Dextrose 50%. However his abdominal x-ray showed dilated bowel, thus patient was treated as symptomatic hypoglycemia secondary to UTI and also to rule out intestinal obstruction. Patient was referred to surgical team and CT Abdomen showed the urinary catheter balloon was inflated inside prostatic urethra.

Discussion: Misplaced urinary catheter balloon can lead to serious complication including urethral trauma which can cause urethral stricture in long term. In this case,it is complicated with UTI and also urine retention that causes the bladder to distend and push the bowel, giving a false picture of dilated bowel on abdominal x-ray.

Conclusion: Although urinary catheter insertion is a simple procedure, but as a healthcare provider we should not take it for granted. All the steps must be followed properly to ensure patient's safety as per Medical Ethics "do no harm".

Keywords: Urinary catheter balloon, urine retention, urinary tract infection

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NEUTROPHIL-LYMPHOCYTE RATIO (NLR) AS A SIMPLE TOOL IN PREDICTING PROGNOSIS AND SEPSIS SEVERITY IN DISTRICT HOSPITAL

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Introduction: In Malaysia sepsis is one of the leading cause of intensive caru unit (ICU) admission.Delayed in recognition of sepsis will result in increased mortality and morbidity. NLR can be calculated by dividing neutrophil count to lymphocyte count. Both parameters can be found in complete blood count test which available in most healthcare facility.

Case Description: A 61 years old malay gentleman with known case of hypertension presented to emergency department complaining of lethargy and poor oral intake for the past 2 days associated with vomiting. Cinically patient looks dry but not lethargic or septic looking. Glasgow coma scale was 15/15.Initial vital sign showed patient in decompensated shock, but saturating under room air. Despite fluid resuscitation, patient still hypotensive thus was started on inotrope. His blood result showed marked leucocytosis, hyponatremia and AKI. His blood gases was normal and not acidotic. His LNR is 31.Chest x-ray show right lung consolidation. Patient was referred to tertiary centre for septic shock secondary to pneumonia, however in view patient is clinically well,was asked by primary team to admit the patient to our hospital. Patient desatured in ward within 6 hours of admission and subsequently succumbed to death.

Discussion: NLR indicate the amount of physiologic stress, level of inflammation and immune response of a disease.A normal range of LNR is between 1-2.Value of more than 8 and 18 classified as moderate and severe stress respectively. Despite being raised in other conditions such as strenuous exercise, stress,p regnancy and chronic disease like coronary heart disease, diabetes and cancer, LNR have high sensitivity and low specifity in predicting severity of an illness including sepsis. Thus it is helpful in differentiating more severe disease versus milder one. In secondary level healthcare facility such as district hospital where equipment and trained personal for critical care is limited, a crucial decision has to be made whether to refer patient to tertiary centre or admit the patient to our facility according to severity and prognosis of the patient.

Conclusion: NLR can served as a cheap, simple and easily available parameters of stress and inflammation to predict the course and prognosis of a disease so that a proper management can be initiated. It should be regularly used in emergency departments and other discipline

Keywords: Neutrophil-Lymphocyte ratio, sepsis

057

COMPARING PRETRAINED MODELS IN VITAL SIGNS IDENTIFICATION USING DEEP LEARNING OBJECT DETECTION FOR PREHOSPITAL CARE

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Introduction: Deep learning has revolutionized medical imaging, extending its impact to prehospital ambulance care. This study evaluates the accuracy of custom-trained deep learning object detection models for identifying vital signs from defibrillator monitor images, specifically addressing challenges posed by small sample sizes and limited hardware resources.

Methodology: This study compared two pretrained models, SSD MobileNet V2 and EfficientDet-D0, both implemented using Python TensorFlow programming. A custom dataset of 90 high-resolution images of captured vital signs from a Zoll X series monitor/defibrillator (pulse rate (PR), blood pressure (BP), oxygen saturation (SO2), and date/time (DT)), was annotated. Transfer learning was employed for model training on a mid-range computing setup. Performance was assessed using mean average precision (mAP) across confidence thresholds of 0.1, 0.3, 0.5, 0.7, and 0.9.

Results: SSD MobileNet V2 demonstrated superior performance compared to EfficientDet-D0. Training times were 5.9 hours for SSD MobileNet V2 and 2.5 hours for EfficientDet-D0, both showing convergence with decreasing loss and increasing learning. SSD MobileNet V2 achieved an overall mAP ranging from 60.81% to 75.66%, while EfficientDet-D0 ranged from 26.31% to 47.81%. Class-specific accuracy for SSD MobileNet V2 vs. EfficientDet-D0 was: PR (76.83-81.83% vs. 56.14-26.75%), BP (91.3% vs. 57.51-62.51%), SO2 (56.61-70.51% vs. 21-37%), and DT (18.5-59% vs. 0-35.6%). Both models exhibited decreased accuracy with increasing confidence thresholds. BP class have consistent highest accuracy detection overall in this study.

Discussion: EfficientDet-D0 displayed greater training variability than SSD MobileNet V2, which showed more stable learning. SSD MobileNet V2's optimized architecture for real-time applications likely contributed to its higher accuracy. The high detection rate for BP may be attributed to its distinct visual features on the monitor. Small objects, such as the date/time display, require further optimization. Performance degradation at higher confidence thresholds reflects increased model specificity. Future improvements should focus on optimizing training parameters and expanding dataset size.

Conclusion: SSD MobileNet V2 outperformed EfficientDet-D0 for vital sign detection, indicating its potential for developing automated image-based monitoring tools in prehospital settings. Despite the small dataset, the custom models achieved promising results. Further research is necessary to evaluate performance across different monitor/defibrillator models and assess real-time implementation feasibility.

Keywords: Deep learning, artificial intelligence, prehospital care, programming

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RETHINK THE WAY YOU RELAX: A DEADLY LOUNGE

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Introduction: Spontaneous hemopneumothorax (SHP) is a rare but potentially life-threatening pleural disruption, often masquerading as simple pneumothorax with great morbidity. It involves simultaneous air and blood accumulation in the pleural cavity without antecedent trauma demanding urgent recognition and intervention. We present a striking case of SHP in a healthy individual, emphasizing its elusive pathophysiology and the imperative for early clinical suspicion.

Case Description: A 33-year-old Thai male with no known pulmonary disease or coagulation disorder, presented with acute onset central chest pain, left-sided back pain, and a pre-syncopal episode after using a massage chair. On arrival, he was hypotensive (BP 84/60 mmHg), tachycardic (HR 116 bpm), and normoxic (SpO_2 98% on room air). Bedside ultrasound revealed an A-profile with absent lung sliding on the left and mediastinal shift with chest X-ray confirming a left-sided tension pneumothorax. A chest tube was swiftly inserted, releasing high-pressure air. However, within the first hour, the tube drained 1 liter of blood, revealing a massive hemothorax. Despite aggressive resuscitation, he remained hemodynamically unstable. CTA thorax showed segmental collapse of the left upper lobe with bronchiectasis and ruled out vascular malformations or malignancy but was unable to exclude bronchopleural fistula, prompting urgent video-assisted thoracoscopic surgery (VATS) and bullectomy.

Discussion: The pathogenesis of SHP remains enigmatic, but it is thought to stem from adhesional rupture, vascular injury, or underlying lung disease, particularly secondary spontaneous pneumothorax (SSP) linked to tuberculosis or emphysema. Hemorrhage into the pleural cavity exacerbates lung collapse, predisposing patients to hemodynamic instability. Clinical deterioration with worsening dyspnea, hypotension, or shock necessitates immediate chest tube insertion. Significant hemorrhage or persistent instability may require surgical exploration for hemostasis. Timely recognition and management are paramount in mitigating morbidity and optimizing outcomes.

Conclusion: Spontaneous hemopneumothorax remains an insidious yet formidable entity in respiratory medicine. This case highlights the need for heightened vigilance in managing spontaneous pneumothorax, as SHP can mimic benign conditions before escalating into a life-threatening emergency. A multidisciplinary approach involving emergency physicians, intensivists, and thoracic surgeons is key to optimizing outcomes.

Keywords: Spontaneous hemopneumothorax, massive hemothorax, mediastinal shift, VATS

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PERCUTANEOUS CATHETER-DIRECTED INTERVENTION FOR ACUTE PULMONARY EMBOLISM: A SINGLE-CENTER EXPERIENCE AT INSTITUT JANTUNG NEGARA

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Introduction: Catheter-directed intervention (CDI), including Cathether-directed thrombolysis (CDT) and mechanical thrombectomy (MT), offers a minimally invasive alternative for acute pulmonary embolism (APE) in high-risk and intermediate-risk patients. We evaluated all APE cases who underwent CDI in IJN, from January to December 2024.

Case Description: This case series consisted of 13 acute pulmonary embolism (APE) patients aged 32 to 69 who underwent CDI. Interventions included CDT using the EkoSonic system (EKOS - ultrasound-assisted thrombolysis), and MT with the Penumbra Indigo Aspiration or Inari FlowTriever systems. 6 patients received EKOS therapy, 6 underwent Penumbra MT, and 1 was treated with Inari MT. 11 out of 13 patients were categorised as intermediate-risk. 1 high-risk patient was treated with penumbra MT. 1 patient was low-risk; however, he had a heavy clot burden and was treated with EKOS.

Discussion: Traditional treatment options for APE includes anticoagulation, systemic thrombolysis and surgical embolectomy. However, new catheter-directed intervention (CDI) techniques are revolutionising the treatment of APE, and provides high-risk and intermediate risk APE patients with possible safer alternative therapy. In our case series, all patients survived to discharge, and they either showed clinical or RV function improvement on echocardiography. Complications were limited to blood loss during the procedure with Penumbra MT. Device selection (CDT vs. MT) should be individualized based on institutional expertise, patient's risk profile, clot burden and patient's preference.

Conclusion: CDI is safe and effective for selected intermediate & high-risk APE patients, with excellent survival and functional outcomes.

Keywords: Catheter-directed intervention, acute pulmonary embolism

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DEADLY TRIANGLE: A CASE OF SEPTIC CAVERNOUS SINUS THROMBOSIS

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Introduction: The "danger triangle of face" of the face which extends roughly from the angles of the mouth to the bridge of the nose, is dangerous merely for anatomic and physiologic reasons. Septic Carvenous Sinus Thrombosis (SCST) commonly arises from infections from the paranasal sinuses, area around the nose, eyes, and mouth. Infections from this area can travel through the skin and pterygoid plexus, a valveless venous system that connects with the cavernous sinus.

Case Description: 51-year-old Indonesian male with underlying hypertension presented with 1 week history of rhinitis, blurry vision, left anterior auricular swelling, left side facial numbness and pain. Examination revealed loss of wrinkle over left forehead, muscle weakness of left eye, drooping angle of mouth and loss of nasolabial fold. No perception of light over left eye with complete ptosis and tense globe. Cranial nerves II,III,IV,IV,V,VI,VII were also impaired. Contrast Enhanced Computed Tomography (CECT) and Computed Tomography (CT) Venography Brain showed Left Cavernous Sinus Thrombosis, mucosa thickening with effacement of nasopharyngeal wall,left maxillary, ethmoidal, sphenoidal sinuses and fossa of Rossenmuller. CECT Orbit showed left ophthalmic artery occlusion with complete ophthalmoplegia. The case were treated with intravenous broad spectrum antibiotic. Patient eventually deteriorated in ward and succumbed to complication of the disease.

Discussion: SCST is a rare, life-threatening disease that occurs when an infection spreads most commonly from the danger area of face to the cavernous sinus and causes clotting in the confined sinus space. The diagnosis of SCST relies mainly on early clinical evaluation, with radiological imaging for confirmation. Magnetic resonance imaging (MRI) is the most sensitive method, providing better resolution than computed tomography (CT), though CECT is often preferred for its accessibility and effectiveness in evaluating bone integrity and potential infections. Treatment for SCST requires prompt and aggressive antibiotic administration. While Staphylococcus aureus is the most common pathogen, broad-spectrum coverage for gram-positive, gram-negative, and anaerobic bacteria is crucial.

Conclusion: The recognition of SCST requires a high level of clinical suspicion and confirmation through imaging. Prompt diagnosis, coupled with extended intravenous antibiotic therapy, is crucial for attaining optimal clinical outcomes.

Keywords: Cavernous sinus thrombosis

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ACUTE UNILATERAL FACIAL NERVE PALSY IN CHILDREN: A RARE PRESENTATION THAT CAUSE A DRAMATIC EFFECT

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Introduction: Facial nerve palsy is a paresis that involves seventh cranial nerve and its division. It's relatively rare and 2 to 3 more times less frequent in paediatric population compared to adult.

Case Description: We presented a case of 6 years old girl whom brought to emergency department by her mother for acute onset of facial asymmetry over right side. Prior to the symptom, child has been having on and off febrile episode for the past one week with right ear pain for three days. Examination showed loss of nasolabial fold, drooping of mouth and effaced right forehead consistent with lower motor neuron palsy of seventh cranial nerve features. Meanwhile, otoscope examination revealed mild bulging and erythematous tympanic membrane of right ear. There was no vesicular eruption inside auditory canal. Blood parameters are normal.

Discussion: Although idiopathic Bell's palsy occurs in majority of adult population, it is different in children aged group as there is more likely that an acute unilateral peripheral facial nerve palsy is due to secondary cause such as infection, inflammatory, traumatic or iatrogenic.

Conclusion: Acute unilateral facial nerve palsy in paediatric population is rare but the dramatic effects create a great concern to parents. This makes early recognition, diagnosis, treatment increasingly important in emergency department setting.

Keywords: Facial nerve palsy, Paediatric

062

WHEN THE AIRWAY FAILS: MANAGING A TRACHEAL INJURY CASE

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Introduction: Tracheal injury is rare but can be terrifying for the treating physician especially when it requires for emergency procedures such as intubation or surgical airway. Here, we present the case of a gentleman with a penetrating tracheal injury due to a trauma and how we manage the airway.

Case Description: A 32-year-old gentleman was brought to the emergency department due to an alleged fall from height of 20 feet and landed onto a 'besi cerucuk' that pierced through his neck. Examination revealed a laceration wound to the anterior neck exposing the trachea. Vitals initially were stable however he had hoarseness of voice. Patient gradually developed shortness of breath with a respiratory rate of 30. Surprisingly other primary survey findings were normal. To secure the airway an endotracheal tube (ETT) sized 6 was placed through the tracheal defect. Post intubation patient was able to saturate with SPO2 of 100%. Patient was transferred to a tertiary centre for trachea repair, tracheostomy and was discharged well after 13 days. An urgent CT Neck revealed skin defect seen at the right side of with ETT seen traversing through the skin defect and piercing the trachea at the level of T2/T3 with its distal tip seen at the carina.

Discussion: Penetrating neck injuries consist of 5-10% of cases in the emergency department. Upon arrival patients requires a rapid and continuous assessment of the airway, looking for hard and soft signs of tracheal injury. Definitive airway management is important to prevent risk of rapid progression of oedema. Superior methods for airway management such as fibreoptic intubation might not always be readily feasible in the acute trauma setting. Published case reports have shown success rates with intubation trough the tracheal defect as proven in the above case. Attempting endotracheal intubation can cause complete transection or obstruction. The transacted distal end of the trachea could be identified and ETT inserted before definitive surgical repair.

Conclusion: Penetrating neck injury is an uncommon presentation in the emergency department however in the event of one; the treating physician can attempt direct intubation through the tracheal defect if and when feasible after proper assessment.

Keywords: Penetrating neck injury, Airway Management, Tracheal Injury

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PURPLE GLOVE SYNDROME: THE HIDDEN PERIL OF PHENYTOIN INFUSION: A CASE REPORT AND LITERATURE REVIEW

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Introduction: Purple glove syndrome (PGS) is a rare but severe adverse effect of phenytoin, a commonly used antiepileptic in prophylaxis and treatment of seizure disorder in emergency department. Instead of a diagnosis, PGS represents a clinical spectrum that ranges from mild disease that often fulfils the triad of pain, swelling and discolouration at the injection site with spontaneous resolution after conservative management, to the other extreme of limb-threatening compartment syndrome and limb ischaemia, often requiring surgical intervention.

Case Description: A 20-year-old female who was treated at our emergency department for breakthrough seizure secondary to defaulted antiepileptic developed the catastrophic spectrum of purple glove syndrome. This patient had an unusually rapid progression of the condition in contrary to the proposed stages in literature and developed the most severe form of PGS – acute compartment syndrome and concurrent vascular compromise and acute limb ischaemia. She underwent revascularization with anticoagulant infusion and urgent fasciotomy. The affected limb was successfully salvaged from amputation and patient was discharged.

Discussion: Diagnosis of PGS should be suspected in patients who develop the classical triad of pain, swelling and discolouration at injection site following phenytoin administration. Early detection and initial management are essential to prevent the condition to progress to its severe form. Phenytoin should be immediately withheld. Early management of PGS includes immediate removal of the implicated cannula, limb elevation, gentle heat and pain relief. Monitoring for progression into limb-threatening complications is necessary. Surgical intervention is indicated if there is evidence of vascular compromise and compartment syndrome to prevent adverse outcome of tissue necrosis and amputation.

Conclusion: PGS is a rare adverse effect of phenytoin however it carries significant morbidity. Clinicians should always anticipate PGS as a potential adverse effect whenever administrating phenytoin. Administrating staff should aware of the existence of phenytoin infusion protocol and strict adherence must be followed to minimize the risk of PGS

Keywords: Purple glove syndrome, phenytoin, compartment syndrome, limb ischaemia

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ESCAPE THE CARDIAC ARREST: A FUN ALTERNATIVE FOR LEARNING ALS RESUSCITATION

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Introduction: Effective training in Advanced Life Support (ALS) is essential for improving outcomes in cardiac arrest. Gamified learning, such as escape room (ER) games, has gained popularity for its immersive and engaging approach. This study aimed to create an innovative educational ER game in ALS training.

Methodology: We developed a cardiac arrest resuscitation-themed ER game with its content was validated in accordance with the American Heart Association (AHA) guidelines. The participants are locked in and required to solve a series of puzzles and demonstrate skills in order to escape the rooms within one hour. The game was followed by a debriefing session. A baseline knowledge and practical skills were assessed, comprising multiple-choice questions (MCQs) on basic theory and decision-making, together with two performance assessments on chest compression-only CPR and manual defibrillation. Students were provided with self-directed learning materials for two weeks before the game. A post-tests including students' perceptions of the ER game were evaluated using a Likert scale questionnaire.

Results: A total of 46 fourth-year medical students from Universiti Kebangsaan Malaysia (UKM) participated in the study. Post-test scores showed significant improvement in both basic theoretical knowledge (pre-test: 6 [5-8], post-test: 10 [9-10]; $P<0.001$) and decision-making (pre-test: 4 [2.8-6], post-test: 6 [5-7]; $P<0.001$). Performance in chest compression-only CPR (pre-test: 7 [6-8], post-test: 9 [8-10]; $P<0.001$) and manual defibrillation (pre-test: 3 [2-4], post-test: 11 [10-12]; $P<0.001$) also showed significant improvement. All students (100%) agreed that the ER game was enjoyable, useful for learning, improved teamwork, and appropriate for the university.

Discussion: The ER game provided an engaging and effective learning experience, enhancing both theoretical knowledge, decision making and practical skills of ALS. It's immersive and interactive nature likely contributed to increased motivation and active participation, reinforcing knowledge and enhancing skill acquisition. This suggests that gamified learning can serve as a fun alternative to traditional resuscitation training.

Conclusion: The ER game demonstrated an enjoyable and effective alternative education approach to learning of knowledge and skills in ALS training among medical students. This innovative approach can serve as a valuable addition to emergency medicine curricula.

Keywords: Advanced Life Support, gamification, escape room, medical education

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LIFELINE IN THE SKY: AIR TRANSPORT OF ANTIDOTE FOR ARSENIC POISONING

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Introduction: Arsenic poisoning is a global issue, affecting many through environmental and occupational exposure, as well as intentional acts like suicide or homicide. The local and systemic manifestations vary based on several factors, including the quantity ingested, duration of exposure, and the chemical state of the arsenic.

Case Description: A 14-year-old boy presented to our centre, Hospital Lahad Datu, 1 hour post incidental ingestion of arsenic-based pesticide. Patient mainly exhibited gastrointestinal symptoms and was resuscitated accordingly with crystalloid and oxygen support. “Pusat Racun Negara” was alerted and subsequently, case was discussed with Consultant Toxicologist. It was advised then for administration of chelating agent (Dimercaprol) within 6 to 8 hours post arsenic exposure for 48 hours.Unavailability of the antidote in our centre prompted a collaboration with Hospital Queen Elizabeth, Kota Kinabalu, in which a mercy flight by The Royal Malaysian Navy was arranged to have the antidote flown to our centre. The first dose intramuscular (IM) Dimercaprol was successfully administered in our Emergency Department approximately 6.5 hours post ingestion.Treatment with IM Dimercaprol continued for 48 hours followed by prolonged chelation therapy throughout admission, a decision made based on clinical judgement. Whilst admitted, he developed multiple complications of arsenic toxicity which include kidney injury; however, not requiring dialysis; transaminitis and bilateral sensorineural hearing loss. The case was co-managed by multidisciplinary teams. Miraculously, after 1 month of admission, he was asymptomatic and was discharged well.

Discussion: Dimercaprol neutralises heavy metal by forming a stable five-membered ring between its sulfhydryl groups with the heavy metals, promoting its elimination. Early initiation of chelation therapy following arsenic exposure demonstrated a positive impact on patient outcomes and was made possible in this case with air transport of the antidote.

Conclusion: Despite having limited resources, district hospitals in Sabah strive in providing optimal patient care and treatment. The advancement of technology, particularly in air medical transport, plays a crucial role in addressing these healthcare gaps, improving patient prognosis by providing timely access to specialized care.

Keywords: arsenic, poisoning, toxicity, air medical transport

066

A SIMPLE COUGH OR SOMETHING MORE?: WHEN VAPING GOES WRONG. AN UNEXPECTED CASE OF HAMMAN SYNDROME IN HEALTHY INDIVIDUAL

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Introduction: Hamman Syndrome is a rare condition characterized by the presence of free air in the mediastinum without an obvious traumatic or iatrogenic cause. We present a rare case of Hamman Syndrome in a healthy young adult following vaping, highlighting the potential for e-cigarette use to induce barotrauma.

Case Description: A 20-year-old healthy man with a two-year history of vaping was brought to the Emergency Department with a one-day history of cough, left neck swelling, and chest pain. He was alert, conscious, and not in distress, with stable vital signs and no features suggestive of Marfan syndrome. Lung examination revealed signs of pneumothorax, including hyperresonance on percussion, reduced air entry in the left lung, and crepitus extending from the neck to the left chest. Lung ultrasound showed evidence of pneumothorax. Blood tests were normal. Chest X-ray and computed tomography (CT) scan of the thorax confirmed a left apical pneumothorax, pneumomediastinum, and extensive subcutaneous emphysema in the neck and upper thorax, with no evidence of tracheobronchial or esophageal injury, nor subpleural blebs or bullae. A left chest tube was inserted, and a repeat chest X-ray on day 6 showed resolution of the subcutaneous emphysema and pneumothorax, with resolving pneumomediastinum. The patient was discharged in stable condition and advised to stop vaping.

Discussion: Vaping has become increasingly popular worldwide, especially among young adults and adolescents, as an alternative to traditional smoking. While the exact mechanism by which vaping induces Hamman syndrome remains unclear, contributing factors may include barotrauma from deep inhalation, irritant-induced coughing, and vaping-related inflammation. Although Hamman syndrome is typically benign, its presentation can mimic life-threatening conditions such as Boerhaave syndrome and tension pneumothorax. However, distinct radiological features help differentiate these conditions. This case underscores the importance of recognizing vaping as a potential trigger for Hamman syndrome and highlights the need for patient education on its pulmonary risks. Further research is necessary to understand the long-term consequences of vaping and its role in spontaneous pneumomediastinum.

Conclusion: CT thorax scan is essential for diagnosing spontaneous pneumomediastinum while ruling out serious conditions. Early recognition prevents unnecessary treatments and ensures proper care.

Keywords: Hamman syndrome, pneumothorax

067

ADVANCING EMERGENCY PULMONARY EMBOLISM CARE: ULTRASOUND UTILITY, MEDICATION OF CHOICE AND PERT IMPLEMENTATION

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Introduction: Pulmonary embolism (PE) is a life-threatening condition that necessitates prompt diagnosis and intervention. This discussion highlights the importance of Pulmonary Embolism Response Teams (PERT) in enhancing patient outcomes through a multidisciplinary, protocol-driven approach following rapid identification using ultrasound in the emergency department (ED).

Case Description: A 57-year-old woman presented with sudden-onset breathlessness and a history of one month of immobilization due to trauma. On initial assessment, she was hypotensive and tachycardic (HR 120/min), with an oxygen saturation of 90% onroom air and a respiratory rate of 30 breaths per minute. Her Well's score was highand bedside Point-of-care ultrasound (POCUS) revealed a dilated right ventricle, a D-shaped left ventricle, and a positive McConnell sign. A straddling thrombus was identified in the main pulmonary artery. Incompressible left femoral and popliteal vein, consistent with deep vein thrombosis (DVT) were found. She underwent urgent open pulmonary embolectomy. She was subsequently discharged in stable condition with warfarin therapy.

Discussion: In cases of high-probability PE without hemodynamic compromise, LMWH(enoxaparin 1 mg/kg BID or fondaparinux 5–10 mg based on body weight) should be promptly administered and CTPA should be performed within 24 hours. Modern medicine acknowledge role of POCUS in detection of PE by identifying direct and indirect echocardiographic signs with or without lower limb DVT. Fondaparinux is preferred due to a lower bleeding risk, while enoxaparin remains a viable option due to its shorter half-life. Studies found fondaparinux to be more effective in reducing venous thromboembolism incidence. With over 100 PERT teams in the U.S., growing evidence supports their impact on PE treatment. Implementing PERT in MOH tertiary centers should be considered, as studies show a 43% reduction in 6-month mortality and shorter hospital stays (9.1 to 6.5 days).

Conclusion: This case underscores the importance of establishing a local PERT in Malaysia MOH hospitals to enhance emergency care and improve patient survival in acute PE, with active stakeholder involvement ensuring its success.

Keywords: Pulmonary Embolism, Ultrasound, Medication

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SIMULTANEOUS ACUTE ISCHEMIC STROKE AND STEMI: A DILEMMA IN EMERGENCY MANAGEMENT

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Introduction: Cardio-cerebral infarction (CCI) is a rare but critical emergency involving simultaneous acute ischemic stroke and STEMI, posing complex treatment challenges. This report explores diagnostic and therapeutic dilemmas, emphasizing the need for a multidisciplinary approach to balance reperfusion benefits with hemorrhagic risks.

Case Description: A 62-year-old male presented with acute left-sided hemiparesis and dysarthria. Neurological examination showed 0/5 motor power in the left upper and lower limbs, with preserved function on the right. His random blood glucose was 9.6 mmol/L, and vitals were stable. A stroke protocol was activated. Cardiac telemetry revealed ischemic changes, and ECG showed ST-segment elevations in the inferior leads with posterior and right ventricular involvement. Further history disclosed chest discomfort since the previous day, peaking the night before admission. POCUS demonstrated impaired left ventricular function with akinetic inferior and posterior walls. The aortic root was 3.4 cm, with no evidence of dissection. The patient had transient hypotension (lowest BP: 80/56 mmHg), managed with norepinephrine infusion. The case was referred to neurology and cardiology. Primary PCI was performed, and the patient was admitted to the CCU. He was then discharged well under anticoagulant therapy.

Discussion: Concurrent stroke and STEMI, termed cardio-cerebral infarction (CCI), is rare (0.009%–0.3% prevalence) and often results from simultaneous thromboembolic events due to atrial fibrillation, plaque rupture, or paradoxical embolism. Management of CCI poses a dilemma. Thrombolysis, standard for both stroke (alteplase 0.9 mg/kg) and STEMI (tenecteplase or streptokinase), carries high bleeding risk in stroke patients requiring PCI and dual antiplatelet therapy. Delaying stroke treatment to prioritize PCI risks worsening cerebral ischemia. Current evidence suggests PCI should be prioritized over systemic thrombolysis when feasible to minimize hemorrhagic complications. While study suggest a lower dose of thrombolysis (alteplase 0.6 mg/kg) is as effective as standard with lower risk of complication, mechanical thrombectomy may be considered in selected cases.

Conclusion: This case highlights the need for a multidisciplinary approach involving emergency, neurology, cardiology, and critical care teams. Due to limited large-scale studies, individualized management based on patient stability and institutional resources remains crucial. Further research is needed to establish standardized protocols for optimal CCI management.

Keywords: Stroke, Myocardial Infractions, Emergency

069

COMPARISON OF PATIENT OUTCOMES BETWEEN MANUAL AND MECHANICAL CPR IN ADULT CARDIAC ARREST IN A PRIVATE HOSPITAL

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Introduction: High-quality chest compressions are essential in cardiopulmonary resuscitation (CPR) and influence patient outcomes following cardiac arrest. Manual CPR is often limited by rescuer fatigue, inconsistent compression quality, and inconsistent staff proficiency. Mechanical CPR (mCPR) devices deliver consistent and uninterrupted compressions. This study aims to compare patient outcomes—return of spontaneous circulation (ROSC) and survival to discharge—between manual CPR and mechanical CPR (mCPR) in in-hospital cardiac arrest. Background and Setting In Ipoh Specialist Hospital, a private hospital with a hospital-wide Code Blue system, Emergency and ICU staff typically manage advanced interventions such as airway, defibrillation, and medication administration. However, manual chest compressions are often performed by the respective unit's staff, particularly in general ward settings. Due to a lower frequency of cardiac arrest events, many staff have limited hands-on real-life resuscitation experience, potentially affecting compression quality. To address this, our hospital implemented the LUCAS mCPR device into Code Blue protocol in July 2023.

Methodology: We conducted a retrospective analysis of adult in-hospital cardiac arrest cases from July 2022 to December 2024. Patients receiving manual CPR (n = 104) were compared with those treated using the LUCAS mCPR device (n = 88). ROSC and survival to hospital discharge were analysed using the Chi-square test and Fisher's exact test, respectively.

Results: The ROSC rate was 58.7% in the manual CPR group and 61.4% in the mCPR group (p = 0.768). Survival to discharge was 38.5% in the manual CPR group and 32.9% in the mCPR group (p = 0.454), with no statistically significant differences observed (p = 0.454).

Discussion: Although neither difference was statistically significant, ROSC was slightly higher with mCPR, while survival to discharge was higher with manual CPR. These findings may reflect limited sample size and variability in patient condition or post-resuscitation care. mCPR may offer operational benefits by delivering consistent compressions and freeing clinical staff for other critical tasks—particularly in setting where staff have limited CPR exposure or difficulty maintaining compression quality.

Conclusion: In our setting, mCPR achieved outcomes comparable to manual CPR.

Keywords: Mechanical CPR, in-hospital cardiac arrest, code blue management, return of spontaneous circulation

070

IMPLEMENTING MECHANICAL CPR DEVICE IN CODE BLUE MANAGEMENT: OUR EXPERIENCE

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Introduction: High-quality cardiopulmonary resuscitation (CPR) is critical for cardiac arrest survival. To address challenges with manual CPR, such as rescuer fatigue, inconsistent compressions, and limited staff availability, our centre implemented the LUCAS mechanical CPR (mCPR) device. This poster outlines our implementation process, challenges, solutions, and outcomes.

Case Description: We chose the LUCAS device for its minimal consumable needs and low maintenance. Staff training was conducted through lectures, demonstrations, hands-on sessions, and mock code simulation, focusing on critical care units. The Code Blue protocol was updated to incorporate the mCPR device, and initial pilot testing was conducted in the Emergency Unit before a broader rollout.

Discussion: Initial challenges included consultant doubts about the device's benefits and complications, team unfamiliarity causing assembly delays, and device portability issues. These were addressed through regular briefings and training, consultant demonstrations and discussions, and developing a custom Code Blue cart for efficient device transport.

Conclusion: Staff surveys highlighted the mCPR device's benefits: providing consistent, high-quality CPR, reducing rescuer fatigue, freeing team members for critical tasks (airway management, defibrillation, medication administration), and enhancing resuscitation effectiveness. Implementing the mCPR device improved our resuscitation efforts. Despite initial challenges, regular training and effective logistics solutions facilitated successful integration into our code blue management. The mCPR device has improved our code blue management by ensuring high-quality CPR, reducing rescuer fatigue, and allowing team members to focus on critical tasks. We recommend other hospitals assess their needs, select a suitable mCPR device, provide comprehensive training, engage stakeholders, update protocols, conduct pilot testing, and optimize logistics for successful implementation.

Keywords: Mechanical CPR, in-hospital cardiac arrest, code blue management, return of spontaneous circulation

071

CAUDA EQUINA SYNDROME SECONDARY TO SACRAL CHORDOMA: A CASE REPORT

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Introduction: Cauda equina syndrome (CES) is a rare yet urgent neurosurgical condition characterized by the compression of cauda equina nerve roots, leading to potentially irreversible neurological deficits if untreated. While lumbar disc herniation is the most common cause, rare entities like sacral chordoma can also result in CES. Sacral chordomas are malignant tumors originating from notochord remnants, often presenting with vague symptoms that delay diagnosis. This case report highlights an atypical presentation of CES secondary to sacral chordoma, emphasizing the importance of early recognition, imaging, and surgical intervention.

Case Description: A 63-year-old Malay gentleman with diabetes, hypertension, and dyslipidemia presented with acute onset urinary and bowel incontinence, following a month of buttock pain and lower urinary tract symptoms. He initially sought treatment for worsening buttock pain and was diagnosed with coccydynia. He was subsequently admitted to the urology ward for acute urinary retention secondary to benign prostatic hyperplasia and was discharged with clean intermittent self-catheterization. However, the next day, he developed acute urinary and bowel incontinence, prompting a second visit to the emergency department. Neurological examination revealed saddle anesthesia and reduced sensation at S3-S5 levels, with absent perianal reflexes. MRI revealed an expansile lesion from S2-S4, suggestive of chordoma. Histopathological examination confirmed the diagnosis. The patient underwent wide sacral resection up to S1 with posterior spinal instrumentation and fusion.

Discussion: This case underscores the diagnostic challenge posed by CES with atypical presentations. The absence of classic lower limb symptoms delayed recognition, highlighting the importance of thorough history-taking and detailed neurological examinations. Sacral chordomas, although rare, must be considered in patients with unexplained urinary or bowel dysfunction. MRI is pivotal in confirming diagnosis and guiding management. Early surgical intervention is critical to prevent permanent neurological deficits.

Conclusion: Clinicians should maintain a high index of suspicion for CES, especially in atypical presentations. Recognizing rare causes like sacral chordoma is essential to ensure timely diagnosis and intervention, thereby improving patient outcomes.

Keywords: Cauda equina syndrome, sacral chordoma, saddle anaesthesia, incontinence

072

AGAINST THE ODDS: MANAGING RUPTURED ECTOPIC PREGNANCY POST-TUBAL LIGATION

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Introduction: Bilateral tubal ligation, or female sterilization is an effective and safe method for permanent contraception. The probability of ectopic pregnancy occurring is increased when pregnancy occurs after sterilization. Ectopic pregnancies pose a significant risk as they can result in a ruptured fallopian tube, causing severe bleeding that may become life-threatening if not treated promptly.

Case Description: A 39 years old lady, has bilateral tubal ligation done 5 years ago, presented to our center with one week history of suprapubic pain. She has no per vaginal bleeding neither an episode of amenorrhea. Per abdominal examination reveal tenderness over lower abdominal region with stable haemodynamic parameters. Her urine pregnancy test (UPT) turned up positive thus a bedside scan done which showed free fluids at Morrison Pouch and Pouch of Douglas. Extrauterine gestational sac can be seen with fetal pole corresponding to 6 weeks size. Patient was then subjected for emergency laparotomy and salpingectomy. Intraoperatively, noted hemoperitoneum with 200ml of volume estimation. Extrauterine gestational sac with fetus seen at the remnant of the right Fallopian tube with fimbrial end. Proceed with total right salpingectomy. Post operatively, patient was stable and discharged well.

Discussion: The failure rate of BTL is typically around 0.5%, meaning that about 1 in 200 women may become pregnant after the procedure. Healthcare professionals should remain vigilant and consider ectopic pregnancy as a potential diagnosis in women of reproductive age who present with lower abdominal pain and amenorrhea, even if they have undergone tubal sterilization. Women with bilateral tubal ligation should be informed about the rare possibility of failure and advised to seek prompt medical attention if they experience symptoms or signs indicative of pregnancy.

Conclusion: Early detection and suspicion of ectopic pregnancy in women of reproductive age post BTL is cardinal as it requires prompt action and intervention to prevent adverse outcome for patient.

Keywords: Ectopic pregnancy, tubal ligation

073

CHATBOT APPLICATION VERSUS CONVENTIONAL TRIAGING IN THE PREDICTION OF PATIENT'S OUTCOMES IN EMERGENCY DEPARTMENT

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Introduction: The primary function of triage in Emergency Departments (ED) is to ensure timely prioritisation of patients based on clinical urgency. Various triage systems exist, but are susceptible to inter-rater variability due to human factors. This study evaluates the triage performance of ChatGPT version 4.0 by comparing its decisions to conventional triage outcomes using the Malaysian Triage System (MTS) and Emergency Severity Index (ESI), and assesses its ability to predict patient disposition outcomes compared against actual clinical dispositions

Methodology: A retrospective study was conducted at the ED of Hospital Canselor Tuanku Muhriz (HCTM), involving 499 adult patients seen between June 2023 and May 2024. Data on demographics, presenting complaints, and vital signs were extracted from the hospital information system. This data was entered into ChatGPT version 4.0 using standardised prompts to assign triage categories according to MTS (2022 revision) and ESI, and to predict dispositions (discharge, general ward, ICU, or death). ChatGPT's outputs were compared to actual triage and disposition outcomes using cross-tabulation, Cohen's Kappa, and Chi-square tests.

Results: The index triage category (ITC) by ChatGPT 4.0, according to the MTS (ITC-MTS) and ESI (ITC-ESI) classifications, demonstrated fair agreement with conventional triage, with $\kappa = 0.305$, $p < .001$ and $\kappa = 0.329$, $p < .001$, respectively. For disposition predictions, ChatGPT's outputs revealed fair concordance with the actual outcomes, $\kappa = 0.288$, $p < .001$. ChatGPT showed stronger performance in low-acuity cases, with more variability in semi-urgent and high-acuity presentation categories.

Discussion: ChatGPT version 4.0 demonstrated promising alignment with conventional triage particularly for low-acuity patients, suggesting it can reliably identify stable cases. However, limitations were noted in more severe cases, possibly due to reliance on static inputs without real-time clinical cues or evolving patient status. Over-triage was observed in some cases, potentially reflecting a safety-focused bias, which could strain ED resources. Nevertheless, the consistent statistical associated bolster ChatGPT's potential as a triage assist tool when integrated with clinician oversight

Conclusion: ChatGPT version 4.0 demonstrated fair agreement with conventional triage and disposition outcomes. While not a replacement for clinical judgment, it may assist decision-making and enhance triage consistency in ED workflows.

Keywords: Artificial intelligence, ChatGPT, Emergency department, Triage

074

THE DEADLY FLAG

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Introduction: The South African flag sign is an electrocardiogram (ECG) pattern that is associated with high lateral ST-segment elevation myocardial infarction (STEMI), a condition that requires immediate intervention. Based on previous literature, this ECG pattern was caused by a sudden blockage of the left anterior descending coronary artery (LAD-D1).

Case Description: A 54-year-old Malay male presented with typical acute severe chest pain that started three hours before the presentation at our centre. He was haemodynamically stable with clear lung auscultation. Upon arrival, the ECG revealed ST-segment elevation over I, aVL, and V2, with reciprocal ST-segment depression over lead III. The STEMI Network was activated for Primary Percutaneous Cardiac Intervention (PPCI), and the patient was sent for urgent PCI at a cardiac centre that was located 34 kilometres from our centre. PPCI shows occlusion over the Ramus Intermedius (RI) artery that was successfully stented. The procedure was deemed successful with complete resolution of angina pain.

Discussion: The South African flag sign was first described in 2015 with the ECG characteristic of ST-segment elevation of lead I, aVL and V2 with ST-segment depression in lead III. This is an ECG sign that was known to represent the acute occlusion of LAD-D1. However, this sign can also represent acute occlusion in multiple other arteries. A study done in 2021 found that this ECG pattern can be seen in cases of acute coronary occlusion of the LAD-D1 (41.9%), left circumflex-obtuse marginal (LCX-OM11) (19.4%), LAD (32.3%), and RI (6.5%). As shown in this case, the culprit artery that was identified was the RI artery. The RI artery is a variant coronary artery that arises from the left main bifurcation angle (LMBA) that occurs only in 20% of the population. The presence of this artery increases coronary turbulence flow and reduces the endothelial shear stress that theoretically promotes atherosclerotic plaque formation.

Conclusion: The South African flag sign is an ECG sign that requires urgent attention and intervention. This ECG pattern should be made known to every physician and medical officer working in the emergency department, as any delay of intervention may lead to worse patient outcomes.

Keywords: STEMI, Coronary, ECG, PCI

075

ALLEGED NAJA KAOUTHIA SNAKE BITE WITH SKIP CUTANEOUS LESION DERMONECROSIS COMPLICATED WITH PYROGENIC REACTION TOWARDS ANTIVENOM

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Introduction: Naja Kaouthia, or the monocled cobra, is a venomous snake commonly found in Southeast Asia. Its bite can cause both local and systemic symptoms. A rare but significant complication of its antivenom is a pyrogenic reaction, a severe immune response. This case report describes an 11-year-old boy who developed a pyrogenic reaction after receiving QSMI Naja Kaouthia antivenom, along with skip dermonecrosis lesions.

Case Description: An 11-year-old Malay boy was brought to the Emergency Department after a cobra bite on his left foot. He presented with localized pain, swelling, and bruising. Initial management included IM tetanus toxoid, IV fluids, analgesia, and one cycle of QSMI Naja Kaouthia antivenom, while monitoring the rate of proximal progression (RPP), pain score progression (PSP), and vital signs.Within hours of antivenom administration, he developed periorbital swelling, mastoid swelling, and fever, indicating an allergic and pyrogenic reaction. He was treated with antihistamines and corticosteroids. Supportive care, including IV fluids and antibiotics, was continued under the co-management of peadiatric and orthopedic team. His condition stabilized within 24 hours, with symptoms resolving with continued antihistamines and steroids.By post-bite day 3, the dermonecrosis had worsened, showing skip dermonecrosis lesions on the left foot. However, RPP, PSP, and creatine kinase (CK) levels improved, so further antivenom was not needed. The patient underwent wound debridement on post-bite day 8 to remove necrotic tissue and drain abscesses. No systemic envenomation effects were found, and inflammatory markers showed a decreasing trend. He was discharged on post-trauma day 15.

Discussion: Pyrogenic reactions to antivenom are rare but require early recognition and treatment. Differentiating allergic or pyrogenic reactions from envenomation symptoms is crucial for appropriate management. Antivenom administration should be cautious, with supportive treatment like corticosteroids and antihistamines for severe immune responses. Skip dermonecrosis lesions alone do not require additional antivenom unless other parameters worsen.

Conclusion: This case highlights the importance of early recognition and management of pyrogenic reactions. Healthcare providers must be vigilant in differentiating immune-mediated reactions from envenomation to optimize patient outcomes. Skip dermonecrosis lesions do not always indicate the need for further antivenom administration.

Keywords: Naja Kaouthia, Pyrogenic, Antivenom

076

ROLE OF BENZODIAZEPINE IN CATATONIC SCHIZOPHRENIA

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Introduction: Schizophrenia is divided into five subtypes, disorganized schizophrenia, paranoid schizophrenia, residual schizophrenia, undifferentiated schizophrenia, and catatonic schizophrenia.

Case Description: 60 years old Chinese female with known case of hypertension, diabetes mellitus, dyslipidaemia and schizophrenia on IM clopixol 200mg monthly was brought to emergency department for unresponsiveness for 1 day. Patient was last seen well 2 days ago. Otherwise, no history of fever, chest pain or weakness, or fall. Upon assessment noted patient was still unresponsive and has glass cow coma (GCS) scale of E1V1M1(3/15), but no stridor, warm peripheries, and not tachypnoeic or bradypnea, bilateral pupil are 3mm/3mm equal, reactive. Noted occasional crying and lip smacking, together with movement of head and hands. On neurological examination, noted power of bilateral upper limb and lower limb is 0/5, hypotonia, reflex 2+, no clonus. Blood investigation for full blood counts, renal profile, troponin T, liver function tests are all normal and Ecg shows sinus rhythm. CT brain was performed but also shows no abnormalities. Patient was given trial of intravenous 1-2 mg of midazolam, every 2-3 hours, noted improvements in the GCS E3V2M5, able to obey simple commands, but sill having occasional crying. As a conclusion a diagnosis of catatonic schizophrenia was made and referral psychiatric and medial team was made. Patient was admitted in medical ward for further observation of Gcs and for electroconvulsive therapy (ECT) role later if not responsive to benzodiazepine.

Discussion: Catatonic schizophrenia is a syndrome characterised by motor abnormalities like purposeless activity, immobility and posturing, together with disturbances of consciousness. Three of the twelve symptoms must be present; Catalepsy, Waxy flexibility, Stupor, Agitation, Mutism, Negativism, Posturing, Mannerisms, Stereotypies, Grimacing, Echolalia, and Echopraxia. Patients with catatonia are susceptible to malnutrition, dehydration, pneumonia. Neuronal pathways mediated by the neurotransmitter gamma-aminobutyric acid (GABA) are believed to play a central role in the integration of emotional and cognitive functions. Catatonic symptoms are postulated to arise from dysregulation in these pathways. Benzodiazepines potentiate GABAergic activity and are believed to counteract the GABAergic dysregulation underlying catatonic symptoms.

Conclusion: This case illustrates of patient with Catatonic Schizophrenia and its role and treatment using benzodiazepine.

Keywords: Schizophrenia

077

CHALLENGES IN DIAGNOSING POLYMYOSITIS, A TYPE OF PROXIMAL MYOPATHY OF MUSCLES

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Introduction: Idiopathic inflammatory myopathies involve four major subtypes that include polymyositis, dermatomyositis, inclusion body myositis, and necrotizing myopathy. We report such a case that presented with slow progressive chronic proximal myopathy developing in an individual over a period of months.

Case Description: 64 years old Chinese gentleman with known case of diabetes mellitus, hypertension, ischemic heart disease, presented to emergency department with gradual bilateral proximal muscles of upper limb and lower limb weakness for the past 1 month. Weakness started from bilateral thigh, buttock, legs, then bilateral shoulder towards upper limb and associated with dysphagia. No recent history of fever or prolong strenuous exercise or use of any traditional medication, no rashes no urinary or bowel incontinence and no shortnesss of breath. During neurological examination noted power of bilateral extensor and flexor of shoulder and hip was 2/5 but both knee, ankle, elbow and wrist was 5/5. However, muscle tone, reflex, sensation and cranial nerves are normal. Investigation test taken, noted renal profile was normal but creatinine kinase was 12561 units/L. Full blood count and C- reactive protein are in normal value. All the tumour markers, C3,C4 and ANA were also within normal parameter. Patient was hydrated adequately with intravenous drip of 1.5L/24 hours with positive balance. Patient was subsequently seen by neuromedical team and admitted in ward for Electromyography (EMG), serum anti myositis antibodies test and started on oral prednisone 1 mg/kg a day. and for possible intravenous immunoglobulins (IVIG) administration.

Discussion: Polymyositis is an idiopathic inflammatory myopathy characterized by Progressive proximal muscle weakness, Elevated skeletal muscle enzyme levels, Characteristic electromyography (EMG) and muscle biopsy findings of endomysial mononuclear inflammatory infiltrate and muscle fiber necrosis. Polymyositis can cause few complications like increased risk of myocardial infarction, aspiration pneumonia due inability to swallow, as well as regurgitation problems and risk of thromboembolism.

Conclusion: Polymyositis, being a chronic disease, is associated with a grave prognosis in the long run. In addition to causing disability and affecting the quality of life of the patient. The majority of patients usually respond to steroid therapy.

Keywords: Polymyositis

078

STENT MIGRATION IN OESOPHAGEAL CANCER: A CASE REPORT

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Introduction: Oesophageal stents are commonly used as a cost-effective and advantageous palliative measure in malignant dysphagia, as well as for treatment of other benign esophageal conditions, such as benign esophageal strictures, esophageal perforations, and tracheoesophageal fistulas. However, it carries the risk of complications that may increase the morbidity and mortality rate, such as chest pain and stent migration, which is known to occur in up to 20% of patients.

Case Description: We describe a 60-year old Chinese male with a background of Oesophageal Cancer who presented to the Emergency Department with massive hematemesis one month after undergoing oesophageal stenting via oesophagogastroduodenoscopy. He was hypotensive and required emergency blood transfusion. A CT aortogram showed interval migration of the oesophageal stent distally into the stomach, together with an increase in size of the mid oesophageal tumour. A new fully covered metal stent was deployed emergently to tamponade the tumour. However, the existing stent was unable to be removed in the same setting due to extensive blood clots that made visualisation difficult and was only later removed when he underwent minimally-invasive Mckeown oesophagectomy.

Discussion: Oesophageal stents have both short-term complications (within 1 week) such as migration, perforation, obstruction, and haemorrhage, as well as long-term complications (after 1 week) such as migration, reflux, haemorrhage, obstruction and formation of enteric fistulas. Several risk factors have been identified in oesophageal stent migration. These include stents placed for oesophageal cancer, a stent diameter of <20 mm, plastic stents, fully covered stents, and a history of oesophageal surgery. A tumor location or stent placement across the oesophagogastric junction has also been a strong predictor for migration. Given that stent migration has the risk of leading to life-threatening presentations such as obstruction, perforation and haemorrhage, removal of stent after migration is recommended whenever possible.

Conclusion: Oesophageal stent migration is an important complication to be looked out for in patients post insertion. Early diagnosis with urgent imaging such as a CT aortogram is essential, followed by surgical consultation for the best outcomes.

Keywords: oesophageal cancer, stent complications, stent migration, hematemesis

079

MY OVARY IS DRIVING ME CRAZY!: A CASE OF ANTI-NMDAR ENCEPHALITIS WITH OVARIAN TERATOMA

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Introduction: Anti-N-methyl-D-aspartate receptor (NMDAR) encephalitis is a rare autoimmune disorder characterized by the production of IgG antibodies against NR1 subunit of NMDA receptors in the brain which are crucial for synaptic plasticity. Many would be unfamiliar with its clinical presentation, as it was not characterized in literature until recently, resulting in a delay in the diagnosis and treatment.

Case Description: A 33-year-old woman with no past medical illness presented with a month history of headache, talking to self, auditory and visual hallucinations, and loss of consciousness. In the emergency department, she was disoriented, not obeying command and laughing to self. Physical examination was unremarkable. There was no neurological deficit and no neck stiffness. Urine toxicology was negative, and her initial CT brain was clear. She was admitted for altered mental status for investigation with possible meningoencephalitis. She developed refractory seizures requiring intubation and high doses of intravenous Propofol, Midazolam and Ketamine infusions in the ward. Intravenous Adrenaline infusion was initiated as she developed bradycardia with a heart rate of 20-30bpm. Brain MRI revealed a right temporal hippocampus haemorrhage, possibly representing a cavernoma of autoimmune etiology. Multiple seizures arising from the right temporal region were noted on EEG. Lumbar puncture was significant of 216 WBC/μL (100% Lymphocytes). NMDAR antibodies were detected in both serum and cerebrospinal fluid, and a large left ovarian teratoma was found on CT Abdomen Pelvis. She completed a course of intravenous Methylprednisolone, followed with a unilateral salphingo-oophorectomy and a tracheostomy due to prolonged ventilation and poor GCS recovery.

Discussion: This case demonstrates several key clinical and diagnostic features of anti-NMDAR encephalitis. It highlights the importance of emergency physicians to maintain a high index of suspicion in young women presenting with a constellation of symptoms including psychiatric disturbances, cognitive impairment, seizures and autonomic dysfunction. Routine bedside ultrasound in emergency department should be performed to screen for ovarian teratomas, which is a classical finding in women with this disease.

Conclusion: Emergency physicians play a vital role in the diagnosis of anti-NMDAR encephalitis. With prompt referrals to respective teams, expediting the treatment of immunotherapy and tumour excision will yield a better patient outcome.

Keywords: NMDAR, encephalitis, teratoma, autoimmune

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TISSUE GLUE REPAIR OF DERMAL AVULSION INJURY - CASE REPORT

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Introduction: Dermal avulsion injuries (DAI) are wounds that have been torn off from the epidermis to dermis layers through trauma. Fingertip injuries are a common form of DAI that presents to the Emergency Department(ED). The initial stage in managing DA is aimed at achieving hemostasis and preventing infection, followed by adequate closure of the wound. Difficulty in hemostasis is a common reason why such patients seek medical attention. This case report seeks to discuss the presentation, early recognition, management, and outcomes of 2 patients with fingertip DAI repaired with tissue glue.

Case Description: We describe a 27 year old and a 31 year old Chinese male who underwent immediate tissue glue repair of fingertip DAI with pictorial documentation of wound recovery as well as patient feedback. Both patients accidentally cut off a small area of tissue while using a knife and presented to the ED when they were unable to stop the bleeding at home. Upon follow-up, excellent cosmetic outcome was reported and with no complications such as infection or rebleeding of the wound.

Discussion: Hemostasis is first achieved by soaking the wound in 1% lignocaine-epinephrine solution in a small medicine cup/urine sample container for 5 minutes. A proximal tourniquet is then applied to the digit and the digit elevated above the level of the heart and exsanguinated to achieve a dry bloodless field. These steps are critical before direct application of tissue glue to the wound surface. Traditionally, tissue glue is only used to close clean linear wounds with good edge approximation. There are concerns about systemic absorption when applied directly to an open wound. However, this is negligible with small wounds. Based on literature as well as the authors' experience, this method, a form of primary closure, should only be applied to clean, small wounds (<1cm diameter) without underlying fracture or bone/tendon exposure. Fingertip injuries are most common but this method could theoretically be applied to the toes as well.

Conclusion: Tissue glue repair for DAI is a useful technique which provides excellent hemostasis, good wound healing and overall patient satisfaction with no complications reported to date.

Keywords: dermal avulsion injury, haemostasis, skin reattachment, tissue glue

081

ST ELEVATION IN A PATIENT WITH INTRACRANIAL HEMORRHAGE

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Introduction: Electrocardiographic (ECG) changes can be commonly found in patients with intracranial bleed. Among the most common changes are ST depression (24%), left ventricular hypertrophy (20%), corrected QT interval (QTc) prolongation (19%), and T wave inversion (19%). We report a case of subarachnoid bleed with ST elevation in ECG.

Case Description: An 80-year-old lady was brought in by ambulance as she was found unresponsive by her son. She has underlying hypertension but defaulted treatment for many years. On arrival, her BP 262/116mmHg, PR 91, spO2 100% under room air. On examination, she had abnormal flexion response to pain. She was not hypoglycemic. ECG shows sinus tachycardia with diffuse ST elevation over anterior leads and prolonged QTc. Patient was intubated for airway protection and sent for computed tomography (CT) scan of the brain to rule out intracranial haemorrhage before decision to thrombolyse. However, CT imaging shows massive subarachnoid bleed.

Discussion: A phenomenon known as neurogenic stress cardiomyopathy (NSC) is used to describe patients with intracranial bleed that has ECG changes. Although there are few proposed mechanism for this phenomenon, it is not fully understood. Generally, this phenomenon postulates that stress on the nervous system can have an effect on the heart functionally and structurally. The most common ECG alterations are repolarization abnormalities although sometimes arrhythmia such as atrioventricular block, atrial flutter, and ventricular arrhythmia can occur too. However, to date there are no studies reporting the incidence of ST elevation alone compared to ST depression in a patient with intracranial bleed. More extensive study is needed to observe the relation between these ECG changes and patient's prognosis.

Conclusion: Special attention should be given to patients that present atypically with ECG changes. ECG changes can be due to many causes apart from cardiac-related problem. Being aware of this would direct us to proper care and treatment for the patient.

Keywords: ST elevation, Intracranial hemorrhage

082

THE EFFECTS OF POSITIVE PRESSURE VENTILATION ON ACUTE CARDIAC TAMPONADE: A CASE SERIES

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Introduction: In acute cardiac tamponade resuscitation, circulatory management takes precedence over airway and breathing measures. Both invasive and non-invasive positive pressure ventilation (PPV) may worsen the condition by raising intrathoracic pressure, negatively impacting a preload-dependent heart.

Case Description: Case 1: An 18-year-old male presented with acute onset of shortness of breath with eye swelling and a fever. He was tachypneic with a compensated shock. Cardiac point-of-care ultrasound (POCUS) revealed an exophytic mass with a large pericardial effusion with evidence of tamponade. Bilevel positive airway pressure (BiPAP) was initiated and his blood pressure rapidly dropping. He was mechanically ventilated and hemodynamic support with inotropes. Patient was hypoxic despite on 100% bag-valve-mask ventilation and high ventilator settings. Pericardiocentesis was performed using a parasternal approach and drained 100 ml of hemoserous fluid. Patient subsequently developed pulseless electrical activity and cardiopulmonary resuscitation was commenced. A second pericardiocentesis was attempted via subxiphoid and drained only 10 ml. Patient succumbed likely due to malignant cardiac tamponade. Case 2: A 76-year-old male with no comorbidities presented with acute onset chest pain with shortness of breath and reduced effort tolerance. His vitals were as follows: blood pressure 120/80 mmHg, heart rate 106 beats/min and respiratory rate 24 breaths/min. Cardiac POCUS showed and irregular pericardial wall with a large pericardial effusion with evidences of tamponade. He was placed on BiPAP due to worsening respiratory distress. He became hypotensive along with compensatory tachycardia. BiPAP was discontinued and replaced with high-flow nasal cannula, which he tolerated well. Pericardiocentesis was performed via parasternal approach and a catheter was inserted, draining 250 ml hemoserous fluid. Analysis of pericardial fluid revealed atypical cells with immature lymphocytes and a computed tomography showed left lung mass with distant metastasis.

Discussion: Cardiac tamponade is preload-dependent, and PPV further increases diastolic pressure, reducing stroke volume and cardiac output. Animal studies have shown PPV caused fluctuations in various pressures (pleural, pericardial, arterial and cardiac) and were transmitted to the pericardial fluid.

Conclusion: The principal management of acute crashing cardiac tamponade should be emphasized on circulation rather than standard ‘airway and breathing’, and timely pericardiocentesis should be performed to improve the outcome of the patients.

Keywords: Cardiac tamponade, pericardiocentesis, intubation, positive pressure ventilation

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ASSESSING THE KNOWLEDGE, ATTITUDES, AND PRACTICES OF THE MALAYSIAN TRIAGE SCALE 2022 AMONG EMERGENCY HEALTHCARE PROVIDERS

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Introduction: The traditional framework of ED triage which used a three-tier was superseded with a five-tier due to a lack of agreement and standardization nationwide. With the recent implementation of the five-tier Malaysian Triage Scale 2022 (MTS), it is important to evaluate the competency of emergency healthcare providers (HCPs) in adapting to this latest version of the MTS.

Methodology: A one-year observational cross-sectional study was conducted to prospectively assess the knowledge, attitudes, and practices of the five-level MTS among emergency HCPs in Ministry of Health (MOH) hospitals in Malaysia using a newly developed and validated online questionnaire. All registered HCPs within the ED employed at the MOH hospitals were invited to participate in this study.

Results: The analysis included a total of 370 respondents. The median scores for knowledge and practice were 69.6% (IQR 60.9-73.9%) and 70% (IQR 60-80%), respectively. Over 80% of respondents exhibited average to good knowledge and practices. Seventy-eight percent expressed motivation to implement the five-tier MTS, but only 54.6% feeling competent to execute it. Over 70% of respondents demonstrated positive attitudes towards infection control and decontamination procedures. There was a strong agreement regarding triaging in level 1 and level 2 scenarios, however, there was inadequate practice concerning the identifications of semi-critical and non-urgent cases. Significant differences were observed in the median knowledge scores based on designation and educational qualifications. The correlation coefficients between triage knowledge-attitudes and triage knowledge-practice were 0.165 and 0.319, respectively.

Discussion: Level 1 and level 2 scenarios indicate HCPs' proficiency in identifying critical symptoms or illnesses over less obvious conditions. MTS level 1 and 2 typically display more overt symptoms, including severe hemorrhage, respiratory distress, or cardiac arrest. Furthermore, MTS rapid assessment tools prioritize the identification of critical cases, while non-critical cases exhibit greater variability and subjectivity, depending on symptom modifiers, vital signs, or point-of-care diagnostics.

Conclusion: Emergency HCPs possess adequate triage knowledge and practices of the five-tier MTS 2022 protocols. They exhibit motivation in utilizing the protocols, despite concerns regarding their competence in execution. While emergency HCPs demonstrated accuracy in recognizing life-threatening scenarios, they require further training and practice to effectively identify semi-critical and non-urgent conditions.

Keywords: triage, knowledge attitudes practices, five-tier triage, three-tier triage

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DELAYED PRESENTATION OF POST-TRAUMATIC BLUNT DIAPHRAGMATIC HERNIA WITH GASTRIC VOLVULUS

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Introduction: Post-traumatic diaphragmatic hernia complicated by gastric volvulus may manifest immediately or several years after the incident. Delayed presentation of traumatic diaphragmatic hernia with gastric volvulus is an uncommon surgical emergency with a mortality rate of 15-20%.

Case Description: A 35-year-old gentleman presented with a three-day of epigastric pain, nausea, vomiting, and no bowel opening. His history revealed that he had blunt left chest trauma three years ago following motor vehicle accident and sustained left pneumothorax, which had been treated by insertion of a left-sided chest tube. Examination revealed that he was in pain with pain score of 10, tachypnoeic, dehydrated, and compensated shock. Respiratory examinations showed a well-healed chest tube scar and a reduced air entry over left lung with borborygmi sounds. Chest x-ray demonstrated an eventration of the left diaphragm and dilated gastric shadow with an air-fluid level with mediastinal shift. Blood gases revealed severe high-anion gap metabolic acidosis with hyperlactatemia. Computed tomography showed left diaphragmatic hernia with whole stomach herniated into the left hemithorax, however no evidence of volvulus reported. On gastroscopic examination, herniated stomach was distended with pan gastric ischemia suggestive of volvulus with strangulation. The patient received fluid resuscitation, nasogastric tube insertion, and antibiotic administration. Despite these efforts, the patient succumbed following a gastroscopic procedure and did not undergo operative intervention.

Discussion: The incidence of occult diaphragmatic hernia in penetrating trauma to the left lower chest is high, at 24%. This case is rather unusual because of the delayed presentation of a missed traumatic diaphragmatic hernia following blunt chest trauma. Borchardt;s triad is believed to be diagnostic for acute gastric volvulus that consists of unproductive retching, epigastric pain and distension and the inability to pass a nasogastric tube. The diagnosis of gastric volvulus is made by barium studies with radiological signs of double air-fluid level on upright films.

Conclusion: Clinician should have a high index of suspicion of traumatic diaphragmatic hernia that can occur in both blunt or penetrating chest trauma, which may easily be missed at initial presentation and may present itself with a delayed manifestation of a complication such as gastric volvulus or strangulation.

Keywords: Traumatic diaphragmatic hernia, delayed presentation, gastric volvulus, Borchardt’s triad

085

POTT'S DISEASE OF THE CERVICAL SPINE AND TUBERCULOUS COLD ABSCESS OF THE NECK AND CHEST WALL

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Introduction: Tuberculosis of the cervical spine is unusual in Pott's disease. Direct extension from adjacent cervical spine resulting neck or chest wall cold abscess is rarely reported. Early diagnosis and treatment with antituberculous drugs and surgical intervention are important to prevent complications such as airway obstruction or neurological deficit.

Case Description: A 65-year-old female with history of type II diabetes mellitus, hypertension, end-stage kidney disease presented with two-week history of painful neck and chest swelling and shortness of breath. She had history of catheter related infection over previous right internal jugular vein cannulation, which she was treated with antibiotic. Examination revealed anterior neck swelling extend to chest wall measuring 7 x 4 cm. She had lower cervical spine tenderness with limited range of motion. Chest x-ray showed mediastinal enlargement. Computed tomography revealed multiloculated collection measuring 5.2 cm x 5.8 cm x 5.7 cm extending from thyroid isthmus cranially to posterior margin of sternum caudally with multiple subcentimeter mediastinal lymphadenopathy. Magnetic resonance imaging revealed C5/C6 infective spondylodiscitis resulting in spinal canal stenosis and a supraspinatus fluid collection. The patient was treated by a multi-disciplinary team, with plans for tuberculosis evaluation, abscess drainage, and anterior cervical corpectomy with fusion.

Discussion: The finding of a chest wall or neck mass implies a differential diagnosis between tuberculous cold abscess, pyogenic abscess, and neoplastic involvement of the chest wall. Diagnosis is made from aspirated pus culture grew Mycobacterium tuberculosis; however, the TB bacillus is fastidious and the sole reliance on positive cultures for diagnosis can be associated with poor sensitivity. The recommended treatment for cold abscess included standard a 6-month regimen of antituberculous drugs with 2 months of intensive phase and 4 months of continuation phase. For Pott's disease, it recommends a regiment involving 9 months of treatment with continuation phase extending for a period of 7 months.

Conclusion: Primary tubercular involvement of the neck and chest wall is extremely rare. Clinician should assess for other extrapulmonary tuberculosis such as Pott's disease, which can be missed or misdiagnosed.

Keywords: Pott's disease, tuberculosis, cold abscess, chest wall

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UNMASKING THE SILENT KILLER: AN ATYPICAL PRESENTATION OF AORTIC DISSECTION LEADING TO DIAGNOSTIC DILEMMA

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Introduction: Aortic dissection is a potentially fatal surgical emergency that often presents with non-specific symptoms. Its atypical presentation could lead to misdiagnosis, adding to its diagnostic challenge.

Case Description: A 49-year-old gentleman with underlying hypertension complained of severe jaw pain radiating to the right side of his chest for 1 day. Without a history of trauma, he described the pain as crushing with a pain score of 9.On examination, there were no significant findings in the respiratory or cardiovascular systems. Despite the bradycardia (Heart rate: 52 BPM), the patient was normotensive and saturated under room air. The ECG displayed deep T wave inversion at V2-5, while the CXR revealed cardiomegaly. The patient was treated as NON-ST ELEVATION MYOCARDIAC INFARCTION. Double antiplatelet therapy was served. Strong analgesia (IV Fentanyl 50mcg and IV Morphine 2mg) was required to control his pain. Subsequently, the patient became less responsive with GCS of E1V1M3. The left upper limb demonstrated complete paralysis. Blood glucose was 6.7 mmol/L. The patient was intubated for airway protection. Bedside ultrasound showed a flap in the right common carotid artery with false lumen. No intracranial bleed was noted from the CT brain. CT angiogram confirmed extensive dissection arising from the aortic root to the ascending aorta, abdominal aorta, and left internal and external iliac artery. The larger false lumen has compressed the smaller true lumen of ascending aorta. The patient was referred to the cardiothoracic surgery team for Bentall Procedure.

Discussion: Presentation of aortic dissection might vary from chest pain to neurological deficit depending on the extent of dissection. When in doubt, Point-of-Care Ultrasonography (POCUS) is very helpful in looking for features of dissecting arteries. The bradycardia has led the direction of thought away from aortic dissection. The compression of the true lumen by the false lumen in the right common carotid artery may stimulate the baroreceptor which results in bradycardia. CT angiogram remained the gold standard for making the diagnosis.

Conclusion: It is crucial to acknowledge the presenting complaint and be cautious in ruling out the life-threatening diagnosis. Aortic dissection can present in atypical ways and prompt recognition is vital to improve patient outcomes.

Keywords: Aortic dissection, atypical presentation

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ROLE OF TRANSTHORACIC ECHOCARDIOGRAPHY (TTE) IN A CASE OF TYPE B AORTIC DISSECTION MIMICKING ACUTE CORONARY SYNDROME (ACS)

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Introduction: Acute aortic dissection is the most common life-threatening disorder affecting aorta but also often misdiagnosed. Transthoracic Echocardiography (TTE) is extremely valuable in assessing aortic dissection.

Case Description: 56years old Male presented with sudden epigastric pain radiating to back with diaphoresis, vomiting and breathlessness. Initial ECG shown sinus rhythm with T-waves inversion at inferior leads leading to probable diagnosis of ACS. However, blood pressure(BP) of left and right arm was 156/76mmHg and 126/71mmHg respectively shown discrepancy greater than 20 mmHg between both arms, but no radio-radial delay. BP subsequently higher and patient complained pain with reduced sensation over left lower limb. Left lower limb pulses were all not palpable. Bedside TTE scan done shown good cardiac contractility, however ascending aorta diameter was 3.4cm and abdominal aorta was 2.3cm with visible intimal flap seen over superior mesenteric artery. There was widened mediastinum measuring 9cm in chest radiograph. Computed Tomography Angiography(CTA) Aorta done shown Stanford B aortic dissection extending to bilateral common iliac arteries, with non-opacification of left common iliac and left external iliac arteries, likely acute limb ischemia. Patient not keen for surgical intervention for limb ischemia due to financial constraints, and was admitted for BP optimisation on Intravenous Labetolol infusion.

Discussion: Differentiating acute aortic dissection with coronary mal-perfusion from ACS is challenging, and misdiagnosis is common might lead to death due to inappropriate antithrombotic treatment causing catastrophic bleeding. Stanford Type A dissections involve ascending aorta and Type B dissections occur distal to subclavian artery. The above case emphasized the importance of bedside TTE making prompt diagnosis by assessing potential high risk features of aortic dissection although unable to visualise all aortic segments, before treating mimicked symptoms of ACS. It reported diagnostic sensitivity of 67-90% and a specificity of 71-100%. TTE is recommended due to its immediate availability, but aortic dissection could not be ruled out completely with TTE alone. CTA Aorta still the golden standard of diagnostic imaging.

Conclusion: Number of patients treated for ACS is always greater than aortic dissection in emergency department. TTE as initial imaging in combination with high index clinical suspicion, could offer more secure basis for diagnosing aortic dissection early.

Keywords: Aortic Dissection, Acute Coronary Syndrome, Transthoracic Echocardiography

088

POCUS FOR TIMELY DIAGNOSIS OF LARYNGEAL FRACTURE AFTER ASSAULT

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Introduction: Laryngeal fractures, although rare, are potentially life-threatening due to the risk of airway compromise, necessitating immediate and accurate diagnosis. Focused airway point-of-care ultrasound (POCUS) offers a rapid bedside assessment tool for suspected laryngeal trauma in the emergency department.

Case Description: A 58-year-old male presented to the ED following an alleged assault, during which he was punched in the neck. He complained of hoarseness of voice, difficulty swallowing, and neck pain. On examination, he was hemodynamically stable, not in respiratory distress, and exhibited anterior neck bruising, tenderness, and a soft voice. He had no palpable neck crepitus or stridor. Airway POCUS revealed an undisplaced fracture of the thyroid cartilage with normal vocal cord movements. A CT neck confirmed a midline thyroid cartilage fracture, and flexible nasopharyngoscopy showed mild laryngeal edema without vocal cord injury. The injury was classified as Schaefer grade 2. The patient was admitted for observation and treated with intravenous dexamethasone, anti-reflux, analgesia, and voice rest.

Discussion: While CT neck remains the gold standard for imaging laryngeal trauma, airway POCUS provides real-time upper airway assessment, allowing visualization of thyroid or cricoid cartilage fractures, endolaryngeal hematomas or edema evidenced by disruption of air-mucosal interface or surrounding mixed echogenicities, and vocal cord movement abnormalities. This facilitates early recognition of life-threatening airway injuries and timely intervention. Studies demonstrate good correlation between airway POCUS findings and CT imaging, as well as between preoperative airway POCUS and laryngoscopic assessments of vocal cord movement. Recent research also propose that airway POCUS findings can be aligned with the Schaefer Classification System for laryngeal trauma, supporting its integration into clinical practice.

Conclusion: Incorporating airway POCUS into the evaluation of blunt neck trauma enhances triaging, accelerates clinical assessments, facilitates early diagnosis, and informs airway management plans. This approach is particularly valuable in resource-limited settings or when transferring patients to CT imaging is unsafe due to a high risk of airway catastrophe.

Keywords: Laryngeal fracture, POCUS

089

CHLORPYRIFOS POISONING: A CASCADE OF CHOLINERGIC CRISIS, ASPIRATION, AND PULMONARY EMBOLISM

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Introduction: Pesticide poisoning remains a significant public health problem associated with high morbidity and mortality. In Malaysia, agricultural insecticide poisoning is the second most frequent type of pesticide poisoning, with organophosphates (OP), particularly chlorpyrifos, being the leading causative agent.

Case Description: A 30-year-old man presented to our center 12 hours after intentionally ingesting 50–100 mL of chlorpyrifos-containing termiticide (21.2%) with decreased responsiveness, hypersalivation, and recurrent vomiting. On arrival, his Glasgow Coma Scale (GCS) was E4V2M6, with bilaterally 2 mm reactive pupils. Vital signs included a blood pressure of 122/89 mmHg, heart rate of 81 bpm, and SpO_2 of 96% on room air. He exhibited copious foamy oral secretions, generalized muscle weakness, and minimal rhonchi on auscultation. Despite treatment with escalating doses of intravenous atropine and pralidoxime, his persistent vomiting led to aspiration, resulting in respiratory distress requiring mechanical ventilation. He was intubated and maintained on atropine and pralidoxime infusions for 48 hours. Serum cholinesterase testing later returned at 128 U/L (ref: 5320 – 12920 U/L) confirming acute toxicity. He was extubated after three days; however, his hospital course was complicated by a saddle pulmonary embolism, confirmed on CTPA. Tracheal aspirate cultures identified Klebsiella pneumoniae.

Discussion: This case highlights the life-threatening sequelae of chlorpyrifos poisoning, including cholinergic crisis and secondary pulmonary embolism. The benefits of atropine in management are well-established. However, the clinical benefits of pralidoxime remain debated, as a recent meta-analysis showed that it does not significantly reduce mortality or ventilator requirements, and may increase the risk of intermediate syndrome. Nevertheless, in the absence of an alternative antidote, pralidoxime remains a mainstay of treatment, especially when administered within 24 to 48 hours of ingestion. For severe toxicity, continuous infusion may offer advantages over intermittent boluses though optimal dosing remains uncertain. The subsequent development of pulmonary embolism may be attributed to prolonged immobilization and a hypercoagulable state induced by systemic inflammation.

Conclusion: OP poisoning remains a significant medical emergency. Our case emphasizes the need for monitoring beyond the acute cholinergic phase, as delayed complications can significantly impact patient outcomes. Stricter regulation of public access to hazardous pesticides is essential to prevent similar incidents.

Keywords: chlorpyrifos, organophosphate, cholinergic, pralidoxime

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ACUTE PANCREATITIS IN PREGNANCY: A CASE OF HYPERTRIGLYCERIDEMIA-INDUCED COMPLICATIONS AT 34 WEEKS GESTATION

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Introduction: Acute pancreatitis in pregnancy (APIP) is a rare but potentially life-threatening condition that poses significant risks to both mother and fetus. Diagnosing APIP is challenging, as acute abdominal pain during pregnancy may mimic other conditions such as labor onset, obstetric emergencies, or various medical and surgical causes of acute abdomen.

Case Description: A 33-year-old multiparous woman at 34 weeks of gestation presented with a two-day history of severe, localized epigastric pain. She reported no vomiting, diarrhea, fever, contraction pain, or vaginal bleeding. The patient had a history of hypertriglyceridemia but was not on treatment. Examination revealed a hemodynamically stable but tachycardic patient in significant pain, febrile, and dehydrated. Abdominal examination showed epigastric tenderness and a gravid uterus, with no signs of labor. Bedside ultrasound confirmed fetal heart activity and the absence of intra-abdominal free fluid. Her blood samples appeared lipemic, prompting a serum amylase test, which was elevated (702 IU/L). Blood tests confirmed significant hypertriglyceridemia. Abdominal ultrasound findings supported a diagnosis of acute pancreatitis. She was admitted to the intensive care unit and treated for hypertriglyceridemia-induced APIP with fenofibrate, fluids, and analgesics. The patient delivered a healthy infant vaginally the next day. Both mother and baby were discharged well.

Discussion: APIP is commonly triggered by gallstones, alcohol, or hypertriglyceridemia, typically occurring in the third trimester or early postpartum. Hypertriglyceridemia is an independent marker of poor prognosis in APIP. In this case, the lipemic blood sample provided a critical clue, prompting the workup of APIP. Plasma triglyceride levels naturally rise during pregnancy due to hormonal changes, usually remaining well-tolerated but potentially reaching severe levels in high-risk individuals. A diagnostic pitfall of APIP is that it may precipitate labor, with pain potentially mistaken for labor-associated discomfort. If unrecognized or poorly managed, APIP significantly increases maternal and fetal mortality.

Conclusion: Careful differentiation and heightened clinical suspicion are essential when evaluating acute abdominal pain in late pregnancy to avoid missing rare but critical diagnoses such as acute pancreatitis in pregnancy. A history of hypertriglyceridemia or lipemic blood samples can offer vital diagnostic clues.

Keywords: Acute pancreatitis in pregnancy

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PAEDIATRIC BEHCET'S DISEASE MASQUERADING COMMON DERMATOLOGICAL LESIONS IN EMERGENCY DEPARTMENT

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Introduction: Behcet's disease (BD) is a chronic relapsing occlusive vasculitis of unknown aetiology, characterized by oral aphthosis, genital ulcerations and uveitis. BD is more prevalent in Mediterranean, Middle East and Japan, however, remains rare in Malaysia. In emergency department, these symptoms can be mistaken for other common illnesses resulting delay in diagnosis and treatment.

Case Description: A 12-year-old Indian boy exhibited swelling of the lips, painful oral ulcers, bilateral conjunctival injection with serous discharge, and penile edema accompanied by vesicular rashes. He had a four-day history of fever along with upper respiratory tract infection (URTI) symptoms. This represented his second visit to the emergency department, having previously been diagnosed with hand, foot, and mouth disease (HFMD) and discharged with symptomatic care. Clinical evaluation indicated lethargy and mild dehydration. Systemic examination revealed swollen lips with multiple ulcers and serous discharge. Conjunctival examination showed injection without hypopyon or ulcers. Genital examination indicated a swollen and tender glans penis with erythema, but no urethral discharge was observed. Blood tests were generally normal, except for an elevated C-reactive protein level of 89.1. He was subsequently admitted to the medical ward for further work-up and treatment.

Discussion: Numerous classification criteria have been established for Behçet's Disease (BD) diagnosis, largely targeting adults and focusing on major and minor clinical features such as those from the International Study Group (ISG) and the revised International Criteria for Behçet's Disease (ICBD). Nevertheless, pediatric BD poses diagnostic difficulties due to its rarity and the absence of validated criteria specific to this demographic. The clinical presentations in children frequently diverge from those in adults, leading to possible misdiagnosis or delayed identification and treatment.

Conclusion: BD is a rare but complex disorder with significant diagnostic challenges, particularly in paediatric population. Further research is needed to establish standardized paediatric diagnostic criteria and optimal treatment.

Keywords: Behcet's disease, paediatric, genital ulcer, uveitis

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RED ALERT ! HERE COMES THE ADRENALINE SURGE ! A CASE OF PERI MORTEM CAESAREAN SECTION AFTER TRAUMATIC ARREST

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Introduction: Maternal cardiac arrest is a rare catastrophic event that imposes huge challenges towards effective resuscitation particularly when caused by traumatic event like motor vehicle accident. A study by Ajit et al had estimated the incidence of maternal cardiac arrest to 1 in 30,000 pregnancies but cases of maternal cardiac arrest due to motor vehicle accidents are not widely reported in Malaysia. Perimortem caesarean delivery (PMCD) has been conducted during resuscitation to relieve aortocaval compression to facilitate both maternal and fetal survival. We present to you a case of a maternal cardiac arrest in a 26 years old pregnant mother who was involved in motor vehicle accident and the challenges in the revival of this patient.

Case Description: We reported 26 years 26-year-old G2P1 at 36 weeks of gestation who was antenatally diagnosed GDM and maternal obesity. Patient was a pillon rider involved in a high speed motorbike accident. She was transferred to ED in a critical condition. Initial examination revealed signs of severe pelvic and intra-abdominal injuries in compensated hypovolemic shock. However the ultrasound assessment showed no fetal heart activity. Trauma alert was activated which had involved multidisciplinary teams to help in the resuscitation. Patient had deteriorated rapidly and went into cardiac arrest. Peri morterm caesarean section with exploratory laparotomy were performed bedside in ED as an attempt to improve perfusion. However , despite extensive efforts both mother and fetus were succumbed to dead

Discussion: Traumatic maternal cardiac arrest remains the nightmare to many first-line attending emergency doctors. The effective resuscitation involves early recognition of life-threatening signs and prompt delivery of optimal care to patients. The approach to resuscitation is different from standard approach to traumatic arrest and it requires a good understanding of the physiological changes during pregnancy traumatic injury to aid clinical judgement. Early intubation and some other unique approach like perform left lateral uterine displacement have been recommended.

Conclusion: Managing maternal traumatic arrest is challenging and stressful. The awareness and good knowledge of maternal and fetal physiology could reduce the incidence of morbidity and mortality.

Keywords: Perimortem caesarean section, Maternal cardiac arrest, Traumatic cardiac arrest

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QUALITY IMPROVEMENT: REVOLUTIONIZING PORTER SYSTEM THROUGH EMERGENCY DEPARTMENT INTEGRATED E-PPK SYSTEM (ED-IES)

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Introduction: 'Pembantu Perawatan Kesihatan' or porters play a crucial role in facilitating effective hospital operations and enhancing patient care. The conventional management of porters is deficient in monitoring, temporal and spatial data, and communication, which adversely impacts their efficiency and causes patient delays in the emergency department (ED).

Methodology: A two-year quality improvement initiative was conducted in the ED, Hospital Teluk Intan to evaluate the impact of the ED Integrated E-PPK System (ED-IES) on the operational performance of ED porters. This assessment focused on turnaround time, productivity, porter satisfaction, and patient length of stay (LOS) in green and yellow zones. ED-IES system integrates the usage of walkie-talkie as a communication tool and PPK token system.

Results: Post implementation of the ED-IES, the turnaround time experienced a significant reduction from 30 minutes (IQR 15-45 minutes) to 5 minutes (IQR 5-10 minutes). Productivity witnessed an enhancement of 30%, characterized by an increment of 3 tasks accomplished per porter on a daily basis. A substantial 86% of respondents opined that the ED-IES fosters equitable treatment and job fairness within the ED, while 89% concurred that the utilization of walkie-talkies augments communication between healthcare personnel and porters. Furthermore, 66% acknowledged that porters' temporal and spatial data is readily accessible, and 89% asserted that the ED-IES framework demonstrates superior productivity compared to the conventional porter management system. In the context of the green zone, the proportion of ED LOS exceeding 8 hours decreased from 1.03% in 2022 to 0.58% and 0.64% in 2023 and 2024, respectively. In the yellow zone, the incidence of LOS surpassing 8 hours diminished from 1.80% in 2022 to 1.10% and 1.01% in 2023 and 2024, correspondingly.

Discussion: The traditional porter management system employed a manual communication framework, which consequently resulted in delays in addressing task requests. Moreover, porters were assigned based on their designated zones, thereby creating bottlenecks in task execution, particularly during peak operational hours. The absence of effective monitoring by supervisors, along with inadequate spatial data, further exacerbates this challenge.

Conclusion: ED-IES facilitates a broad spectrum of operational improvements, enhances productivity, increase porters' satisfaction levels, and optimizes ED LOS while mitigating ED overcrowding.

Keywords: Porter management system, productivity, communication, quality improvement

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MEASURING EMERGENCY DEPARTMENTS CONGESTION USING INDICATORS AND TOOLS: A SCOPING REVIEW

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Introduction: The imbalance of Emergency Department (ED) staff and patient volume, particularly with non-emergency cases, creates overcrowding. This leads to issues like long wait times and patient dissatisfaction. Accurate measurement of overcrowding is important for solution development, yet a standardized, practical method is currently unavailable. This study aims to identify and review the most commonly used indicators and tools for measuring ED overcrowding globally.

Methodology: Scoping review conducted follows the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) checklist to identify the indicators and tools used to tackle overcrowding in ED. The searches were formulated using the Population, Intervention, and Outcome (PIO) framework utilising databases such as Scopus, PubMed, Emerald Insight and Google Scholar as the search engines. Keywords used includes hospital, emergency and trauma, measure, indicator, overcrowding and congestion. Data regarding indicators and tools were extracted manually into a standardised table.

Results: The initial search yielded 1347 abstracts, 1199 of whom were excluded after title and abstract review. Fifty of 167 studies were later excluded after full review for the following reason; article not in English, study did not involve ED, indicators mentioned not related to overcrowding and full text not available. The final analysis, therefore, included 117 studies. The analysis identified 25 indicators and 9 assessment tools as being widely implemented globally in literatures. Among these, ED length of stay (ED LOS), patient waiting time, and patients leaving without being seen are the most frequently employed indicators, whereas the National Emergency Department Overcrowding Study (NEDOCS) and the Emergency Department Work Index (EDWIN) emerges among the primary scoring metrics used to quantify hospital-level ED crowding.

Discussion: Global measurement of overcrowding relies on a combination of indicators and tools. Indicator such as ED LOS turns out to be the most frequent indicators for ED performance. Complementing this indicator, tools like NEDOCS also seem to be useful to predict upcoming crowdedness when compared to other methods.

Conclusion: As recommendations, it may be beneficial to explore a national strategy that integrates ED LOS and NEDOCS to address the challenges within ED.

Keywords: hospital, emergency department, overcrowding, indicators

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BRAIN TUMOUR IN DISGUISE: POSTERIOR FOSSA TUMOUR

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Introduction: Brain tumours are the most common solid malignancy in children and represent the leading cause of paediatric-cancer related deaths. Making the initial diagnosis of a brain tumor can be difficult as early symptoms are nonspecific to brain tumors and more frequently are associated with other etiologies leading to delays in diagnosis.

Case Description: A 9-year-old kid without prior medical illness presented with recurrent occipital pain and persistent early morning vomiting for two months. Child was discharged as gastritis and anxiety disorder by previous visits to clinic. Patient also complained of neck pain, headache and myalgia. Recently unstable gait was present as claimed by parents. Upon examination, vital signs were stable with a full Glasgow Coma Scale (GCS) but child appeared lethargic. Neurological examination revealed unstable gait with rombergs test positive. A computed tomographic (CT) scan of brain revealed large posterior fossa mass centred at the left cerebellum causing compression of the fourth ventricle with resultant acute obstructive hydrocephalus and subependymal CSF seepage as well as generalized. Patient underwent surgery and HPE revealed Pilocystic Astrocytoma Grade I. Patient's symptoms improved and was then discharged with neurosurgical follow up with plan of Magnetic Resonance Imaging (MRI) post operation to look for any significant residual or recurrence.

Discussion: The presenting features of childhood brain tumours differ based on anatomical location of tumour. Although magnetic resonance imaging (MRI) is the gold standard imaging technique for optimal visualization for brain tumors and is often needed for neurosurgical planning in the unstable child, a CT scan may be the best initial imaging choice.

Conclusion: The most common presenting symptom of a posterior fossa tumour is raised intracranial pressure. The clinical presentation of increased intracranial pressure can easily be mistaken for other etiologies especially in children. It is vital to have high index of suspicion of clinical presentation of space occupying lesion in children that would help in facilitating early diagnosis, effective management, and improved outcomes in pediatric patients with brain lesions. Misdiagnosis in view of poor insight could lead to long-term neurological and cognitive impairments.

Keywords: Histopathological examination

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'I DON'T FEEL RIGHT': A CASE REPORT OF NEUROTOXICITY IN IVERMECTIN OVERDOSE

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Introduction: Ivermectin is a broad spectrum anti-parasitic agents, was once used for COVID-19 treatment. Neurological adverse effects are rare but can occur in certain cases. We report a case of ivermectin toxicity with neurological symptoms.

Case Description: A 16-year-old girl with no previous psychiatric or medical history presented to emergency department 15 hours after she deliberately ingested 30 tablets of Ivermectin (12mg each) and 5 tablet of 500mg of paracetamol due to family issues. Following the ingestion she experienced dizziness, vomiting, blurred vision, unsteady gait, and visual hallucinations. On examination she was alert, drowsy but oriented and hemodynamically stable. Self-inflicted scars was found on her left forearms. Neurological examination revealed right diplopia, right horizontal nystagmus and positive finger pointing test over right side. Other examinations was unremarkable with normal blood investigations and CT brain. After symptomatic treatment her symptoms resolved and no neurological deficits were observed prior discharge. She was diagnosed with persistent depressive disorder with suicidal attempt with major depressive episode. She was discharged well with psychiatry follow-up.

Discussion: Ivermectin is highly lipophilic but it doesn't easily cross the blood-brain barrier due to the presence of P-glycoprotein (P-gp) efflux transporter which is highly expressed at the blood brain barrier thus prevents adverse neurological effects when taken at therapeutic doses. However in rare case mutations in the P-glycoprotein transporter or massive overdoses can allow ivermectin to enter the CNS, leading to neurotoxic effects such as ataxia, tremors, myoclonus, seizures, encephalopathy, and coma. According to the National Poison Centre, the toxic dose for adults is considered to be more than 2mg/kg. Mild symptoms are expected to recover within 48 hours. In one reported case of massive ingestion (total dose of 414mg/kg),long term effect of polyneuropathy has been observed. Ivermectin overdose is managed primarily with supportive care, as there is no antidote available. Prognosis is generally favorable unless complicated by severe hypotension or respiratory failure.

Conclusion: Although ivermectin therapy is generally well tolerated, rare adverse neurological effects, as seen in this case, can occur. As a treating physician, a thorough examination must be performed to ensure no important findings are missed or overlooked.

Keywords: Ivermectin, Overdose, Neurotoxic

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A STAB IN THE BACK: A CASE REPORT OF TRAUMATIC EPIDURAL PNEUMORRHACHIS

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Introduction: Pneumorrhachis (PR) is a rare condition defined by free air presence in the spinal canal. Coupled with limited management guidelines, its diverse aetiologies and unclear pathogenesis pose a diagnostic challenge. Traumatic PR can be anatomically classified into epidural and intradural types, with differentiation being crucial due to the severity of intradural injuries.

Case Description: We present a case of a 56-year-old male with multiple comorbidities (diabetes, hypertension, ischemic heart disease and asthma) who presented to the Emergency Department following a knife stab to the posterior neck. He complained of right-sided weakness but was not in respiratory distress. His blood pressure was 181/124 mmHg, and heart rate was 80 beats/minute. Glasgow Coma Scale was 15/15, with equally reactive pupils. Right upper and lower limb power was 3/5 and 2/5, respectively, with intact sensation, pain and temperature in all limbs. The 4x2 cm stab wound at the C6/C7 found no active bleeding, deformity or midline spinal tenderness. Sonographic findings showed no haemopneumothorax, pericardial effusion and intraperitoneal free fluid, while chest X-ray revealed no pneumomediastinum. A computerised tomography scan of brain and neck revealed PR from C2 to C7/T1, left posterior neck region soft tissue injury, no cervical spine fracture and no acute intracranial haemorrhage. Subsequent magnetic resonance imaging showed evidence of extradural PR at C5/C6, multilevel degenerative disc disease causing spinal stenosis (C5/C6), impingement of the C5, C6 and right C7 exiting nerve roots and cord oedema from C4/C5 to C5/C6. He was then treated conservatively.

Discussion: As most traumatic PR cases are asymptomatic, clinical diagnosis is challenging and requires advanced imaging modalities for confirmation and differentiation of PR types. Traumatic epidural PR is typically self-limiting, with the air being spontaneously reabsorbed into the blood without recurrence. In this case, the injuries sustained caused right sided hemiparesis which was managed conservatively. Prognosis is primarily influenced by the accompanying injury, rather than PR itself.

Conclusion: Traumatic PR is rare clinical entity, and advanced imaging is vital for diagnosis. PR is managed conservatively, without routine prophylactic antibiotics.

Keywords: Pneumorrhachis, trauma, intraspinal air, spinal canal

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CUTE BUT DEADLY: A Case of Pufferfish Poisoning in Sabah

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Introduction: Tetrodotoxin (TTX) is a highly potent neurotoxin that can be found in the viscera and skin of a pufferfish. In Malaysia, TTX poisoning has been reported in Terengganu and Sabah. Since no antidote exists, treatment remains supportive. Healthcare professionals must recognize the symptoms of TTX poisoning for early detection and management. We report a patient who initially presented with stroke-like symptoms but was later diagnosed with TTX poisoning.

Case Description: A 48-year-old man presented to the Emergency Department with dizziness and vomiting. He exhibited right-sided weakness, slurred speech, and a Glasgow Coma Scale (GCS) of E4V4M5. His blood pressure was 199/111 mmHg. Neurological examination showed generalized hypotonia, hyporeflexia, and Babinski's sign on the right side. A stroke alert was activated. However, after returning from CT imaging, he desaturated and experienced a cardiorespiratory arrest, requiring four cycles of resuscitation and synchronized cardioversion for unstable supraventricular tachycardia. CT and CTA of the brain showed no acute infarction or large vessel occlusion.Further history revealed that he had consumed pufferfish roe earlier that day. He was admitted to the high-dependency unit, where he developed recurrent myoclonic jerks requiring multiple anti-epileptics. MRI showed no significant abnormalities, but EEG suggested Lance-Adams myoclonus due to hypoxic-ischaemic encephalopathy or TTX toxicity. His blood investigations remained normal. He was extubated after 13 days and hospitalized for 48 days. Upon discharge, he had coordination issues, dysarthria, and required a walking frame.

Discussion: TTX poisoning can be fatal if not promptly recognized. Symptoms typically appear within 30 minutes to six hours. Severe cases may deteriorate within 15–20 minutes, depending on toxin concentration and parts consumed. Our patient consumed pufferfish roe, causing severe toxicity and prolonged recovery. Since TTX poisoning can mimic stroke or food poisoning, misdiagnosis may delay treatment. Death often results from respiratory failure and cardiovascular collapse, emphasizing the need for early supportive care.

Conclusion: Pufferfish poisoning awareness among Malaysian healthcare professionals remains low. This case highlights the importance of recognizing TTX poisoning early, particularly in regions where pufferfish is consumed. A high index of suspicion is necessary to prevent misdiagnosis and ensure timely supportive management to reduce complications and long-term disability.

Keywords: Tetrodotoxin (TTX) poisoning, pufferfish poisoning, stroke mimics

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BEYOND THE SHADOWS: WHEN SUSPECTED LUNG CARCINOMA REVEALS A HIDDEN PULMONARY EMBOLISM

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Introduction: Pulmonary embolism (PE) is an acute, life-threatening condition characterized by the occlusion of one or more branches of the pulmonary arterial circulation, which may progress to hemodynamic instability and sudden death if left untreated. Rapid risk stratification and timely intervention are crucial in reducing morbidity and mortality.

Case Description: A 44-year-old gentleman with underlying hypertension and dyslipidemia presented to the emergency department with breathlessness for 1 day, right-sided chest pain for 2 months and right neck swelling for 5 months. On examination, vital signs were BP 175/110, HR 112, RR 22 bpm and SpO2 90% on room air, with reduced air entry over right lower lung zone, while other systemic examination was unremarkable. ECG showed sinus tachycardia with S waves in lead I and T-wave inversion in lead III. Bedside 2-point compression test was negative for DVT and echocardiography demonstrated no signs of PE. Chest X-ray revealed a lung mass in the right upper lobe along with elevation of right hemidiaphragm. Given the high suspicion of PE, with a Well's score of 4.5 (moderate risk), and elevated D-dimer of 16.1 ug/ml, an Urgent CTPA was performed. The scan confirmed extensive PE involving the right main pulmonary artery, extending into bilateral segmental branches and a spiculated right upper lobe mass suspicious of primary lung carcinoma. Promptly, patient was started on anticoagulation therapy and admitted for further management. He remained stable throughout his hospital stay and was discharged well after 10 days, with close follow-up under chest clinic.

Discussion: This case highlights the diagnostic challenge of PE in the setting of a suspected but unconfirmed lung carcinoma. The primary risk factor was heavy smoking, which raises suspicion for lung carcinoma. However, the vague presentation underscores the importance of maintaining a broad differential diagnosis. Further investigations, including excision biopsy of the lymph node and CT staging, are necessary to establish a definitive diagnosis.

Conclusion: Pulmonary embolism can mimic or co-exist with lung carcinoma, making early recognition crucial to avoid diagnostic delays. A systematic approach with strong clinical suspicion, D-dimer testing, and imaging ensures timely diagnosis and management, which can greatly improve patient outcomes.

Keywords: pulmonary embolism, lung carcinoma, CTPA

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SUSPICIOUS FLAPS IN THE AORTA: A CASE OF AORTIC DISSECTION

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Introduction: Aortic dissection is a rare but life threatening disease in Malaysia with an incidence of 6 per 100,000 population and a mortality of 5.2 per 100,000. Unfortunately diagnosis can be delayed due to variable clinical presentation, requiring a high suspicion index and early recognition to adequately manage this condition. If left untreated, aortic dissection may lead to potential complications such as cardiovascular or respiratory collapse or end organ ischaemia.

Case Description: A 59-year-old male presented to the emergency department with a one week history of transient right eye vision impairment, left leg weakness and occasional chest discomfort radiating to the back. Upon review he was alert, but had left leg weakness and a weak femoral pulse. Immediate point-of-care ultrasonography revealed a wide aortic root and an intimal flap over the ascending aorta, right carotid and at the abdominal aorta. Subsequent computed tomography (CT) angiography revealed he had a Stanford Type A aortic dissection from the aortic root extending into both common iliac arteries. He was then referred to the surgical team and planned for transfer to a cardiothoracic centre for definitive operative management.

Discussion: Identifying an aortic dissection in the emergency department can be challenging due to its variable clinical presentation upon admission. Patients may present with stroke-like symptoms or the chest pain may be misidentified as an acute coronary syndrome. This will delay diagnosis and may lead to further complications. In the emergency department, bedside ultrasonography is a convenient imaging modality with a sensitivity of 67-80% and specificity of 99-100% upon visualisation of an intimal flap. This highlights the importance of adequate training to ensure skilled ultrasound operators in the emergency department to recognise such findings.

Conclusion: Aortic dissection is a condition with high morbidity and mortality, hence this case was reported to reinforce the importance of clinical suspicion and early bedside ultrasonography to aid in detection of such patents. This enables early definitive imaging and management hence improving clinical outcome.

Keywords: Aortic dissection, ultrasound, emergency

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SEEING THE UNSEEN: A CASE OF PAEDIATRIC OPTIC NEURITIS

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Introduction: Paediatric optic neuritis (ON) is a rare disease, involving inflammation of the optic nerve with an incidence of 1.5 per 100,000 population. Unfortunately diagnosis can be delayed in the paediatric population due to young children not noticing or reporting their symptoms until a change in behaviour is noted by their caregivers. If left untreated and uninvestigated, there is the concern that the child may have poor vision recovery or that it is an early manifestation of a serious condition such as multiple sclerosis (MS).

Case Description: A 3-year-old child presented to the emergency department with a three-week history of worsening painless blurring of vision, described as sudden blackness. On further history she was noted to be clumsy by her parents with frequent falls at home despite being seen at an optometrist and wearing spectacles of 0.4 diopter. Upon review she was well with an unremarkable physical examination. Subsequent ophthalmoscopy revealed she had bilateral optic disc swelling but a computed tomography (CT) of her brain was normal. She was admitted to the paediatric unit and planned for a lumbar puncture and further workup.

Discussion: The main concern with ON is its relationship to MS with between 13-36% of children with optic neuritis eventually developing MS. The workup in the first presentation will be to investigate other non-immune-mediated causes of ON with a lumbar puncture and brain magnetic resonance imaging. The mainstay of treatment is intravenous steroids with consideration for intravenous immunoglobulin or plasmapheresis if steroid resistant. Consideration must also be given to psychosocial challenges including potential missed schoolwork or other issues arising from the functional vision limitation. The visual recovery is usually good although long-term monitoring and follow-up for the child is mandated to pick up any underlying disorders.

Conclusion: Paediatric optic neuritis is a rare condition, making this case particularly significant in highlighting the importance of early detection, especially in the emergency department. Prompt recognition and swift referral to the appropriate specialities are crucial to ensuring timely investigations and appropriate management, especially to identify potential causes.

Keywords: Optic neuritis, child, emergency

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AN UNSEEN THREAT BEHIND THE THROAT: RETROPHARYNGEAL ABSCESS WITH MEDIASTINAL EXTENSION IN AN ADULT

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Introduction: Retropharyngeal abscess (RPA) is a rare but serious infection, typically seen in children. In adults, RPAs are less common but often present with severe complications due to delayed diagnosis. This case highlights an atypical presentation of RPA in a 34-year-old male, emphasizing the importance of prompt recognition and intervention to prevent life-threatening outcomes.

Case Description: A 34-year-old healthy male presented with progressive neck swelling, fever (38.5°C), and epigastric discomfort over several days. Initially attributing his symptoms to a mild infection, he developed worsening hoarseness and difficulty swallowing. Examination revealed a swollen, tender neck, muffled voice, and epigastric tenderness. There was no history of trauma or recent dental procedures. Laboratory Findings: Marked leucocytosis (WBC 21,000/μL), consistent with systemic infection.Imaging: Neck X-ray suggested airway narrowing. A contrast-enhanced CT scan confirmed a large RPA extending into the mediastinum with right vocal cord palsy, likely from recurrent laryngeal nerve involvement.The patient was started on intravenous Augmentin and Dexamethasone and transferred to a tertiary center for urgent surgical drainage. Postoperatively, his symptoms resolved, and he recovered uneventfully.

Discussion: This case highlights the atypical presentation of RPA in adults, particularly epigastric discomfort caused by mediastinal extension. Such symptoms, including esophageal irritation and vagus nerve involvement, can mislead clinicians and delay diagnosis. The deep location of RPAs makes clinical evaluation challenging, necessitating early imaging, such as contrast-enhanced CT scans, to confirm the diagnosis and assess complications like mediastinitis or vascular involvement.Prompt intervention with antibiotics and surgical drainage is critical to preventing severe complications, including airway obstruction and sepsis. This case underscores the importance of multidisciplinary care and heightened clinical suspicion when evaluating adults with nonspecific symptoms like neck swelling and systemic signs of infection.

Conclusion: RPA in adults can present with unusual symptoms, delaying diagnosis. Clinicians should be alert to gastrointestinal complaints in conjunction with neck symptoms. Early recognition and intervention are crucial in preventing life-threatening complications

Keywords: Retropharyngeal abscess, deep neck infection, mediastinal extension, epigastric discomfort

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VENOUS DOOM, COMPARTMENT BOOM: A LETHAL COMBINATION

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Introduction: We present a case of Phlegmasia Cerulea Dolens (PCD) complicated by compartment syndrome, in which timely intervention significantly improved patient outcomes. It is a rare but devastating complication of PCD, arises when elevated venous pressure increases intracompartmental pressure, compromising tissue perfusion. Delayed treatment risks severe morbidity, including amputation (up to 50%) and mortality (25–40%).

Case Description: A 44-year-old lady with underlying Chronic Kidney Disease (CKD) and Systemic lupus erythematosus (SLE) presented with one day history of left lower limb pain and swelling. The pain became intense 2 hours prior to arrival. There were no history of fever, claudication pain or trauma .On examination, she was alert, not tachypnoeic, normotensive but tachycardic. Examinations revealed tender, dusky discolouration, tense swelling over the whole left lower limb with cold peripheries, paraesthesia and absent of the distal pulses. Other systemic examination was unremarkable. Two point compressions ultrasonography of left lower limb showed presence of thrombus within the left femoral and popliteal vein. The diagnosis of PCD complicated with acute limb ischemia and compartment syndrome was made clinically, followed with bedside fasciotomy and unfractionated heparin infusion was started. Post fasciotomy, distal perfusion improved. Urgent CT Angiogram/Venogram done revealed long segment left lower limb DVT extending into left common iliac vein with unilateral left lower limb oedema involving subcutaneous and intramuscular aspects with recent fasciotomy. Patient was admitted and discharged well after 10 days with Non-vitamin K Antagonist Oral Anticoagulants (NOAC)

Discussion: This case underscores the rapid progression from deep vein thrombosis (DVT) to life-threatening compartment syndrome in Phlegmasia Cerulea Dolens (PCD). Effective management requires a dual approach: immediate anticoagulation to halt thrombotic progression and emergent fasciotomy to restore limb perfusion. Delayed fasciotomy significantly increases morbidity, including irreversible ischemia and amputation. This case emphasizes the necessity of prompt, aggressive intervention to optimize outcomes in PCD complicated by compartment syndrome

Conclusion: While anticoagulation remains cornerstone therapy for DVT, it is often inadequate in Phlegmasia Cerulea Dolens (PCD) complicated by compartment syndrome. Limb salvage in these cases demands early recognition and aggressive intervention, including prompt fasciotomy, to prevent irreversible tissue damage and amputation.

Keywords: Phlegmasia Cerulea Dolens (PCD), compartment syndrome, fasciotomy

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HYPERBARIC CHAMBER: GROWING IN NECESSITY

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Introduction: Decompression sickness (DCS) is entirely a clinical diagnosis that requires immediate attention due to the serious complications it can cause. Prompt recognition and timely intervention, such as recompression therapy in a hyperbaric chamber, are crucial to prevent long-term damage or even life-threatening outcomes.

Case Description: A 64-year-old fisherman with underlying hypertension presented to our centre, Hospital Lahad Datu, with complaint of severe back and abdominal pain, associated with bilateral lower limb numbness up to umbilical region. There was no history of trauma prior. Upon further history, he had went diving to catch fish before onset of symptoms using a hose connected to petrol-based air compressor around 40 meter in length and dived underwater in a depth of around 20 meters for 3 hours straight. Subsequently, he ascended for 30 minutes before diving back to the same depth for the second time. It was only then, he developed such symptoms.Upon presentation to our Emergency Department, he was triaged to Yellow Zone in view pain despite having normal vital signs. Thorough history taking and clinical examination, equipped with relatively normal blood investigation and imaging prompted us to come to the diagnosis of Decompression Sickness (DCS) Type 2. He was put on high flow mask (HFM) oxygen supplement and pain was managed accordingly. Next, an arrangement was made for ground transfer to The Royal Malaysian Navy's facility based in Semporna in which hyperbaric oxygen therapy (HBOT) commenced; a centre located approximately 2 hours away. He was eventually discharged well and symptom-free.

Discussion: Sabah, with its extensive coastline and large fishing community, has seen a rise in the use of compressor diving as cheaper alternative. However, this method, often employed without adequate equipment or proper monitoring, poses significant risks to divers. Among these risks are decompression sickness. Additionally, the use of hydrocarbon-based compressors can lead to carbon monoxide inhalation and other related health issues.

Conclusion: Decompression sickness, a well-documented condition, is becoming more prevalent in Sabah. This highlights the increasing demand for additional hyperbaric chamber facilities to accommodate the growing needs of the affected population.

Keywords: decompression sickness, diving, hyperbaric oxygen therapy

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A DEADLY BENEVOLENT ACT: A CASE OF UNINTENTIONAL CASSAVA POISONING

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Introduction: Cassava thrives in Sabah and serves as a staple food for many residents. However, it contains cyanogenic compounds, raising concerns about its potential impact on consumer health especially when not prepared or cooked well.

Case Description: A 3-year-old non-local boy presented to our centre, Hospital Lahad Datu, 1 hour post Cassava ingestion, given by his neighbour. The Cassava was fried and patient had consumed approximately 5 pieces before he started to exhibit gastrointestinal symptoms. Upon arrival to our centre, he was drowsy, hypotensive and tachypnic. Eventually, he was intubated and was resuscitated accordingly. Case was discussed with Consultant Toxicologist and was advised for administration of intravenous hydroxycobalamine 70mg/kg, however, the antidote was not available in our centre. Ground retrieval was arranged to have the antidote brought in to our centre from Hospital Sandakan, a hospital 2 hours away. Typical "raspberry" urinary discolouration was seen upon hydroxycobalamine administration in this patient. Subsequently, patient was admitted to High Dependency Unit (HDU). Throughout admission, he developed multiple complications include kidney injury, metabolic acidosis, coagulopathy and hyperglycemia. He was able to be extubated after 3 days and was admitted for a span of 6 days before he was discharged well.

Discussion: Toxic substance called glucoside can be found in Cassava. When exposed to digestive enzymes, it is hydrolyzed and releases hydrocyanic acid, leading to toxicity. Cyanide poisoning can present with symptoms such as altered mental status, gastrointestinal disturbances, and seizures—an array of signs that overlap with other toxicities and poisonings. Physicians must maintain a high level of suspicion for cyanide poisoning, particularly when risk factors are present, and ensure prompt administration of the antidote.

Conclusion: Hydroxocobalamin is a potent antidote in suspected cyanide poisoning. Administering antidote promptly can substantially improve recovery prospects.

Keywords: cassava, cyanide, toxicity

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THE USAGE OF NEBULIZED GLYCERYL TRINITRATE IN TREATMENT OF PULMONARY EMBOLISM

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Introduction: The management of pulmonary embolism (PE) complicated with acute right ventricular (RV) failure, haemodynamic instability and respiratory failure is a challenging situation to deal in Emergency Department (ED). Pulmonary vasodilators are useful options that can be offered as it can help in reducing pulmonary pressure however, these drugs might not be available in ED. We describe a case of a patient with PE and RV failure which showed improvement following administration of nebulized Glyceryl trinitrate (GTN) as an alternative.

Case Description: 69-year-old female presented with shortness of breath 3 hours ago. Upon arrival, she was in respiratory distress. Lungs were clear on auscultation. Upon arrival, Spo2 90% under high flow mask, RR 40/min. Bedside echo revealed RV enlargement with interventricular septal wall flattening and good left ventricle function. Patient was started on non-invasive ventilation. ABG taken on NIV with Fio2 1.0 showed type 1 respiratory failure with metabolic and respiratory acidosis. After a while, she became hypotensive and more tachypneic. Nebulized GTN was administered. Her condition showed marked improvement following intervention. Patient's respiratory rate improved to around 24-26/min. Once stable, she was sent for CTPA which showed bilateral PE involving segmental and subsegmental branches of pulmonary arteries with features of right heart strain.

Discussion: PE leads to increased pulmonary pressure due to presence of clots that block pulmonary arteries. Additionally, hypoxemia in PE can cause hypoxic vasoconstriction which can worsen pulmonary hypertension. Pulmonary vasodilators such as nitric oxide can be offered as it can help in reducing pulmonary pressure. However, these drugs might not be readily available in ED. An alternative for this drug is nebulized GTN which is a potent vasodilator that is commonly used in the ED for management of hypertensive emergencies. A few case reports have been published showed similar positive findings however, randomized control trial to support usage of nebulized GTN as pulmonary vasodilator in PE is limited.

Conclusion: Nebulized GTN can be considered as one of the options in treatment for PE complicated with RV failure as it is readily available and feasible in ED. Nevertheless, further studies need to be conducted to support its usage.

Keywords: Pulmonary embolism, right ventricle, Glyceryl trinitrate, nebulized

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WHEN MALARIA TAKES YOUR BREATH AWAY: THE DEADLY LINK TO PULMONARY EDEMA

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Introduction: Malaria in modern settings is still a diagnostic challenge; hence the management could be a difficult one, especially in places where it was uncommon. Fluid management, a vital component in resuscitation may be overlooked. Without a complete hemodynamic assessment of fluid status, it could lead to complications as the most severe form of respiratory complications is ARDS and pulmonary edema.

Case Description: This is a case of 23 years old male with no known medical illness history of employment in a durian orchard in Raub presented to emergency department with fever, cough and lethargy for 1 week. Physical examination revealed normal blood pressure with tachycardia and pyrexia of 38.9°C. Lung auscultation was unremarkable. Initial blood gas showed mild lactic acidosis with pH of 7.312 and a lactate of 3.2. Patient was started on T. Paracetamol and given IV fluid bolus of 1L (15mls/kg). However, while ongoing treatment in emergency department, he the developed shortness of breath with respiratory rate of 32. The patient was noted to have crepitation until middle zone. NIV was started and the patient was admitted to ICU after a diagnosis of suspected malaria was given. Oxygen requirement was eventually weaned down and transferred to general ward. Malaria rapid test was positive but the BFMP result was negative.

Discussion: Malaria is still an endemic infection especially in East Malaysia and parts of Central West Malaysia, especially in Pahang. Pulmonary edema is usually the most severe form of lung involvement. The offending organism for this is plasmodium falciparum. According to Thomas et. al, it is a rare but known complication of falciparum, caused by microvascular dysfunction. Conservative fluid management must be initiated to avoid further aggravation of the vessel. Initial respiratory support could be initiated, including both invasive and non-invasive mechanical ventilation. Other definitive treatment is early administration of antimalarial agents and antibiotic for concomitant bacteremia especially in patients with lung involvement.

Conclusion: judicious fluid use in severe malaria should be initiated and point care ultrasound can be used to evaluate and assess patient's hemodynamic status. Care must be undertaken to avoid further aggravating the patient's lung.

Keywords: Pulmonary Edema, Malaria, Fluid

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GIVE THE BLUE POTION TO PAPA SMURF!

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Introduction: Indoxacarb, an oxadiazine pesticide used widely in agricultural setting blocks sodium channels in insects nervous system. This is a case report highlighting presentation of acquired methaemoglobinaemia in adult after ingesting pesticide which can be managed successfully with early recognition and prompt definitive management.

Case Description: we report a case of 28 year old man with suicidal inclination ingesting 50ml of indoxacarb 14% that was successfully treated with Methylene Blue. Upon arriving on our doorstep he was found alert, not breathless but registering oxygen saturation of 88% even when supplemented by non rebreathable High Flow Oxygen Mask of 15L/min and cyanosed peripherally. Paradoxically, his blood gas was normal on HFMO2 pH 7.40 PaCo2 34 PaO2 372 HCO4 22.8 lactate 1.1 . His other parameters were normal ; BP 120/74 PR 73 t: 36 dxt 4.2 Physical Examination of the lungs, abdomen and the heart was relatively normal. His MetHb level was rocketing uphill from an initial level of 12.2, 22.8 then to an alarming level of 38. He was treated with methylene blue immediately and was able to achieve oxygen saturation to 97% over 3-4 days.

Discussion: Indoxacarb can precipitate life-threatening methaemoglobinaemia, but a single dose of methylene blue given promptly will cure the person. The blood gases may appear ostensibly normal, but one look at the man's fingers and oxygen saturation would narrate a different story altogether. This is one of the few instances where blood gas results may not be accurate to rely on, MetHb level, oxygen saturation via pulse oximetry and the overall clinical picture may be of better surrogate for reliable monitoring.

Conclusion: People developing Methaemoglobinaemia after ingesting indoxacarb can be treated successfully if given methylene blue promptly.

Keywords: MetHb, methaemoglobinaemia, methylene blue, indoxacarb

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A RARE CASE OF DELAYED TRAUMATIC INTRACRANIAL HAEMORRHAGE IN ELDERLY

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Introduction: The incidence of delayed blunt traumatic intracranial haemorrhage (ICH) in elderly is low based on a prospective observational study conducted in 2018 by James A.C. et al. One of the identified risk factors to developing ICH in elderly include the usage of oral antiplatelet and anticoagulant. We present an interesting case of an elderly who presented to Emergency Department (ED) with ICH following a normal CT scan finding 3 weeks prior.

Case Description: A 78-year-old male with underlying diabetes mellitus, hypertension, not on any oral antiplatelet or anticoagulants. He fell down after trying to climb up a chair to clean the fan and hit his head on the ground. Post-trauma, he complained of dizziness. There were no other symptoms of raised intracranial pressure. Systemic and neurological examinations were unremarkable. A CT scan was done and showed no acute intracranial bleed. He was taken home with head injury advice. 3 weeks later, he revisited the ED due to a headache which worsened upon coughing and movement of the eyes. During this visit, there were no abnormal neurological findings seen. A repeated CT scan was performed and showed bilateral fronto-parieto-temporal acute to subacute subdural hemorrhages with cerebral edema and mass effect. He was then referred to the neurosurgical team for surgical intervention and transferred to a tertiary center.

Discussion: Elderly patients on anticoagulant and antiplatelet have a higher risk of sustaining intracranial hemorrhage following trauma. Interestingly, our patient did not consume these medications. To explain this condition, anatomical and structural brain changes in the elderly could cause them to easily get ICH following fall. This is because elderly patients have cerebral atrophy which increases the space between the dura and skull for bleeding. They also have a decline in the elasticity of the cerebral bridging veins, which pose a higher risk of injury and developing ICH.

Conclusion: Although delayed ICH in the elderly is rare, clinicians must be vigilant when dealing with elderly patients who revisit the ED with any symptoms of raised intracranial pressure. A CT scan must be performed despite a normal CT scan finding during previous medical consult.

Keywords: elderly, fall, intracranial hemorrhage

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"OH, I'M SEEING DOUBLE AND MY EYES SUDDENLY SQUINTS?!": A RARE CASE OF CEREBELLOPONTINE ANGLE TUMOR WITH OCULAR MANIFESTATION

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Introduction: Acute diplopia can emanate from innumerable causes, including cranial nerve (CN) palsies, ocular conditions, and intracranial pathologies like stroke and tumors. Cerebellopontine Angle Tumors (CPA) account approximately 10% of intracranial tumors, and patients may present with diverse atypical symptoms depending on the type and location of the lesion. We describe a case of CPA tumor in a young adult with ocular manifestations.

Case Description: A 30-year-old woman presented with worsening binocular diplopia over the past day, along with intermittent episodes of vertigo for the past 4 months. She also developed right eye strabismus and progressive blurring of vision. Additionally, she reported mild left-sided weakness for the past 3 months. She denied fever, persistent vomiting, seizures, with no connective tissue disease signs or ear-related symptoms. Although she sought medical attention previously, yet only was prescribed dizziness medication. On examination, vital signs were stable. Neurological assessment revealed right-sided CN VI palsy, horizontal nystagmus, and loss of the right nasolabial fold. Strength in the left upper and lower limbs was 4+/5, and no other significant abnormalities were found. A contrast-enhanced CT (CECT) of the brain revealed a well-defined extra-axial mass at the right cerebellopontine angle, causing mass effect and displacement of the brainstem, along with signs of early hydrocephalus.

Discussion: Acute diplopia poses a diagnostic challenge, especially in the emergency department (ED). The initial measure is determining the diplopia is monocular or binocular. Binocular diplopia (BD) results in double vision albeit both eyes are open, and resolves as one eye closes which contrast to monocular diplopia (MD). MD suggestively indicates localized affected eye that requires ophthalmologist referral. Conversely, BD imply ocular misalignment associated with cranial nerves, muscles, or the central nervous system (CNS), requiring further radiological investigation especially related with neurological signs. Imaging is critical to rule out serious conditions like tumors or strokes in these cases.

Conclusion: Acute diplopia is relatively rare in the ED but can stem from benign to emergent causes with significant morbidity. A thorough diagnostic approach is crucial to avoid misdiagnosis and reduce risks of complications.

Keywords: Acute diplopia, Binocular diplopia, Cerebellopontine angle tumor

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TO BE OR NOT TO BE: KOUNIS SYNDROME

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Introduction: Kounis syndrome is an acute coronary event secondary to allergic reaction. The main pathophysiological mechanism is inflammatory mediators released during a hypersensitivity reaction causing coronary vasospasm or atheroma plaque rupture.

Case Description: An 81-year-old Chinese lady with underlying hypertension, dyslipidemia and ischemic heart disease presented to the emergency department with generalized body rashes after having her dinner which consist of fish and vegetables. She denies any previous known allergies. She does not complain of dyspnea and has no gastrointestinal symptoms. Her initial vital signs were stable. However, she became less responsive whilst waiting for her turn. There was no jerky movement, urinary incontinence or chest pain to note. She regained full consciousness before we could attach a cardiac monitor. Electrocardiogram (ECG) done showed high lateral infarction which then normalized. Computed tomography (CT) Brain showed multifocal infarcts with no intracranial haemorrhage. Further ECGs after admission showed evolving changes from sinus bradycardia to multiple T waves inversion over V2-6. Her initial troponin was negative but repeated test was elevated. She was referred for inpatient angiogram, however no slot was available. She was discharged well after completing her anticoagulant regime.

Discussion: In the setting of an acute coronary event, it is of utmost importance to differentiate between coronary vasospasm and thrombus formation secondary to plaque rupture because the management differs. Coronary angiogram is the only way to tell these apart. In our setting, urgent percutaneous coronary intervention is not readily available. But repeated ECG showed normal sinus bradycardia without thrombolysis tells us that it was most likely a vasospasm that mimics myocardial infarction. The mainstay of treatment for Kounis syndrome is removal of causal agent, administration of corticosteroids and anti-histamine. Vasopasm from type 1 Kounis syndrome can also be treated with vasodilators such as nitrates and calcium channel blockers. For patients with anaphylaxis, adrenaline should be used with caution as it worsens myorcardial ischemia.

Conclusion: In principle, Kounis syndrome is becoming more common as this eccentric diagnosis has gained more attention. The key to diagnosis is a high index of suspicion. Accurate diagnosis avoids unwarranted treatment to our patients.

Keywords: allergic reaction, acute coronary event

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A CASE OF RECURRENT HAEMOPTYSIS LEADING TO ACUTE UNILATERAL LUNG COLLAPSE

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Introduction: Any haemoptysis exceeding 100 mL/H can cause abnormal ventilation or acute airway obstruction leading to possible fatal complications. Few case reports have described blood clot formation secondary to massive haemoptysis leading to airway obstruction. Here, we present a case of recurrent haemoptysis leading to an acute unilateral lung collapse.

Case Description: A 34-year-old male with a background of learning disability presented to our casualty with a complaint of recurrent haemoptysis. He was a non smoker with no prior comorbids/hospitalization. He complained of a week of chesty cough with an onset of haemoptysis 4 days after- initially minimal and subsequently increasing amount and frequency, associated with central pleuritic chest pain. He denied PTB contact/constitutional symptoms/night sweatsHe was initially triaged to green zone where initial CXR revealed a hyperinflated clear lung field. ABG taken on arrival showed good oxygenation under room air.Patient was given a stat dose of Neb and IV TXA with no active complaints.About an hour later, patient complained of worsening bouts of cough associated with epistaxis, SOB, pleuritic chest pain.SPO2 had dropped to 80% under RA with an ABG showing T1RF. Repeated CXR within 4H of presentation revealed left lung collapse with ipsilateral mediastinal shift. Patient was then intubated for impending respiratory collapse. About 6 hours post intubation, ABG showed good oxygenation and CXR revealed a fully expanded lung with minimal blunting of left costophrenic angle. CTA/CECT thorax (3H post intubation)- left lower lobar bronchiectasis with multiple lung nodules- dilated left bronchial artery- no active hemorrhage

Discussion: Several disorders have been described where endobronchial blood clots can lead to airway obstruction. (Ie. bronchiectasis, PTB, malignancy)A history of mild/massive haemoptysis may be found before an endobronchial blood clot formation; however, respiratory failure is seen in approximately 30% of patients without a previous history of haemoptysis. Early and prompt intervention is required to tackle the acute obstruction. intervention may include: PPV; bronchoscopy for lavage and clot removal; hemostatic measures to control active haemorrhaging.

Conclusion: Haemoptysis followed by clot formation can lead to airway obstruction and acute respiratory failure. Early recognition and intervention is necessary to prevent fatal complications.

Keywords: atelectasis, haemoptysis, airway obstruction

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TOXIC MEGACOLON: A POTENTIALLY DEADLY CONDITION

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Introduction: Toxic megacolon (T.M) is rare but possesses a high morbidity and mortality rate. We describe a case of a lady who presented with toxic megacolon and bowel ischemia.

Case Description: This is a 21-year-old lady who presented to the emergency room with a two-days history of severe abdominal pain, fever, vomiting, and shortness of breath. She had constipation and abdominal distention for a year that had never been investigated. Upon arrival, she was tachycardic and hypotensive.On examination, her abdomen was distended and guarded. Other physical examinations were unremarkable. Laboratory results indicated leucocytosis, elevated C-reactive protein, severe metabolic acidosis and hyperlactatemia. Abdominal radiography revealed grossly dilated bowel loops suggesting megacolon with a maximum diameter of 17.5 cm. As she was hemodynamically unstable with signs of peritonitis, she underwent an emergency exploratory laparotomy, bowel decompression, subtotal colectomy, and washout. Intraoperatively, the bowels were grossly dilated and ischemic from the rectum to the cecum. Histopathological evaluation of the colon specimen revealed ganglionic colon with ischemic changes. Postoperatively, she required triple inotropic support and mechanical ventilation. Unfortunately, she succumbed on the second day of admission.

Discussion: Toxic megacolon is non-obstructive dilation of the colon, usually associated with systemic toxicity. It carries an in-hospital mortality rate up to 7.9%. The precipitating factors for toxic megacolon include inflammatory bowel disease, Clostridium difficile infection, anti-motility agents, electrolyte derangements, and diagnostic procedures such as barium enema and colonoscopy. The diagnostic criteria for TM include: (a) radiographic evidence of colonic dilation greater than 6 cm, especially in the transverse colon; (b) any three of the following: fever, tachycardia, leukocytosis, or anemia; and (c) any of the following: hypotension, hypovolemia, altered mental status, or electrolyte disorders. These criteria were met by our patient. Treatment for TM often involves medical therapy with an aim to reduce inflammation and prevent perforation. However, if complications such as haemorrhage, peritonitis, abdominal compartment syndrome, or perforation do occur, urgent surgery is indicated.

Conclusion: Toxic megacolon is a potentially deadly condition. Hence, early recognition is required to prevent complications and ensure patient survival.

Keywords: Toxic Megacolon, Bowel Ischemia

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SUBCUTANEOUS EMPHYSEMA AND PNEUMOMEDIASTINUM COMPLICATIONS OF POST COVID-19 IN PAEDIATRICS AGE GROUP

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Introduction: The coronavirus disease 2019 (COVID-19) is a multi-system infection which predominantly affects the respiratory system. Subcutaneous emphysema with or without pneumomediastinum and pneumothorax been recently reported as an unusual complication in cases of severe COVID-19 pneumonia. Subcutaneous emphysema can result from surgical, traumatic, infectious or spontaneous etiologies. Injury to the thoracic cavity, sinus cavities, facial bones, barotrauma, bowel perforation, or pulmonary blebs are common causes.

Case Description: We presented, a 7-year-old girl with immunization up to age and she was born term via spontaneous vaginal delivery (SVD). She had history of COVID-19 in March 2022. She presented to ED again in June 2022 with complained of fever, rapid breathing, cough, and runny nose. Upon examinations, child appeared tachypneic with respiratory rate; 48 breath per minute. SpO2 under room air showed 93% and the patient was put on FMO2 5L/min. Upon auscultation, transmitted sound heard bilaterally. Further examination revealed crepitus over neck region. She was sent for chest X-ray revealed pneumomediastinum with upper chest subcutaneous emphysema.

Discussion: COVID-19 infection is associated with acute respiratory distress syndrome from severe inflammatory response. Hereby related to the case presented, revealed crepitus over neck region. Further understanding on pathophysiology of it would be beneficial. It is to be related with burst of pro-inflammatory cytokines initiate alveolar injury, pulmonary oedema, and reduced oxygenation within pulmonary vessels. This hypoxic state leads to pulmonary vasoconstriction, increased vascular permeability with an influx of inflammatory cells within the lung parenchyma, thereby reducing surfactant levels and atelectasis. A right-to-left shunt ensues a ventilation/perfusion mismatch with an increased physiological dead space. Further, levels of PAL-1 lead to reduced depletion of fibrin causing perfusion deficiency and pulmonary dysfunction. Thus, may complicated with subcutaneous emphysema. Besides considering this, pneumomediastinum or subcutaneous emphysema in COVID-19 does not appear to be associated with the classic barotrauma mechanism which correlated with involvement of mechanical ventilation.

Conclusion: Subcutaneous emphysema, pneumediaternum is a rare condition for post COVID-19 patients. The understanding of pathophysiology of it still required further studies. The high incidence of subcutaneous emphysema related to COVID-19 deserves a careful assessment and should not be neglected.

Keywords: COVID-19, subcutaneous emphysema, pneumomediastinum

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HELMET STRAP THYROTOXICOSIS: INDIRECT BLUNT NECK INJURY CAUSING THYROTOXICOSIS

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Introduction: Blunt trauma to the neck is relatively common, mostly cause by traffic accident. We presented a rare trauma induced thyrotoxicosis. 25% of laryngotracheal trauma have no physical finding initially. High index of suspicion is needed. Malaysia law requiring motorcyclist and pillion to wear helmet universally accepted as mean of protection could fatally cause an injury if not worn properly.

Case Description: 25 year old Malay male. Alleged motor vehicle accident motorbike with car, where his helmet strap slipped backward during collision. He complained of anterior neck pain and odynophagia. He is stable hemodynamically without airway compromise. His anterior neck swollen, tender, no tracheal deviation, no subcutaneous emphysema. Computed tomography (CT) neck noted multiple laryngeal bone and cartilage fracture dislocation and thyroid gland hematoma with anterior neck hematoma. His blood parameter shown persistently low thyroid stimulating hormone with high free thyroxine (FT4) .

Discussion: Blunt neck injury causing isolated thyroid injury in an normal thyroid is uncommon, further causing thyrotoxicosis state is extremely rare. Neck has complex anatomy with many vital organ. Onset of life threatening symptom ranges from 60 minute to more than 24 hours. Respiratory compromise are manage according to Advanced Trauma Life Support guidelines. Thyrotoxicosis induce trauma happen from rupture of thyroid acini and release of thyroid hormone into bloodstream. Serial monitoring of thyroid function needed to observe for recovery as trauma induce thyroiditis involve a triphasis course. Malaysia as middle income country, main mode of transportation via motorcycle offer many benefit, but associated with high level of road trauma itself. Helmet wearing deem to decrease fatalities, but there is a limit to it protection. Design characteristics and behavior wearing play an important parameters.

Conclusion: Higher incidents of neck injury in motorcycle crashes are not from direct contact rather indirect due to stress and hypermotion of neck. Trauma induce thyrotoxicosis diagnosed by high index of suspicion in motorbike rider wearing helmet with finding suggestive of thyroid gland involvement

Keywords: helmet strap, thyrotoxicosis, blunt neck trauma, thyroid gland

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MALIGNANT CARDIAC TAMPONADE MIMICKING UNSTABLE SUPRAVENTRICULAR TACHYCARDIA

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Introduction: Cardiac tamponade is a critical emergency condition characterized by pericardiac fluid accumulation leading to impaired cardiac filling and hemodynamic collapse. In patients with advanced malignancy, particularly lung carcinoma, tamponade may present as unstable tachyarrhythmia. Early recognition and prompt pericardiocentesis remain the cornerstone of treatment.

Case Description: An elderly Malay man with advanced left lung carcinoma presented with worsening dyspnoea for one day and signs of respiratory distress. Initial assessment revealed narrow complex tachycardia with heart rate 214 bpm, hypotension, tachypnea (respiratory rate : 30 breath per minutes) and reduced air-entry over left hemithorax. Cardiac monitor showed SVT. Urgent synchronized cardioversion (100J) was attempted for unstable supraventricular tachycardiac but failed to rerstore hemodynamic stability, even after second attempt. Given persistent instability, beside transthoracic echocardiography was performed, revealing a large pericardial effusion with classical features of cardiac tamponade-right atrial systolic collapse and right ventricular diastolic collapse. Immediate ultrasound-guided pericardiocentesis was performed via parasternal approach, aspirating 200cc of hemorrhagic serous fluid. Post-procedure, the patient demonstrated clinical improvement with resolving normalization of hemodynamic (sinus rhythm with HR 90bpm, blood pressure:120/67mmHg) and respiratory distress resolution.

Discussion: This case highlight few importance points :1) Malignancy-related cardiac tamponade often presents insidiously but can precipitate sudden decompensation resulting in unstable supraventricular tachycardia.2) Arrhythmias, especially persistent tachycardia unresponsive to cardioversion, should raise suspicion for structural causes such as tamponade,especially in lung carcinoma patients. 3) Point-of-care echocardiography is crucial for rapid diagnosis of structural cause of unstable tachyarrhythmias, allowing immediate bedside intervention.4) The parasternal approach for pericardiocentesis is a safe and effective alternative to the subxiphoid approach.

Conclusion: This case highlights the diagnostic challenge of malignant cardiac tamponade presenting as refractory narrow complex tachycardia. Early use of point-of-care ultrasound and prompt pericardiocentesis are vital, life-saving intervention in emergency settings.

Keywords: malignant, cardiac tamponade, unstable tachyarrhythmia

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WHEN AIR KILLS: RAPID RECOGNITION OF TENSION PNEUMOCEPHALUS

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Introduction: Tension pneumocephalus (TP) is a life-threatening neurosurgical emergency caused by trapped intracranial air under pressure, typically secondary to skull base fractures or penetrating trauma. If not promptly identified, it may lead to brain herniation and death. We present a rare case of tension pneumocephalus that developed three months following an initial head trauma.

Case Description: A 17-year-old male presented to our Emergency Department with complaint of persistent headache for one week with pain score 10, vomiting and few episodes of rhinorrhea. He had history of motor vehicle accident three months ago where he sustained multiple acute intracranial haemorrhages with cerebral oedema, bilateral comminuted frontal bone fracture with a depressed component on the right, multiple facial and base of skull fractures. He was treated conservatively and discharged after five days of admission. A repeat CT brain was done and showed extensive pneumocephalus with early hydrocephalus, cerebral oedema and bifrontal gliosis from previous hemorrhage. The patient underwent decompressive frontal craniectomy, recranialization and dural repair. The patient remained clinically asymptomatic following the aforementioned interventions. He was discharged 8 days after admission.

Discussion: TP generally develops as air enter via skull fracture during coughing and sneezing but cannot escape, thus escalating intracranial pressure. This condition is often explained by the ball-valve mechanism. Clinical presentation of TP may include thunderclap headache, abrupt mental decline, vomiting and seizure.Non contrast CT brain is the gold standard to diagnose tension pneumocephalus with the appearance of “Mount Fuji Sign”. Urgent surgical decompression is essential for the management of tension pneumocephalus. Timely decompression is critical for survival, with mortality rates decreasing from 40% to 15% when surgery is performed within six hours. Delayed intervention is associated with poor outcomes.

Conclusion: Tension pneumocephalus is a life-threatening condition that necessitates urgent neurosurgical intervention to prevent fatal outcomes. High clinical suspicion is crucial, particularly in patients with head trauma who present with persistent headache and cerebrospinal fluid leakage. Timely diagnosis relies on the rapid recognition of classic imaging signs, most notably on a CT scan, which should be prioritized for prompt identification.

Keywords: Tension Pneumocephalus, Ball-valve Mechanism, Mount Fuji Sign, Neurosurgical Decompression

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MANAGEMENT OF BREAKTHROUGH SEIZURE AND STATUS EPILEPTICUS IN THE EMERGENCY DEPARTMENT: A PROSPECTIVE, OBSERVATIONAL, MULTICENTER STUDY

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Introduction: Managing breakthrough seizures and status epilepticus in the Emergency Department (ED) is challenging due to patient heterogeneity, limited access to patient medical records, and inconsistent clinical practice. This study aimed to assess the current management of breakthrough seizure and status epilepticus (SE) in the ED.

Methodology: BEAT'EM (management of Breakthrough sEizure and stATus epilepticus in the Emergency Department) is a prospective, multicentre study on adult epilepsy patients presenting to the ED for breakthrough seizure or SE. Data were collected (November 2024 to March 2025) via convenience sampling. Endpoints include the SE rate, adherence to antiepileptic drugs (AEDs), acute management in the ED, identified precipitating factors, pharmacist interventions, ED and hospital length of stay (LOS), and in-hospital mortality.

Results: A total of 206 patients from 22 hospitals were recruited, mostly male (n=123, 59.7%), and with structural epilepsy (n=87, 42.2%). The median epilepsy duration was 8 (2-17) years, with most having active follow-up (n=186, 90.3%) and adhering to AEDs (n=124, 60.2%). Seizure-related ED visits or hospitalisation within 6 months were common (n=101, 49.0%). Most patients presented with breakthrough seizures (n=178, 86.4%), while 28 (13.6%) had SE at presentation, and 20 (11.2%) progressed to SE after arrival. Non-AED related precipitating factors were identified in 74.3% (n=153) patients. Acute treatment was initiated in 106 (51.5%) subjects, primarily with intravenous (IV) phenytoin (n=77, 37.4) and IV diazepam (n=58, 28.2%). Maintenance AEDs were started in 70.4% (n=145) of patients. Therapeutic drug monitoring (TDM) was performed in 67.3% (n=138) of eligible AEDs. Clinical pharmacists made a total of 74 interventions in 57 (27.7%) patients. Fifty-seven (27.7%) patients were discharged directly from ED [median LOS in ED: 24 (13.8-40.0) hours], while 148 (71.8%) of patients were admitted [median time of ED arrival-to-admission time: 11.5 (6.0-24.0) hours]. In-hospital mortality was 1.5% (n=3).

Discussion: The study highlights gaps in acute seizure management, AEDs adherence, and pharmacist interventions, with non-AED-related factors contributing to most breakthrough seizures and a high ED burden due to prolonged ED stays before discharge or admission.

Conclusion: These findings emphasise the need for standardised ED protocols, improved seizure management strategies, and enhanced pharmacist involvement to optimise patient outcomes and reduce ED burden.

Keywords: epilepsy, breakthrough seizure, status epilepticus, emergency department

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A RARE CASE OF LACTESCENT SERUM-INDUCED ACUTE PANCREATITIS

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Introduction: Hypertriglyceridemia (HTG) is the third most common cause of acute pancreatitis. The presence of lactescent serum is a sign of severe hypertriglyceridemia, and it is strongly indicative of it being the cause in patients presenting with acute pancreatitis, especially when the triglyceride level is > 11.3mmol/L.

Case Description: A 37-year-old lady presented to a rural hospital with sudden onset of severe epigastric and left hypochondriac region pain associated with multiple episodes of vomiting. She was referred to a tertiary hospital for further intervention. In Emergency Department (ED) of the tertiary hospital, abdominal examination revealed localized tenderness and guarding over the left hypochondriac region and hemodynamically stable. Milky serum was observed during blood-taking procedure. Investigation showed serum amylase level was 131 U/L and serum triglyceride (TG) level was 19.7mmol/L. An abdominal CECT scan revealed acute interstitial pancreatitis with lymphadenopathies. Her pain was controlled with regular doses of analgesics and started on diet modification, antilipidemic agent, and insulin infusion. Her serum TG decreased to 5.6 mmol/L, and she was discharged home after 5 days of admission. Patient was discharged with statin, fenofibrate, and omacor; and reviewed under gastroenterology clinic.

Discussion: The pathophysiology of HTG-induced pancreatitis (HTGP) remained unclear; it is believed that byproduct of TG-rich lipoprotein breakdown by pancreatic lipase, free fatty acids, and lysophosphatidylcholine induce pancreatic damage leads to pancreatitis. Acute pancreatitis (AP) should not be excluded even if the amylase level is normal, as several cases reported for normal amylase levels in HTGP. Initial treatment of acute pancreatitis is similar regardless of the etiology which includes bowel rest, hyperhydration, and pain control. Insulin can stimulate the release of lipoprotein lipase which hydrolyzes triglyceride, helping in reducing triglyceride levels. Risk stratification based on the severity of AP using APACHE or Balthazar should be performed to determine appropriate management and admission.

Conclusion: Lactescent serum should raise a high degree of suspicion for HTGP. Early recognition, diagnosis, and treatment are essential to improve the outcome. Bowel rest, aggressive fluid resuscitation, and analgesia are the key to success. Complications should be closely monitored and if necessary, patient should be directed to the intensive care unit.

Keywords: Hypertriglyceridemia, Acute pancreatitis, Latescent serum

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MECHANICAL THROMBECTOMY FOLLOWING SYSTEMIC THROMBOLYSIS IN MASSIVE PULMONARY EMBOLISM: A CRITICAL INTERVENTION IN THE EMERGENCY DEPARTMENT

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Introduction: Massive pulmonary embolism (PE) is a time-sensitive emergency associated with high mortality if not promptly treated. Systemic thrombolysis is the first-line therapy in hemodynamically unstable PE; however, adjunctive interventions such as mechanical thrombectomy may be necessary in selected cases. We report a case highlighting the role of mechanical thrombectomy following thrombolysis in a critically ill patient with massive PE.

Case Description: A 66-year-old female with hypertension and untreated bilateral varicose veins presented with acute dyspnoea and reduced consciousness for one day, preceded by bilateral lower limbs pain for a week. She was hypotensive, tachycardic, tachypnoeic, hypoxic. Point-of-Care Ultrasound (POCUS) revealed dilated inferior vena cava, McConnell's sign and right ventricular strain. Urgent CT Pulmonary Angiogram (CTPA) demonstrated massive PE involving the pulmonary trunk, bilateral pulmonary arteries and segmental branches of all lobes with signs of right heart strain. She was immediately administered with intravenous alteplase in the resuscitation bay. Despite thrombolysis, she remained haemodynamically unstable, necessitating urgent mechanical thrombectomy. Large clot burden was aspirated from the right superior and inferior pulmonary arteries extending into the ascending and interlobar branches. Post procedure, there was reduction in right pulmonary artery pressure (PAP). However, despite aggressive intervention and timely resuscitative efforts, she deteriorated further in the intensive care unit (ICU) due to multiorgan failure, requiring maximal inotropic support and continuous renal replacement therapy (CRRT). She succumbed on day three of admission.

Discussion: This case highlights the limitations of systemic thrombolysis alone in massive PE, particularly in patients with high clot burden and persistent instability. Mechanical thrombectomy plays pivotal role in improving pulmonary circulation by rapid reduction in clot burden when thrombolysis is insufficient. Treating physicians must remain vigilant for signs of ongoing shock post-thrombolysis and act swiftly to escalate care, including early involvement of interventional radiology.

Conclusion: Mechanical thrombectomy is a valuable adjunct to systemic thrombolysis in the management of massive PE with persistent hemodynamic instability. Early identification, timely escalation, and multidisciplinary approach are key to improving outcomes. This case underscores the need for emergency department to be equipped and prepared for advanced interventional strategies in acute PE management.

Keywords: Pulmonary embolism, thrombolysis, thrombectomy

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UNMASKING BRADYKININ: A CASE OF ACE INHIBITOR-INDUCED ANGIOEDEMA RESPONSIVE TO TRANEXAMIC ACID

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Introduction: Angioedema is a potentially life-threatening condition of the upper airway caused by plasma extravasation into the interstitial tissues of the skin and submucosa. While histamine-mediated angioedema often responds well to standard anaphylaxis protocols, bradykinin-mediated angioedema presents a greater management challenge due to its resistance to conventional treatment. Angiotensin-converting enzyme inhibitor (ACEi)-induced angioedema is a common acquired form of bradykinin-mediated angioedema.

Case Description: We report the case of a 77-year-old woman with a known seafood allergy who presented with progressive facial swelling, throat discomfort, and dyspnoea over a 3-day period. She had recently been discharged following an admission for acute coronary syndrome and had been prescribed oral perindopril 8 mg among other medications. She denied exposure to any known allergens. On examination, there were no signs of airway compromise, and her vital signs remained stable. Despite administration of standard anaphylaxis treatment — intramuscular adrenaline, intravenous hydrocortisone, and antihistamines — no clinical improvement was observed. Flexible nasoendoscopy performed by the ORL team revealed edema of the retropharyngeal space, bilateral arytenoids, and epiglottis, with sparing of the vocal cords. Given the clinical presentation and recent initiation of perindopril, ACEi-induced angioedema was suspected. A trial of intravenous tranexamic acid (1 gram) was administered, resulting in marked improvement in the angioedema.

Discussion: Early recognition of ACEi-induced angioedema hinges on thorough medication history and a high index of suspicion. Bradykinin-mediated angioedema does not respond to traditional anaphylaxis therapies. Tranexamic acid, through inhibition of plasminogen activation, reduces bradykinin production and may be an effective early intervention. Other therapeutic options reported in the literature include fresh frozen plasma, C1-esterase inhibitor concentrates, icatibant, and ecallantide, with variable efficacy.

Conclusion: ACE inhibitor-induced angioedema may present insidiously but can rapidly progress to airway compromise. Clinicians should maintain a low threshold for securing the airway in deteriorating patients. While standard anaphylaxis treatments are appropriate initial measures, persistent symptoms should prompt consideration of bradykinin-mediated angioedema. In such cases, agents like tranexamic acid, fresh frozen plasma, or C1-esterase inhibitors may be life-saving.

Keywords: Angioedema, tranexamic acid, ACE-inhibitor, bradykinin

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CLOUDS ON THE HORIZON

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Introduction: Maleic anhydride is widely used in the chemical industry and comes in white crystals or powders. Exposure to maleic anhydride would primarily be occupational from contact with spills, fugitive emissions, or vent gases. Acute inhalation exposure of humans to maleic anhydride has been observed to cause irritation of the respiratory tract and eye irritation.

Case Description: A 57 years old gentleman not wearing a proper personal protective equipment inhaled maleic acid gas while washing a tanker with the gas valve dislodged unsure duration of exposure. Patient developed shortness of breath, vomiting and sore throat. Upon arrival to medical centre noted GCS full, blood pressure normotensive, heart rate normal, mild respiratory distress with oxygen saturation under RA 76% and under HFM 15L/minute is 96% with lung bronchospasm. Given nebulization, dexamethasone injection and started on non-invasive ventilation. Initial arterial blood gas was compensating metabolic lactic acidosis. Blood investigations shows normal blood parameters except for mild elevated liver function. Chest x-ray shows features of pneumonitis. Patient was done airway endoscopy by ENT team noted oedema of bilateral arytenoid and no vocal cord oedema.

Discussion: Maleic anhydride is a cyclic dicarboxylic anhydride with the molecular formula $C_4H_2O_3$, characterized by a five-membered ring containing two carbonyl groups and a double bond, making it highly reactive. Maleic acid anhydride exposure can cause allergic sensitisation in the airways caused by specific Ig E antibodies. Upon exposure, Ig E antibodies can trigger immune responses, which result in inflammation of the mucous membranes of the respiratory tract. The allergic hypersensitivity is generally irreversible and incurable.

Conclusion: A harmful contamination of the air can be reached very quickly .Maleic anhydride is a hazardous substance that can cause skin and eye irritation, and respiratory problems upon inhalation, necessitating the use of appropriate protective gear and safe handling practices. Inhalation may cause lung oedema.

Keywords: Maleic anhydride , hazardous, airway, protection

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FROM COMA TO CONSCIOUSNESS: NALOXONE'S EFFECT IN ACUTE XYLAZINE TOXICITY

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Introduction: Xylazine intoxication is increasingly reported, with overdose-related deaths rising globally. However, data on xylazine toxicity in Malaysia is limited. A 2023 case series questioned naloxone's effectiveness as an antidote. This report presents a case where naloxone led to rapid clinical improvement in acute xylazine toxicity.

Case Description: A 28-year-old municipal worker was accidentally injected with a dart containing 150 mg xylazine and 150 mg ketamine while managing stray dogs. He became unresponsive and was referred to the Emergency and Trauma Department (ETD). Initially at the community clinic, his Glasgow Coma Scale (GCS) score was 3/15, with stridor, hypertension (196/67 mmHg), Heart rate is 82 bpm and pinpoint pupils. He received IV fluids and oxygen before transfer. On arrival at the ETD, 30 minutes post-exposure, he was given 0.4 mg IV naloxone, improving his GCS to E2V2M5. A second 0.4 mg dose resulted in full recovery of GCS. Patient is arousable and able to recall the incident. A small puncture wound was noted on his finger, but other examinations were unremarkable. He required no additional naloxone, respiratory support, or inotropes and was discharged well after 24 hours of monitoring.

Discussion: Xylazine is a veterinary sedative with no approved human use. It acts on alpha-2 adrenergic, opioid, and other receptors, leading to neurological, respiratory, and cardiovascular depression. Due to its lipophilicity, it accumulates rapidly in the central nervous system, with effects lasting up to eight hours. Although naloxone is primarily used for opioid toxicity, its administration in this case led to rapid CNS recovery. This suggests that xylazine may interact with opioid receptors, particularly the mu-receptor, which explains the response to naloxone.

Conclusion: The primary management of xylazine toxicity focuses on supportive care, ensuring airway stability and hemodynamic support. This case highlights that early naloxone administration may help reverse CNS depression, though further studies are needed to establish its efficacy, dosage, and safety in xylazine intoxication.

Keywords: Xylazine intoxication, naloxone, CNS toxicity, toxicology

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CARBON MONOXIDE POISONING: THE IMPORTANCE OF EARLY HYPERBARIC OXYGEN THERAPY

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Introduction: Carbon monoxide (CO) poisoning is a life-threatening condition requiring prompt recognition and intervention to prevent irreversible neurological and cardiac damage. CO binds competitively to hemoglobin, forming carboxyhemoglobin (COHb), thereby impairing oxygen delivery and inducing cellular hypoxia. Additionally, CO disrupts mitochondrial function, promoting oxidative stress and neuronal injury.

Case Description: We report the case of a 32-year-old male found unconscious in an enclosed space, presenting to the emergency department with a Glasgow Coma Scale (GCS) score of 5/15 and abnormal non-seizure-like movements. Initial brain computed tomography (CT) revealed bilateral acute putaminal infarcts. Laboratory investigations confirmed elevated COHb at 12.1%, establishing a diagnosis of acute CO poisoning. The patient underwent hyperbaric oxygen therapy (HBOT) with three sessions administered over 18 hours. The first session, initiated five hours post-admission at 2.8 ATA for 120 minutes, improved GCS to 7. Subsequent sessions at 2.0 ATA for 120 minutes each led to progressive GCS improvements—9 and 11, respectively. COHb levels decreased to 1.1%, and the patient regained full consciousness, after which he was referred for psychiatric evaluation.

Discussion: This case underscores the critical importance of early HBOT in severe CO poisoning. HBOT accelerates CO elimination by reducing its half-life from approximately 300 minutes in ambient air to 30 minutes and enhances oxygenation of hypoxic tissues. It also mitigates oxidative injury and lowers the risk of delayed neurological sequelae (DNS). Notably, the bilateral symmetric putaminal infarcts seen on CT, though nonspecific, can serve as a radiological clue prompting consideration of CO toxicity, especially in unexplained unconsciousness.

Conclusion: Timely initiation of HBOT in acute CO poisoning is associated with significant neurological recovery and prevention of long-term complications. Despite the absence of a definitive exposure history, clinicians should maintain a high index of suspicion in cases with compatible imaging findings. This case supports the growing evidence that early, protocol-driven HBOT can optimize outcomes in CO poisoning. Further research is warranted to define standardized treatment protocols and identify predictors of recovery.

Keywords: Toxicology, Carbon Monoxide Poisoning, Hyperbaric Oxygen Therapy, Delayed Neurologic Sequelae

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"SON, DO NOT PLAY THIS PING PONG"

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Introduction: Ping pong fracture is rare type of skull fracture in newborns or infants where skull bone buckles inward without visible break in bone's continuity, resembling indentation produced on ping pong ball when pressed due to malleability of skulls and incomplete bone mineralization. The fracture is most commonly occurred in parietal- temporal skull bone as location is softer. The appearance is frequent during neonate and infant and extremely rare outside of these age periods.

Case Description: 5 months old boy, born at 37 weeks via elective caesarean section for twin pregnancy with history of admission at one month old for pneumonia, presented with alleged fall from bed of two feet height with unknown mechanism of injury to the floor. Post trauma sustained, loss of consciousness, lasted around 30 seconds, then regained consciousness at scene and had skull depression over left parieto-temporal. Upon arrival, GCS full, stable vital signs, pupil bilaterally reactive 2 mm, equal with normal neurological examination while head examination noted skull depression over left parieto-temporal size 5cm x 5cm. Then proceeded with CT brain, showed smooth inward indentation of calvarium at left parietal bone, in keeping with ping pong skull fracture with no evidence of intracranial haemorrhage.

Discussion: In ping pong fracture, it is usually evident during physical examination with unilateral depression with CT brain used to access the extent and shape of fracture. The treatment of this fracture either surgically or conservative depends on severity of fracture. In this case, the treatment chosen is conservative as patient had no neurological deficit and no increased intracranial pressure symptoms. Risk of growing skull fracture also explained to parents. The patient was observed for 3 days in ward then discharged well to home.

Conclusion: In this fracture, strong clinical judgement is needed when had depressed skull bone as can be diagnosed clinically despite in non-traumatic presentation. CT brain just confirms the diagnosis to know extension, fracture shape and excluding any associated injuries. Spontaneous elevation of skull is extremely rare in infants with head trauma. Most of fracture has good prognosis in absence of neurological deficits and need for monitoring of growth skull bone fracture.

Keywords: Ping pong fracture, Infant head injury

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UNILATERAL DO NOT RESUSCITATE (DNR) ORDERS AMONG THE UNDOCUMENTED IN SABAH - WHERE HAVE WE GONE WRONG?

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Introduction: Unilateral Do Not Resuscitate (DNR) orders involving terminally ill undocumented patients present ethical, legal, and professional challenges. These decisions often arise in high-acuity settings due to language barriers, absence of legal surrogates, and lack of institutional guidelines, placing significant moral strain on healthcare providers.

Methodology: A cross-sectional multicenter survey was conducted among 137 healthcare personnel from emergency medicine, internal medicine, intensive care, palliative care, and administrative departments across multiple hospitals in Sabah. Participants included 52 emergency department staff and 85 personnel from other departments. The survey assessed knowledge of DNR policies, experiences with unilateral DNR decisions, and perceived barriers to care for undocumented patients. Data were analyzed using descriptive statistics and thematic analysis.

Results: While 78% of respondents demonstrated general knowledge of DNR protocols, only 6% were aware of institutional policies specific to undocumented patients. A total of 67% reported witnessing unilateral DNR orders. Ethical discomfort was expressed by 60% of participants, although 32% supported such decisions in resource-constrained or emergent scenarios. Key barriers identified included fear of deportation (84%), high medical costs (76%), and language barriers (68%). While 59% perceived undocumented patients as a financial burden, 61% felt a moral obligation to provide equitable care. Departmental differences were observed, with palliative care staff more strongly opposing unilateral decisions.

Discussion: The findings highlight significant variation in attitudes toward unilateral DNR orders and a widespread lack of institutional guidance. Emergency and ICU staff were more inclined toward unilateral decisions under pressure, whereas other departments emphasized patient-centered care. Systemic barriers further complicate ethical decision-making, often forcing providers to act without adequate support. To address these challenges, hospitals must implement clear institutional policies on DNR decisions involving undocumented patients, supported by ethical training that considers cultural, legal, and social factors. Additionally, integrating medical interpreters, ethics consultations, and early palliative care referrals may reduce the frequency of unilateral decisions.

Conclusion: This study underscores the urgent need for clear institutional policies, ethical training, and systemic reforms to guide end-of-life care for undocumented patients. Enhancing access to palliative care, interpreter services, and community outreach may reduce the frequency of unilateral DNR orders and support more equitable, compassionate decision-making.

Keywords: Unilateral DNR, undocumented patients, healthcare barriers, ethical decision-making

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THE ART OF BLOOD MALIGNANCY: AN UNUSUAL UROLOGICAL EMERGENCY ASSOCIATED WITH NEWLY CHRONIC MYELOID LEUKEMIA (CML)

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Introduction: Priapism is described as persistent unwanted penile erection of more than 4 hours without sexual stimuli. The hyperviscosity nature of malignancy puts the patient at risk of ischemic priapism. Our case emphasizes the relief of acute priapism in the emergency department (ED) and how haematological screening is crucial in non-traumatic priapism.

Case Description: A 14-year-old boy, previously healthy, presented to the ED with first episode of painful spontaneous penile erection for 27 hours. Further history, he had an intermittent fever for 2 weeks associated with constitutional symptoms. He denied any history of drug abuse, trauma, or arousal stimulation. Genital examination showed penis was engorged, firm, and tender but no sign of penile necrosis. Investigations revealed leucocytosis of 222x103/uL, Hb 12.2g/dL, and thrombocytosis of 1158x103/uL. Peripheral blood film (PBF) showed myeloproliferative neoplasm likely CML in chronic phase. Cold compression and hyperhydration were initiated. He underwent corpus cavernosum aspiration at 2 and 10 o'clock, saline irrigation, and administration of 200mcg phenylephrine followed by Winter shunt under sedation and penile block; and achieved full detumescence. He was admitted to the pediatric department for chemotherapy and co-managed with urology team.

Discussion: Priapism is a painful erectile penis without sexual stimulation.3 Physical examination may not reveal splenomegaly in patients suspected of CML presenting with priapism.4 Bedside ultrasound demonstrated poor flow along the dorsal artery of penis.3 Hyperleukocytosis of >200000 cells/mm3 and thrombocytosis and detection of blast cells in PBF suggestive of CML.3,4 Therapeutic aspiration has a success rate of 30%.2,3 Cannulation using branulla size 16-18G at lateral aspect of the corpus cavernosum to avoid urethral and neurovascular bundle injury.2,3,7 Alpha sympathomimetic agent injection over the intracavernosal region or leukapheresis is recommended to relieve compartmental pressure over the penile region and to achieve rapid detumescence.5,7 Surgical shunting can be considered if the above methods fail to achieve detumescence.3,6 Systemic therapy by chemotherapeutics will treat the underlying CML.2,3,5,6

Conclusion: Priapism is a rare symptom that may be encountered in ED. If left untreated, it can cause permanent tissue damage and fibrosis, ultimately erectile dysfunction. Engagement of multidisciplinary team and commencement of chronic treatment for CML can prevent recurrent episodes of priapism.

Keywords: Priapism, Chronic myeloid leukemia (CML), Hyperviscosity, Aspiration

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TIME BOMB TICKING IN THE NECK: A CASE OF BLUNT NECK TRAUMA RESULTING IN SUBCLAVIAN ARTERY ABUTMENT AND BRACHIAL PLEXUS INJURY

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Introduction: Motor vehicle accidents in Malaysia are on the rise, with an estimated fatality occurring every 90 minutes. Although uncommon, blunt neck trauma accounts for approximately 10–12% of trauma-related mortality.

Case Description: A 19-year-old Malay male motorcyclist was involved in a motor vehicle accident with an unclear mechanism of injury. He presented with left upper limb pain and complete loss of movement. A pulsatile swelling was noted at the left neck-upper limb junction. His left upper limb appeared limp, cold, and pale, with absent brachial and radial pulses. Radiographic evaluation revealed a displaced left first-rib fracture without pneumothorax. A computed tomography (CT) scan of the brain, cervical spine, and a CT angiogram (CTA) of the left upper limb demonstrated an acute subarachnoid hemorrhage (SAH) at the vertex and interpeduncular cistern, cervical spine fracture, displaced first-rib fracture with associated hematoma, but no active vascular extravasation. A head immobilizer was applied as a conventional cervical collar was unsuitable due to neck swelling. Magnetic resonance imaging (MRI) of the cervical spine confirmed avulsion of the left C6 and C7 nerve roots. The patient sustained a permanent brachial plexus injury with complete motor paralysis with power of 0/5 and was managed with a halo vest.

Discussion: Subclavian artery injury from blunt trauma is rare due to its anatomical protection by the clavicle, first rib, scapula, subclavian musculature, and deep cervical fascia. High-energy trauma leading to thoracic outlet fractures is the main cause. Phillips et al. studied 45 patients with first-rib fractures and found that four had subclavian artery injuries. Posterior fractures extending beyond 50% of the rib's thickness with displacement were more likely to cause vascular injury. Despite the displaced first-rib fracture in this patient, the subclavian artery remained intact. However, clinicians must remain vigilant for potential complications such as delayed hematoma formation, thrombosis, or arterial rupture.

Conclusion: First-rib fractures are frequently associated with subclavian artery injuries, necessitating thorough evaluation and thorough monitoring to prevent adverse outcomes.

Keywords: brachial plexus injury, first-rib fracture, vascular injury, blunt trauma, subclavian artery injury

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A GASSY KIDNEY – A RARE CASE OF EMPHYSEMATOUS PYELONEPHRITIS

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Introduction: Emphysematous pyelonephritis (EPN) is a severe necrotizing pyelonephritis which is an infection of the renal parenchyma that causes gas accumulation in the tissues. EPN most often occurs in diabetes mellitus patients and more commonly in females. Its presentation is similar to that of acute pyelonephritis, but EPN often has a fulminating course, and can be fatal if not recognized and treated promptly. It is a rare disease whereby only 1-2 cases reported in the United States yearly.

Case Description: A 62 years old Chinese male presented to the Emergency Department (ED) with a history of abdominal pain, nausea, vomiting and lethargy for three days. During the presentation he was hyperglycemic and blood gas showed acidosis with presence of ketone in the serum. Upon examination, there was a right lumbar and right hypochondriac tenderness with guarding. He was initially treated as diabetic ketoacidosis with intraabdominal sepsis. Bedside Point of Care Ultrasound (POCUS) showed no free fluid in abdomen but revealed dirty shadowing and reverberation artifacts in the right kidney. Subsequent abdominal plain radiograph showed crescentic gas collection within the right renal fossa. Patient was admitted to the acute cubicle bay and Computed Tomography (CT) abdomen was done which confirmed the diagnosis of right EPN.

Discussion: Emphysematous pyelonephritis (EPN) is a rare, but severe, suppurative infection of the renal parenchyma characterized by gas formation in intra-renal and perirenal tissues by fermenting organisms. The predisposing factors for EPN are diabetes mellitus and obstructive uropathy. Prompt radiological evaluation is most useful in making a definitive diagnosis of EPN. Plain abdominal radiographs may only demonstrate the presence of air in the renal parenchyma in a limited number of EPN cases. CT scan is the radiographic method of choice both for diagnosing EPN and demonstrating the extent of the disease. In mild cases, treatment is with intravenous antibiotics. Percutaneous catheter drainage of perirenal or retroperitoneal collections can be performed. Severe cases may warrant nephrectomy.

Conclusion: Due to potential for morbidity and mortality in EPN cases, early recognition of its POCUS sign or plain radiograph findings are important to make the correct decision for its management.

Keywords: emphysematous pyelonephritis

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CODE BLUE FOR A LIMB: THE UNPREDICTABLE SPECTRUM OF ACUTE LIMB ISCHEMIA IN ELDERLY.

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Introduction: Acute limb ischemia (ALI) is a limb threatening emergency encountered in the Emergency Department (ED). It resulted from sudden and significant decreased in blood flow to the limbs, with potential loss of limbs if not immediately recognized and treated. Diagnosis remained a challenge as it requires a high index of suspicion by clinicians.

Case Description: We reported two cases of ALI presented to ED, focusing on two different extents of disease presentation. Both were elderly around 70+ years old with a history of diabetes and hypertension. The first patient was referred by a nearby clinic following right lower limb weakness and numbness for three days with no other significant history. In the hospital, ALI was immediately suspected as the examination revealed pallor, poikilothermic, pulseless, paresthesia and paralysis with pain. The second patient was presented to a district hospital with history of reduced conscious level and shortness of breath. He was referred for a head CT as the working diagnosis of recurrent CVA with orthostatic pneumonia. However, examination revealed poikilothermia and pallor of the right upper limb. Family was unsure regarding the duration of the symptoms. Both cases were referred to surgical team. A Doppler assessment revealed significant reduced blood flow and urgent embolectomy was done. The first patient was discharged well post operation, however, the second patient succumbed from complications of his illness.

Discussion: ALI is classified according to Rutherford criteria based on its severity on presentation. The presenting symptoms can be variable leading to difficulty in diagnosis especially in patients with comorbidities as highlighted in these 2 cases. The patient's comorbid like diabetes can further increase the occurrence of ischemia. There are 3 modalities of treatment to manage ALI, namely medical therapy, endovascular intervention and surgery, based on the classifications and respond to endovascular therapy. However, surgical intervention confers a much greater mortality rate in elderly as compared to others.

Conclusion: ALI remains a diagnostic challenge especially in aging populations, and prompt recognition and management is vital to halt the progression of ischemia and avoid loss of limbs.

Keywords: Acute Limb Ischemia, Elderly

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RIGHT BUNDLE, BIG TROUBLE: WHEN RBBB MASKS AN OCCLUSION MI

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Introduction: Occlusion Myocardial Infarction (OMI) refers to the acute or near-complete occlusion of a culprit coronary artery with inadequate collateral circulation, resulting in transmural myocardial infarction. Unlike the traditional STEMI/NSTEMI classification, many OMI cases do not meet STEMI criteria on ECG, leading to delays in diagnosis and treatment, thereby increasing morbidity and mortality.

Case Description: A 34-year-old man with underlying hypertension presented to the emergency department with acute, typical chest pain lasting one hour. Upon arrival, his vital signs were: blood pressure 118/88 mmHg, heart rate 82, respiratory rate 22 breaths per minute, SpO2 90% on room air, and pain score 5/10. Bilateral lower-zone crepitations were noted. Bedside lung scan revealed generalized B-lines, and echocardiography showed hypokinesia in the anterolateral and posterior walls, with left ventricular ejection fraction (Eyeballing) of 30%. The initial ECG demonstrated a right bundle branch block (RBBB) and continuous cardiac monitoring showing multiple PVCs. Two hours later, patient experienced another episode of severe anterior chest pain, with evolving ECG changes, including deepening T waves and persistent RBBB. Given these changes and worsening clinical symptoms, an urgent referral was made for percutaneous coronary intervention (PCI). It revealed a proximal left anterior descending (LAD) artery total occlusion, with minor irregularities in the left circumflex and right coronary arteries. The patient was admitted to the coronary care unit (CCU) for four days and subsequently discharged in stable condition.

Discussion: This case underscores the need to recognize new-onset RBBB as a potential marker of proximal LAD occlusion. The absence of initial ST elevation delayed coronary angiography, emphasizing the limitations of relying solely on traditional STEMI criteria. OMI should be suspected in patients without ST elevation but with hemodynamic instability, arrhythmias, ongoing chest pain despite therapy, cardiac arrest, or evolving ECG changes. Up to 25% of total occlusion MIs may be missed under current guidelines, reinforcing that “time is myocardium.”

Conclusion: Diagnosing OMI requires integrating clinical findings, ECG evolution, biomarkers, and imaging. In patients with persistent ischemia and conduction abnormalities like RBBB, early recognition and prompt reperfusion are crucial. A paradigm shift toward OMI-based evaluation, rather than STEMI-only PCI criteria, is essential for improving outcomes.

Keywords: Occlusion MI, RBBB, STEMI

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SEVERE TCA TOXICITY: THE RACE AGAINST TIME

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Introduction: Tricyclic antidepressant (TCA) toxicity is a life-threatening emergency due to its narrow therapeutic index, requiring rapid recognition and intervention. Severe toxicity can lead to life-threatening arrhythmias, seizures, and profound hypotension, making early diagnosis crucial. Prompt treatment with sodium bicarbonate and supportive measures can significantly reduce morbidity and mortality.

Case Description: A 23-year-old lady with underlying migraine on Amitriptyline, presented to ED with sudden onset of headache and less responsive. Initial vital signs noted BP 129/83, HR 121, SpO2 99% RA, afebrile. Her GCS was E1V1M3 with bilateral pinpoint pupils. Neurological examination revealed generalized hypertonia and hyperreflexia with clonus and bilateral upgoing plantar reflexes. ECG showed widened QRS complexes of 164 msecs, prolonged QT interval of 509 msec, RSR' pattern and RBBB. Due to her poor GCS recovery, she was intubated for airway protection. Urgent CT Brain showed cerebral edema over right temporal lobe. After 4 hours in ED, additional history from patient's friend revealed that she had been struggling with depression following the recent death of a close family member and intentionally ingested approximately 20 tablets of Amitriptyline (25 mg) 2 hours before presentation. This new information significantly altered the direction of treatment. IV sodium bicarbonate 4.2% 200 ml was administered promptly, along with hypokalemia and hypomagnesemia corrections. Following sodium bicarbonate therapy, the patient's haemodynamics improved, and lactate level decreased. Repeated ECG showed progressive narrowing of the QRS complexes. She was subsequently admitted to the ICU for four days, extubated on Day 2, and discharged in stable condition.

Discussion: This case underscores the hallmark complications of TCA overdose, including altered mental status and QRS prolongation. Given her clinical presentation and ECG findings, early administration of IV sodium bicarbonate was crucial in improving her outcome. Sodium bicarbonate therapy remains the mainstay of treatment in TCA toxicity, particularly when the QRS duration exceeds 100msec, as it induces alkalosis and provides a sodium load that enhances cardiac conduction.

Conclusion: This case demonstrated early recognition and prompt treatment are key to managing severe TCA toxicity. Every second counts - A high index of suspicion, rapid ECG assessment, and immediate intervention can be life-saving.

Keywords: toxicity, tricyclic antidepressant, sodium bicarbonate, TCA

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TO SHOCK OR NOT TO SHOCK: INFERIOR STEMI WITH RAPID ATRIAL FIBRILLATION AND ONGOING CHEST PAIN DURING THROMBOLYSIS

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Introduction: Inferior ST-elevation myocardial infarction (STEMI) typically presents with bradyarrhythmias due to AV node involvement. However, the occurrence of atrial fibrillation (AF) with rapid ventricular response (RVR) during thrombolysis is uncommon and poses a management dilemma. Decisions regarding rate versus rhythm control and drug versus synchronized cardioversion must be balanced against the risks of thromboembolism, hypotension, and thrombus destabilization during reperfusion treatment.

Case Description: A 50-year-old male with no known medical illness presented with typical central chest pain radiating to the left arm. He was hemodynamically stable (BP 140/60 mmHg, HR 150 bpm, and no desaturation under room air) with no reversible AF cause identified. ECG showed inferior STEMI with AF with RVR. Due to the lack of PCI availability, thrombolysis with IV streptokinase was administered. Chest pain and ST elevation resolved post-thrombolysis, but the AF with fast ventricular rate persisted with rate >140bpm. Echocardiography revealed inferior and septal wall hypokinesia with EF <65%. In the absence of hemodynamic compromise, IV digoxin 0.5 mg was given. The heart rate gradually decreased, and the patient reverted to sinus rhythm within 2 hours.

Discussion: Management of AF during thrombolysis must be extra cautious. While synchronized cardioversion can rapidly restore sinus rhythm, it may increase the risk of embolism, particularly if AF duration is unknown. In stable patients, rate control is preferred. Beta-blockers may induce hypotension in inferior STEMI, especially if right ventricular involvement is suspected. In this case, digoxin was selected for its rate-controlling effect without negatively impacting blood pressure or myocardial contractility. The patient's spontaneous cardioversion post-reperfusion suggests ischemia as the trigger for AF.

Conclusion: Rate control using digoxin is a safe and effective strategy for managing AF with RVR in stable patients undergoing thrombolysis for inferior STEMI. Synchronized cardioversion should be reserved for unstable patients or those with ongoing ischemia despite adequate rate control and with caution.

Keywords: Inferior STEMI, atrial fibrillation, digoxin, thrombolysis, rate control

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RAPID PREHOSPITAL INTERVENTION ON BLOOD PRESSURE CONTROL IN A CASE OF SUSPECTED CEREBRAL HEMORRHAGE: THE ROLE OF IV LABETALOL

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Introduction: Rapid assessment and IV Labetalol administration in prehospital care (PHC) are crucial for suspected intracranial haemorrhage. Timely blood pressure control helps prevent hematoma expansion, reducing complications. Early intervention ensures patient stabilization before hospital arrival for definitive neuroimaging and specialized management.

Case Description: We responded to an ambulance call for a 38-year-old Malay male presenting with a sudden-onset thunderclap headache. Upon arrival, the patient was lying comfortably in bed but reported an inability to get up. During the assessment, he experienced a second episode of thunderclap headache with a pain score of 10. A BEFAST assessment was negative. Initial vital signs in the ambulance were BP: 242/149 mmHg, Pulse: 102 bpm, and SpO_2: 99% on room air. A repeated BP reading was 250/156 mmHg. After consulting the on-call consultant, IV labetalol 10 mg was administered. Ten minutes post-administration, BP was 210/139 mmHg, and pulse was 87 bpm. Due to persistent headache, IV Tramadol 50 mg and IV Metoclopramide 10 mg were given. A second dose of IV labetalol 10 mg was administered 20 minutes later, leading to improved vitals: BP 198/100 mmHg, Pulse 82 bpm, SpO_2 100% on room air, and pain score 5/10. The patient was triaged to the Red Zone with a provisional diagnosis of haemorrhagic cerebrovascular accident (CVA) or arteriovenous malformation (AVM). Following stabilization, a CT brain scan confirmed a right basal ganglia haemorrhage.

Discussion: This example underscores the importance of prompt identification and intervention for suspected cerebral haemorrhage in prehospital settings. The patient's thunderclap headache and severe hypertension (250/156 mmHg) necessitated prompt blood pressure management to avert haematoma expansion. Labetalol was administered in two dosages, reducing blood pressure without inducing hypotension. Pain relief with IV tramadol and Metoclopramide improved comfort. Timely triage to the Red Zone enabled rapid neuroimaging, confirming a right basal ganglia haemorrhage. This case underscores the critical role of prehospital BP management in neurological emergencies.

Conclusion: IV Labetalol is a valuable antihypertensive agent in the early management of ICH in prehospital settings. It helps to control BP safely and prevent hematoma expansion. However, its administration requires appropriate training, protocol adherence, and careful patient selection to ensure optimal outcomes.

Keywords: PHC, headache, labetolol

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"HELP...I CAN'T BEND MY LEG": UNCOVERING A PSOAS HEMATOMA IN A YOUNG SCHIZOPHRENIC PATIENT WITH SAGITTAL SINUS

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Introduction: There's increasing prevalence of psychiatric illnesses on a global scale. This trend can be attributed to a combination of factors, including enhanced awareness of mental health issues and improved access to diagnostic tools and treatment options.

Case Description: A 38-year-old gentleman with underlying schizophrenia and left transverse sinus thrombosis on Olanzapine and Warfarin, presented to our centre with complaint of right groin pain and difficulty in ambulating for the past 3 days. He denied history of trauma. He presented to our centre twice prior and was seen in Green Zone. Blood investigations and imaging were unremarkable, hence, was discharged with analgesia. On the third visit, he was triaged to Yellow Zone in view of significant pain. He required multiple repeat dose of analgesia while being observed in Emergency Department. Incidental findings during bedside scan showed right psoas collection. Subsequently, he was admitted under Surgery and ultrasound guided pigtail insertion drained stale blood. He was discharged well and repeated ultrasound abdomen one month later showed resolved psoas collection.

Discussion: A thorough history-taking and clinical examination, coupled with the utilization of all available adjuncts plays a pivotal role in the formulation of an accurate diagnosis. These adjuncts, whether they involve advanced imaging techniques such as ultrasound, laboratory investigations, or other diagnostic tools, provide clinicians with valuable supplementary information. Apart from that, in psychiatry, stigma often leads to patients' concerns being dismissed or taken lightly. It is therefore imperative for clinicians to maintain a high index of suspicion and address psychiatric complaints with the same thoroughness as any other medical condition.

Conclusion: Comprehensive approach enables a more thorough understanding of the patient's condition, thus, minimizes the risk of diagnostic errors, and ensures a more precise and effective treatment plan. Clinicians also play important role in combating stigma towards psychiatric patient and ensure they receive the attention and care they deserve.

Keywords: schizophrenia, psychiatry, psoas hematoma, warfarin

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BEYOND THE LOCAL REACTIONS: THE HEART UNDER ATTACK BY BEES

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Introduction: Kounis syndrome, an acute coronary syndrome induced by hypersensitivity reactions, is a recognized complication of allergic reactions globally. We present a case of Kounis syndrome following multiple bee stings in Malaysia.

Case Description: A 65-year-old male with diabetes mellitus (DM) presented to the emergency department after being stung multiple times by bees on his upper trunk while gardening. He experienced pain and itchiness at the sting site with no other symptoms. Clinically, the patient was hypotensive (BP 80/50), heart rate of 102 bpm, bilateral rhonchi on auscultation, and an SpO2 of 96%. The patient was treated for anaphylactic shock secondary to multiple bee stings with crystalloid infusion, intramuscular (IM) adrenaline 500mcg, intravenous (IV) hydrocortisone 200mg, IV chlorpheniramine 10mg, and nebulized salbutamol. A total of approximately 400 bee stingers were removed. Subsequently, the patient's general condition improved with normalized blood pressure (BP 120/70) and resolution of tachycardia. Six hours post-admission, he developed chest pain, and an ECG revealed ST depression in leads I and aVL, along with ST elevation in lead aVF. Troponin I was elevated at 12,520. Aspirin 300mg was administered, and a cardiologist was consulted. The patient's chest pain resolved, and he was monitored in the ward and discharged after three days.

Discussion: Massive Hymenoptera envenomation is defined as occurrence of more than 50 stings. The venom, trigger IgE-mediated hypersensitivity reactions, releases inflammatory mediators that can induce coronary artery vasospasm (Type 1) or plaque rupture (Type 2) in patients with pre-existing coronary artery disease, leading to acute coronary syndrome. Prompt removal of the sting using a glass slide, without squeezing the stings, is crucial to minimize toxin absorption. The decision to initiate thrombolytic or percutaneous coronary intervention (PCI) depends on clinical assessment. While steroids, antihistamines, and antiplatelet agents are potential treatments, the patient's rapid clinical improvement and early peak troponin level follow by downward trend in troponin levels in our case obviated the need for these interventions.

Conclusion: Kounis syndrome related to bee stings involved early recognition, careful removal of stingers, and management of both the allergic reaction and acute coronary syndrome.

Keywords: Kounis syndrome, anaphylactic shock, bee sting

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A CASE OF EPOXY RELATED HYDROCARBON POISONING

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Introduction: Epoxy-related hydrocarbon poisoning has been documented in several case reports, highlighting the occupational risks associated with epoxy resin exposure. Xylene is commonly used as a solvent or thinner in epoxy formulations to enhance flow and adhesion.

Case Description: Case 1: A 31-year-old previously healthy male presented to the emergency department following a syncopal episode lasting approximately 10 minutes. On arrival, he was drowsy but responsive to simple commands, with full neurological recovery shortly thereafter. The patient reported experiencing dizziness and diaphoresis prior to the episode, which was precipitated by exposure to a strong, paint-like odor. Vital signs, systemic examination, electrocardiogram (ECG), chest radiograph, bedside echocardiography, and routine blood tests were unremarkable. He was observed and subsequently discharged in stable condition. Case 2: A 29-year-old previously healthy male presented with giddiness and presyncope, preceded by epigastric discomfort, heartburn, and belching. On examination, he was drowsy but arousable, with initial oxygen saturation of 92%, requiring 10L supplemental oxygen, which was discontinued after one hour. He regained full consciousness within 45 minutes. Clinical assessment, ECG, imaging, echocardiography, and laboratory results were normal. He was admitted for observation and discharged well the following day. Both incidents occurred during a morning briefing in a well-ventilated workshop recently painted with large area of epoxy resin containing polyamide and xylene. No other workers were affected, and air quality readings were within normal limits. Inhalation of Xylene which is a hydrocarbon was suspected as the causative agent.

Discussion: Epoxy-related hydrocarbon poisoning presents acutely with central nervous system depression, respiratory symptoms (dyspnea, cough, hemoptysis), and mucosal irritation. Radiographic findings often include bilateral alveolar infiltrates or ground-glass opacities, suggestive of chemical pneumonitis or ARDS. Diagnosis is primarily clinical, supported by exposure history, pulmonary function tests, imaging, and toxicological analysis. Management focuses on immediate removal from the exposure source, supplemental oxygen, bronchodilators, and corticosteroids for inflammatory lung injury. Severe cases may necessitate mechanical ventilation and intensive care.

Conclusion: These cases underscore the importance of implementing stringent safety measures, including adequate ventilation and personal protective equipment, when handling epoxy resins and related compounds to mitigate health risks.

Keywords: Epoxy, Xylene, Hydrocarbon, Inhalation, Toxicology

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"THE HEART'S UNEXPECTED STING": A CASE OF KOUNIS SYNDROME

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Introduction: Kounis Syndrome (KS) arises from hypersensitivity reactions, resulting in coronary vasospasm, plaque instability, or stent thrombosis. Typically, patients will present with chest pain, and electrocardiogram findings often indicate changes suggestive of a possible myocardial infarction. However, the key distinction is that this condition is triggered by exposure to allergens such as medications, foods, or insect bites.

Case Description: A 39-year-old gentleman, active smoker presented to our centre, Hospital Lahad Datu, with complaint of breathlessness, palpitation, chest pain, profuse sweating and vomiting. Patient had alleged bee sting one hour prior to arrival to our centre. Upon arrival, his GCS was E1V1M1 and hypotensive at 67/32mmHg (MAP 45). He was tachypneic with oxygen saturation of 93% under room air. On auscultation noted reduced air entry bilateral lower zone of lung, S1S2 with no gallop rhythm or murmur heard over the cardiac. Electrocardiogram revealed ST- segment elevation at Lead III, AVF, ST-segment depression over I, AVL, V5-V6. Bedside echocardiogram was unremarkable. With the provisional diagnosis of Kounis Syndrome, he was started on oxygen supplement, resuscitated with intravenous fluid and given intravenous steroid. Apart from that, he was also administered with antihistamine, intramuscular and subsequently, continuous infusion of adrenaline. His blood parameters were unremarkable with normal Troponin I and other cardiac biomarkers. With watchful waiting, we noted gradual improvement of patient's condition. Approximately 2 hours later, patient returned to full GCS, not tachypneic and we were able to wean off inotropic support. Repeated electrocardiogram showed sinus rhythm with resolution of ST-segment elevation and depression. In view of financial constraint, however, patient opted for discharge against medical advice.

Discussion: Although Kounis Syndrome (KS) shares similarities with Acute Coronary Syndrome (ACS), it is crucial to manage it as a distinct condition. Furthermore, in cases of diagnostic uncertainty, having access to a catheterization laboratory offers a significant advantage, something district hospitals are lacking.

Conclusion: Kounis Syndrome is a rare and frequently underdiagnosed condition. Prompt recognition of Kounis Syndrome in emergency settings is crucial to avoid delays in diagnosis and to ensure the delivery of appropriate care.

Keywords: Kounis syndrome, allergy, acute coronary syndrome, hypersensitivity

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WHEN MIGRAINES TRIGGER A HEART CRISIS: A CASE OF ERGOTAMINE-INDUCED CORONARY VASOSPASM

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Introduction: Ergotamine, an ergot alkaloid commonly used to treat migraines and cluster headaches, can cause vasospasm via its action on serotonin and α-adrenergic receptors. Although rare, ergotamine-induced vasospasm can lead to serious complications, including mimicry of acute coronary syndrome (ACS). Recognising this condition early is crucial to avoid misdiagnosis and ensure appropriate treatment. This case highlights a paediatric patient with ergotamine-induced vasospasm presenting as ACS.

Case Description: A 13-year-old girl with a three-day history of headache was treated with Caffox (ergotamine 1mg, caffeine 100mg) prescribed by a general practitioner. She presented to the emergency department (ED) with acute, central chest pain, palpitation and diaphoresis. On examination, she was hemodynamically stable with normal systemic examination. Her ECG revealed sinus bradycardia with no ischemic changes. Focused cardiac ultrasound showed normal cardiac function. The serial serum troponin I was elevated (104.5 ng/L to 154.4 ng/L) with normal renal function and inflammatory markers. The patient was admitted to the cardiology ward and was planned for cardiac MRI as an outpatient.

Discussion: Ergotamine is a potent ergot alkaloid that functions as an α-adrenergic, serotonergic and dopamine-receptor agonist. It can induce coronary vasospasm, which is often associated with ischemic electrocardiographic changes and angina. Although rare, this condition can mimic acute coronary syndrome (ACS), presenting diagnostic challenges, even in children. In this case, the patient's presentation highlighted the potential cardiovascular risks associated with ergotamine, necessitating careful consideration in the pediatric population.

Conclusion: This case emphasises the need to consider ergotamine as a possible cause of chest pain in patients with migraines history. Clinicians should exercise caution when prescribing ergotamine to children. Early identification and cessation of ergotamine, combined with appropriate vasodilator therapy, are essential to avoid unnecessary interventions and ensure favourable outcomes.

Keywords: ergotamine, coronary vasospasm, paediatric chest pain, acute coronary syndrome

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A CASE OF RECURRENT TRANSIENT ISCHAEMIC ATTACK: IS IT CAPSULAR WARNING SYNDROME?

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Introduction: Capsular Warning Syndrome (CWS) is characterised by recurrent episodes of unilateral transient motor and/or sensory symptoms affecting the face, arm and leg, with a high risk of evolving into a full-blown stroke. Early diagnosis and intervention are critical for preventing permanent neurological damage.

Case Description: This is a 44-year-old female who was diagnosed with a recurrent transient ischemic attack with possible capsular warning syndrome. She presented with intermittent one-sided body weakness and numbness for one month. Despite being on an antiplatelet for her underlying coronary artery disease, her condition worsened one week prior to the emergency department (ED) presentation. Neurological assessment during symptomatic episodes revealed transient hemiparesis without cortical involvement. Urgent plain CT brain was done revealed no acute intracranial haemorrhage or focal brain parenchyma lesion. She underwent with MRI brain which shows small vessel disease (Fazekas 1) with no evidence of cerebral infarction. Given the recurrent and stereotypical nature of her symptoms and imaging findings, a diagnosis of CWS was made. She was initiated on dual antiplatelet therapy, leading to symptom resolution during the admission.

Discussion: CWS serves as a clinical warning for an impending full-blown stroke. It is commonly misdiagnosed as recurrent transient ischaemic attack, delaying appropriate intervention. The role of MRI is vital in identifying subcortical ischemia and excluding cortical involvement. Timely initiation of dual antiplatelet therapy has shown benefits in preventing stroke progression. This case emphasises the importance of clinical suspicion and early aggressive management in patients with stereotypical transient deficits.

Conclusion: Clinicians should maintain a high index of suspicion for CWS in patients with unilateral transient symptoms. Prompt recognition, imaging, and treatment escalation can significantly reduce the risk of permanent neurological injury.

Keywords: capsular warning syndrome, transient ischemic attack, recurrent hemiparesis

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METHYLENE BLUE AS RESCUE THERAPY IN REFRACTORY SEPTIC SHOCK: A CASE REPORT

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Introduction: Methylene blue (MB) has been reported in multiple case studies as salvage therapy for refractory septic shock, particularly when conventional vasopressor agents fail to achieve hemodynamic stability. By inhibiting nitric oxide synthase and guanylate cyclase, MB targets the nitric oxide–cGMP signaling pathway, counteracting vasodilation and improving vascular tone which facilitates tapering of vasopressors. We present a case that demonstrates the clinical utility of MB in managing severe vasoplegia accompanied by profound metabolic acidosis.

Case Description: A 63-year-old man, with underlying diabetes mellitus, hypertension, dyslipidemia, and ESRF on maintenance hemodialysis presented with a two-day history of generalized weakness, vomiting, and abdominal discomfort. Due to hemodynamic instability and escalating inotropic requirements, he was intubated. Laboratory investigations revealed elevated inflammatory markers (TWC 32 × 10^9/L). After ruling out ketonemia, patient was treated as severe pancreatitis with high anion gap metabolic acidosis (HAGMA) and hyperlactatemia (pH 6.6, HCO_3^- 2.2 mmol/L, lactate 25 mmol/L). Sustained low-efficiency dialysis without ultrafiltration was initiated. Early abdominal CT imaging demonstrated diffuse colonic wall thickening. Despite appropriate treatment, the patient exhibited a persistently elevated diastolic shock index and evidence of high-output septic cardiomyopathy. Consequently, MB was administered alongside three vasopressors/inotropes, intravenous hydrocortisone, and continuous sodium bicarbonate infusion. Continuous veno-venous hemodiafiltration was initiated in the ICU, resulting in progressive hemodynamic stabilization and weaning from vasopressor support. The patient was discharged after 15 days, returning to his baseline functional status.

Discussion: The combination of severe HAGMA and lactic hyperproduction likely impaired beta-adrenergic receptor responsiveness, reducing the efficacy of conventional vasoactive agents and culminating in refractory vasoplegia. Although MB is not FDA-approved for septic shock, its off-label use to boost systemic vascular resistance and mean arterial pressure, thereby decreasing vasopressor requirements. Its use, however, mandates caution given the risk of toxicity in patients with hepatic or renal dysfunction and contraindications in pregnancy and glucose-6-phosphate dehydrogenase deficiency.

Conclusion: MB shows promise as an adjunctive therapy in refractory septic shock with severe vasoplegia, aiding hemodynamic stabilization and vasopressor weaning. Recognizing its adverse effects, the development of local clinical guidelines is warranted. Additionally, this case supports the need for further research on its efficacy and safety in Asian populations.

Keywords: Methylene blue, refractory septic shock, vasoplegia

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PARAMEDICS TRAINING IN ULTRASOUND-GUIDED CANNULATION AND VASCULAR ACCESS (USGCVA): EXPERIENCE SHARING

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Introduction: Intravenous line insertion and blood taking, while routine in emergency medicine, often presents challenges, particularly in patients with difficult venous access. Ultrasound-guided cannulation and vascular access (USGVA) has emerged as a superior technique, enhancing first-pass success rates, minimizing complications, and improving patient safety. Paramedics, who frequently encounter patients with challenging intravenous access such as obesity, exhausted veins, and patients in shock will benefit significantly from USGVA training.

Methodology: We proceed to conduct USGVA half-day workshop to train our paramedics. This is followed by a period of one month for them to complete ten supervised USGVA. Eleven paramedics participated in the workshop, led by two emergency physicians and one senior paramedic trained in ultrasound. The curriculum featured two hours of didactic lectures followed by two-hour hands-on session using self-made phantoms made of chicken breast models and gel blocks. Two Mindray ultrasound machine models ME7 and Resona i9 were used. Paramedics were then required to perform USGVA in real-time clinical settings under the supervision of emergency physicians and medical officers. All paramedics were required to perform ten supervised USGVA with 80% success rate. Over one month, all paramedics successfully completed the supervised USGVA. They also completed the post-module surveys.

Results: Eleven paramedics participated in the workshop and completed the post-workshop survey questions. A majority of participants (63.6%) rated their confidence in performing USGVA as high (4 out of 5). Nearly all participants (81.8%) indicated a need for regular practice sessions to maintain and improve their skills. Slightly more than half of them (54.5%) reported feeling comfortable mentoring others in ultrasound-guided procedures, also rating their comfort level as 4 out of 5.

Discussion: Our USGVA half-day course is highly beneficial and recommended for all paramedics. To date, this is the first group of paramedics in Malaysia to have such program leading to hospital privileging. They were awarded credentialing certificates and privileged by the hospital to perform USGVA.

Conclusion: The next agenda is to train all paramedics to be proficient in USGVA and to have yearly competency assessment to ensure paramedics continue to retain their skill, thus providing safe and quality care for the patient.

Keywords: paramedics, ultrasound-guided cannulation and vascular access, training, competency assessment

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NOT JUST A VIRAL RASH: A DIAGNOSTIC DILEMMA WITH A DEADLY TURN

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Introduction: Stevens-Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are rare but life-threatening mucocutaneous drug reactions, with an estimated incidence of 1–2 cases per 1,000,000 annually. In the emergency department (ED), early presentations often mimic more common conditions such as sepsis or viral exanthems, leading to diagnostic delays and poor outcomes. Early diagnosis is critical; however, atypical presentations can cause delayed recognition.

Case Description: A 52-year-old male with genetic hemochromatosis, alcoholic liver disease, and recurrent herpes simplex encephalitis presented to the ED with collapse, a witnessed seizure, and fever (40.1°C). Vitals: BP 116/78 mmHg, HR 137 bpm, RR 26, SpO_2 98%. Examination revealed an erythematous purple maculopapular rash over the hands, feet, chest, and back, along with multiple oral ulcers and bilateral conjunctivitis. He had recently started lamotrigine 25 mg once daily for post-encephalitic epilepsy. Blood tests: TWC 2.1, platelets 56, CRP 18. The initial working diagnosis was sepsis secondary to viral encephalitis, and treatment was initiated with IV acyclovir and IV meropenem (due to penicillin allergy). Although SJS was included in the ED differential based on mucocutaneous features, rash morphology, and recent high-risk drug use, the clinical focus remained on sepsis. Over five days, the rash worsened with >40% body surface area (BSA) involvement, confirming progression to Toxic Epidermal Necrolysis (TEN). UK guidelines for SJS/TEN management were initiated, and dermatology input was obtained; however, the patient deteriorated and died.

Discussion: This case highlights the diagnostic challenge of early SJS/TEN in febrile, systemically unwell patients. Despite early consideration, anchoring bias toward sepsis delayed targeted intervention. The "3Ms" framework—Mucosa, Morphology, and Medication—can help prompt early suspicion of SJS/TEN: Mucosa: Oral, ocular, or genital involvement Morphology: Dusky or targetoid rash, often evolving to bullae Medication: Recent initiation of high-risk drugs. Once confirmed, the patient's SCORTEN score was elevated, indicating high predicted mortality. Earlier recognition and focused intervention may have changed the outcome.

Conclusion: In febrile patients with mucosal involvement and recent high-risk drug exposure, SJS/TEN should remain high on the differential, even when infection is suspected. The 3Ms framework can support early recognition. Emergency physicians must maintain a high index of suspicion. Early recognition can be lifesaving.

Keywords: Toxic Epidermal Necrolysis, Stevens-Johnson Syndrome, Emergency Diagnosis, 3Ms Framework

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DISSECTING COMPLEXITY: PNEUMONIA AND FAILURE

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Introduction: Chronic aortic dissection is a rare yet serious condition with a spectrum of clinical presentations. When complicated by infections like necrotizing pneumonia and organ failure, its management becomes increasingly challenging. Here, we present a case that underscores the importance of multidisciplinary coordination in navigating such complexities.

Case Description: A 44-year-old morbidly obese male with a medical history of obstructive sleep apnea, asthma, hypertension, and dyslipidemia presented with chronic cough, dyspnea, orthopnea, and hemoptysis. He was initially diagnosed with community-acquired pneumonia and commenced on antibiotic therapy. However, progressive worsening of his symptoms necessitated further investigation. Chest radiograph and laboratory findings revealed bilateral pulmonary congestion, leukocytosis, and acute kidney injury. Blood cultures grew Staphylococcus lugdunensis. CT pulmonary angiography and CT Angiography confirmed Stanford Type A chronic aortic dissection, cardiomegaly, aortic regurgitation, and necrotizing pneumonia with pleural effusion. Intravenous antibiotic therapy was initiated for the patient, and further treatment with diuretics, beta-blockers, and pigtail drainage. Echocardiography revealed an ejection fraction of 42%, with evidence of global hypokinesia Due to worsening renal function, he underwent sustained low-efficiency dialysis (SLEDD), which improved his creatinine levels. A multidisciplinary team including cardiology, cardiothoracic surgery, respiratory, nephrology, and infectious disease specialists guided care. The patient was stabilized and discharged with home oxygen and outpatient follow-up.

Discussion: This case highlights a rare presentation of chronic Type A aortic dissection complicated by necrotizing pneumonia, heart failure, and acute kidney injury. The pneumonia masked the aortic pathology and triggered systemic inflammation, leading to multi-organ decompensation. Conservative management was appropriate due to hemodynamic stability. This case underscores the need for multidisciplinary, individualized care and timely clinical decisions in managing complex patients with overlapping cardiovascular, infectious, and renal pathologies.

Conclusion: Effective management of this complex case relied heavily on multidisciplinary coordination and a tailored, patient-centered approach. Early recognition of the evolving clinical picture, dynamic decision-making, and vigilant follow-up were crucial in guiding therapy and mitigating complications. This case reinforces the importance of individualized and adaptable care strategies, particularly in patients with significant multisystem involvement and multiple comorbidities. Coordinated, multidisciplinary efforts remain vital to navigating clinical challenges and optimizing patient outcomes in such high-risk scenarios.

Keywords: Chronic aortic dissection, necrotizing pneumonia, heart failure

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PREDICTIVE ACCURACY OF REVISED GENEVA SCORE IN COMPARISON TO CHOD SCORE IN DIAGNOSING PULMONARY EMBOLISM AMONG COVID-19 PATIENT

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Introduction: Pulmonary embolism (PE) is a recognized complication in COVID-19 due to its pro-inflammatory and pro-thrombotic effects. Common PE prediction tools like the Wells Score and PERC rule may not be optimal in this context. The Wells' Score includes subjective clinical judgment, while the PERC rule is meant for low-risk populations, less applicable to COVID-19 patients who are often at moderate to high risk. This study compares the performance of two objective tools: the Revised Geneva Score, widely used and fully objective, and the CHOD Score, a novel COVID-specific score incorporating C-reactive protein (CRP), heart rate, oxygen saturation, and D-dimer.

Methodology: A retrospective cross-sectional study was conducted at Pusat Perubatan Universiti Malaya (PPUM) from July 2022 to April 2023. Adult COVID-19 positive patients who underwent computed tomography pulmonary angiography (CTPA) were included. Clinical, demographic, and laboratory data were retrieved from electronic medical records. CHOD and revised Geneva scores were calculated for each patient. CTPA-confirmed PE served as the diagnostic reference standard.

Results: A total of 69 patients were included (mean age 66 years; 62.3% male), with PE confirmed in 23%. The CHOD Score demonstrated superior predictive performance with an area under the curve (AUC) of 0.782 (95% CI: 0.666–0.872), compared to 0.615 (95% CI: 0.490–0.730) for the Revised Geneva Score ($p = 0.015$). CHOD had high specificity (92.5%) but lower sensitivity (43.8%), whereas the Revised Geneva Score showed high sensitivity (93.8%) but low specificity (36.4%).

Discussion: The revised Geneva score may be limited in predicting PE in COVID-19 due to the unique pathophysiology associated with the infection, including in-situ pulmonary thrombosis and hypercoagulability. The CHOD score, which incorporates COVID-19-specific parameters such as CRP and oxygen saturation, may be more suitable for this patient population. These findings support the potential utility of CHOD in guiding the need for further diagnostic testing, such as CTPA, particularly when risk stratification is necessary in resource-limited settings.

Conclusion: The CHOD Score may offer a more accurate and practical method for predicting PE in COVID-19 patients. This highlights the need for predictive tools tailored specifically to COVID-19-related complications. Further multicenter validation and prospective studies are recommended before widespread clinical adoption.

Keywords: Pulmonary embolism, COVID-19, Risk stratification, CHOD Score

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"I LOST MY DENTURES!"A CASE REPORT OF ACCIDENTAL DENTURES INGESTION IN AN ELDERLY PATIENT

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Introduction: Foreign body ingestion in adults is relatively uncommon, but when it occurs, it often involves the elderly, particularly those with cognitive impairment, neurological disorders, or ill-fitting dental prostheses. This case highlights an elderly patient with a history of lost dentures, ultimately diagnosed through chest X-ray imaging.

Case Description: An 81-year-old male nursing home resident with a medical history of mild dementia, hypertension, and a previous ischemic stroke with residual right-sided weakness presented with complaints of difficulty swallowing (dysphagia) for one day. He also reported that his dentures had been missing since the previous day. On physical examination, the patient was hemodynamically stable and in no apparent distress. Oropharyngeal examination was unremarkable, with no visible foreign body. There was no drooling, stridor, or signs of respiratory compromise. A chest X-ray revealed a radiopaque foreign body in the upper esophagus. A subsequent computed tomography (CT) scan confirmed the presence of an ingested denture, with no evidence of perforation or surrounding tissue injury.The Otorhinolaryngology (ENT) team was consulted, and the patient underwent emergent esophagoscopy. The dentures were visualized and successfully retrieved from the esophagus without any mucosal injury.

Discussion: Complete or partial dentures, especially those with metal components, are prone to becoming lodged due to their irregular shape and size.The clinical presentation can vary which from mild discomfort or dysphagia to life-threatening perforation. Prompt diagnosis and management are critical to avoid complications. Endoscopic retrieval is the first-line intervention and is generally safe and effective when performed early. Preventive measures include ensuring proper denture fit, educating patients and caregivers about not wearing dentures while sleeping, and performing regular dental evaluations.

Conclusion: Denture ingestion in elderly patients, though rare, requires a high index of suspicion, particularly in individuals with cognitive impairment or unexplained upper gastrointestinal symptoms. Early imaging and endoscopic intervention are key to preventing complications. This case emphasizes the importance of awareness, prevention, and timely management in reducing morbidity associated with foreign body ingestion in the geriatric population.

Keywords: dentures; elderly; ingestion

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AN ESOPHAGEAL RUPTURE CASE PRESENTING WITH SHOULDER STRETCHING PAIN INITIALLY : A CASE REPORT

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Introduction: Esophageal rupture, a rare disorder occurs in non-traumatic people. Although rarely described in the literature, the spontaneous rupture of these diverticula is a very serious condition that is frequently difficult to diagnose and adequately treat.

Case Description: A 92-year-old male with hypertension was brought to the ER due to sudden soreness in his left shoulder radiating to the chest, occurring after pulling on a bedside rail; he also had a mild cough. Physical exam revealed normal breath sounds but Hamman's sign on cardiac auscultation. Chest X-ray (Figure 1) showed air in the neck's soft tissues. Labs showed WBC 11.16 K/μL, lymphocytes 2.6%, monocytes 6.0%, neutrophils 91.3% (segmented 75.0%, band 16.3%), CRP 28.04 mg/dL, with normal liver/renal function and slightly imbalanced electrolytes. Cardiac enzymes were normal except for elevated NT-proBNP at 4734 pg/mL. CT scan (Figure 2) showed a left loculated pleural effusion, esophageal perforation, and a surrounding abscess. Endoscopy (Figure 3) confirmed a perforation 30 cm from the incisors in the mid-esophagus. Diagnoses included mid-esophageal rupture, mediastinitis, and left empyema. Surgery was considered, but the patient refused all interventions including chest tube. A DNR was signed, and he died of respiratory failure 21 days after admission.

Discussion: Spontaneous esophageal rupture presents with nonspecific symptoms like dysphagia and chest discomfort. In this case, pain from pulling a bedrail mimicked muscle strain. Hamman’s sign raised suspicion, prompting CT, which showed perforation. Chest X-ray may show air in neck tissues; CT often detects extraluminal air (92% of cases). Endoscopy confirms rupture but may worsen tears. Mortality can reach 50%, and management depends on rupture site, cause, and patient condition. Most spontaneous ruptures involve the thoracic esophagus.

Conclusion: This case is unique due to its initial misleading symptoms. The original misdiagnosed as a musculoskeletal injury was caused by the lack of characteristic symptoms, highlighting the diagnostic difficulties associated with spontaneous esophageal rupture cases.

Keywords: Esophageal Rupture, Spontaneous Rupture

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EXTRACORPOREAL CARDIOPULMONARY RESUSCITATION (ECPR) FOR OUT-OF-HOSPITAL CARDIAC ARREST (OHCA) PATIENTS: A RETROSPECTIVE COHORT STUDY.

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Introduction: Out-of-hospital cardiac arrest (OHCA) is a major global health issue with widely varying survival rates. Only 6%–22% survive with good neurological outcomes. Extracorporeal cardiopulmonary resuscitation (ECPR), using extracorporeal membrane oxygenation (ECMO), provides circulatory and respiratory support when conventional methods fail, offering potential benefits but requiring specialized resources.

Methodology: We conducted a retrospective analysis of 470 OHCA patients aged 20+ from a local Hospital in Taiwan (2011-2025). Patients with do-not-resuscitate(DNR) orders or traumatic injuries were excluded. The study focused on ECMO administration in the emergency department, with survival to discharge as the primary outcome. ECMO was used in patients under 55 without major trauma or rigidity, while those 55-80 were assessed case-by-case. Exclusions included intracranial hemorrhage, uncontrolled bleeding, terminal cancer, and multiorgan dysfunction. ECMO procedures were performed by qualified cardiac surgeons.

Results: The data is presented as the number of survivors in specific age groups who received ECPR or CCPR treatment, along with the total number of individuals (n) who received these treatments. The overall survival to discharge rates were 10 out of 71 patients (14.08%) who received ECMO (ECPR) and 66 out of 399 patients (16.54%) who received traditional CPR (CCPR). The difference in survival rates between the ECPR and CCPR groups regardless age was statistically no significant, with a p-value of 0.604 (Chi-square value =0.268). This indicates that the discharged survival rate of OHCA patients have no significantly differed between the two treatment groups under our ECMO indication (Table 1).

Discussion: This study suggests that ECPR may benefit OHCA patients, but our single-center data show that indiscriminate ECMO use does not always improve survival. Careful patient selection, prioritizing younger individuals with reversible causes and no severe comorbidities, is crucial. Early ECPR application enhances survival, while ECMO may be futile for older or critically ill patients. Our results showed no significant survival difference between ECPR and CCPR under current ECMO indications. ECMO use should follow AHA and ELSO guidelines, considering prognosis, quality of life, preexisting illness, age, and futility.

Conclusion: In summary, ECPR is still a useful resuscitation technique for certain OHCA patients, but its indiscriminate application is not recommended.

Keywords: Extracorporeal cardiopulmonary resuscitation, Out-of-hospital cardiac arrest, Survival outcomes, Retrospective cohort study

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CHALLENGES IN MANAGING AIRWAY OF A CERVICAL INJURY PATIENT

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Introduction: Airway protection is a crucial part of resuscitation. In patients with suspected cervical spine injury, maintaining airway patency is particularly challenging due to the need to minimize cervical movement.

Case Description: An 84-year-old man presented to the emergency department after a motor vehicle accident, complaining of neck pain and shortness of breath. He was agitated and had stridor. Due to airway compromise, intubation was planned. His initial oxygen saturation was 39%. Pre-oxygenation was started using a bag-valve mask and nasal cannula at 15 L/min, achieving a saturation range of 40–80%. Intubation was performed with manual in-line stabilization using a C-MAC video laryngoscope (blade size 3) and a bougie. A crowded airway with edematous vocal cords was seen, with less than 25% glottic opening. The procedure was complicated by a peri-intubation cardiac arrest. A cervical CT scan revealed C2–C4 fractures with mild spinal canal narrowing.

Discussion: Difficult airway anticipation should include preparing for a surgical airway in case orotracheal intubation fails. Cervical injury limits neck movement, making intubation more difficult. Videolaryngoscopy is often preferred over direct laryngoscopy, combined with manual in-line stabilization to reduce cervical motion. Blade selection is important; curved blades like the C-MAC D-blade offer better glottic visualization with less neck extension. Reducing intubation attempts helps prevent worsening of airway edema. Pre-oxygenation with positive end-expiratory pressure (PEEP), using a bag-valve mask and nasal cannula, increases oxygen reserves, prevents atelectasis, and prolongs safe apnea time. In some settings, awake intubation using a flexible bronchoscope may be considered if the patient is cooperative.

Conclusion: Effective airway management in cervical trauma requires anticipation, preparation, and optimization to reduce the risk of peri-intubation cardiac arrest.

Keywords: Airway, cervical injury, trauma, difficult intubation

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FLINGING LIMBS, HIDDEN CRISIS: HEMIBALLISMUS IN PUTAMINAL HAEMORRHAGE

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Introduction: Hemiballismus hemichorea is typically seen in cases of uncontrolled diabetes mellitus. We present a case, in which this symptom occurs in a patient having putaminal haemorrhage.

Case Description: A 37-year-old gentleman with a long-standing history of untreated hypertension was brought to the Emergency and Trauma Department at Hospital Kuala Lumpur by the Pre-Hospital Care team. His primary complaint was the sudden onset of flinging movements in his left arm, which began at 12:30 AM. The Acute Stroke Protocol was activated prior to the patient's arrival. Upon assessment in the department, the patient was afebrile, with the following vital signs: blood pressure 158/107 mmHg, pulse rate 90 beats per minute, respiration rate 19 breaths per minute, and oxygen saturation 98% on room air. A point-of-care blood glucose test revealed a level of 12.0 mmol/L. His Glasgow Coma Scale score was E3V4M6. The patient was immediately attended to by the Medical Officer in the Red Zone, and following the completion of the initial assessment, he was promptly transferred for a CT scan. The CT scan revealed a right putaminal bleed, a haemorrhagic stroke.

Discussion: Putamen is a critical structure within the basal ganglia. It receives blood supply from lenticulostriate arteries which are prone to rupture due to chronic uncontrolled hypertension. Functionally, the putamen plays an essential role in learning, motor control which include speech articulation, cognitive and language functioning. The classic triad of putaminal haemorrhage are contralateral hemiparesis, hemiplegia, conjugate gaze deviation toward the lesion and aphasia. Notably, some patients might be presented with rare syndromes: hemichorea-hemiballismus, an involuntary flinging movement over the extremities. Surgical evacuation was remains controversial with current guidelines recommending consideration only for select cases involving rapid neurological deterioration and significant mass effect.

Conclusion: This is a rare case of hemiballismus hemichorea presenting as a symptom in a patient with putaminal hemorrhage.The managing team need to be aware of this as a rare aetiology when handling such a case.

Keywords: Putaminal haemorrhage, hemiballismus, hypertensive crisis, basal ganglia haemorrhage

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A JOURNEY TO ACUTE ISCHAEMIC STROKE CARE EXCELLENCE AT SUNWAY MEDICAL CENTRE VELOCITY

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Sunway Medical Centre Velocity

Introduction: Timely thrombolysis is critical in acute ischemic stroke care. This project aimed to ensure that at least 50% of thrombolysis cases at our institution achieve a door-to-needle time (DNT) of under 45 minutes within 24 months. The initiative aligns with the Angels Initiative quality benchmarks and supports our goal of advancing stroke certification.

Methodology: A multidisciplinary stroke team was established, involving emergency physicians, neurologists, radiologists, the cathlab team, and nurses. Key strategies included: Implementation of a standardized Stroke Code Activation Algorithm, Use of a stroke pathway checklist and prioritization of CT/MRI imaging, Stroke simulations to stress test protocol effectiveness, Monthly case reviews between emergency physicians and the stroke coordinator. Data tracking and analysis using the RES-Q registry

Results: In the past 9 months, data revealed: Around 10% of ischemic stroke cases required thrombolysis. Median DNT improved from 92 minutes to 51 minutes (43% improvement) . Percentage of thrombolysis cases with DNT <45 minutes increased from 0% to 33%. Median door-to-imaging time dropped from 58 minutes to 16 minutes (72% improvement). The hospital received the Angels Gold Award (2024) and Platinum Award (2025) for acute stroke care

Discussion: The introduction of a team-based, protocol-driven approach significantly enhanced the hospital's ability to deliver timely thrombolysis. The improvement in both DNT and imaging times reflects improved cross-department coordination, efficient resource prioritization, and stronger clinical governance. While the goal of ≥50% of cases achieving DNT <45 minutes is still in progress, the trend indicates that continued efforts will likely yield further gains.

Conclusion: The structured multidisciplinary stroke protocol has demonstrated measurable success in reducing DNT and improving acute stroke care quality. The initiative has strengthened alignment with global best practices, elevated stroke care standards, and brought national recognition through the Angels Awards. Ongoing monitoring and interdepartmental reviews will be key to sustaining progress and achieving the project's full target.

Keywords: Acute Stroke, Door-to-Needle Time, Quality Improvement, Angels Initiative, Thrombolysis, Emergency Protocol

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TRIAGE KNOWLEDGE AMONG ASSISTANT MEDICAL OFFICERS IN AN EMERGENCY DEPARTMENT

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Introduction: Effective triage is essential for managing patient flow and optimizing resource allocation in busy emergency departments. Assistant Medical Officers are vital in initial patient assessment and triage decisions. This study evaluates their knowledge of the Malaysian Triage System (MTS) and explores the relationship between years of service, training, and decision-making accuracy to identify gaps and inform targeted interventions.

Methodology: A cross-sectional study was conducted using a survey questionnaire distributed to AMOs in the ED (Hospital Sultan Idris Shah) from October 30 to November 30, 2024. The questionnaire assessed demographics, knowledge of triage principles, decision-making skills, and confidence levels using scenario-based questions. The instrument assessed demographics, knowledge of MTS, and perceived factors influencing triage decisions. Descriptive statistics, ANOVA, and Spearman's correlation were used for data analysis via SPSS v27.

Results: Most respondents (91.7%) had <5 years of service in the ED; 40.0% had ≥5 years of triaging experience. Despite 81.7% receiving training, knowledge scores were moderate to low (mean: 2.17 ± 0.03). Key gaps were seen in scenario-based triage classification. A weak negative correlation between knowledge and years of service (ρ = -0.201, p = 0.124) was found. No significant differences were noted in decision-making perception across age (p = 0.924), education (p = 0.389), or years of service (p = 0.188). Notably, triage decisions were most affected by inaccurate patient information and lack of structured training (mean scores 4.30 and 4.07 respectively).The study revealed that a significant percentage of AMOs demonstrated adequate knowledge of triage principles, while some showed gaps in understanding specific protocols and decision-making. Years of service, training, and certifications were significantly associated with knowledge levels.

Discussion: Longer service alone did not equate to higher triage knowledge or accuracy. Despite prior training, knowledge gaps persist—likely due to lack of reinforcement, inconsistent exposure, and absence of simulation-based learning. Practical experience without ongoing education may lead to outdated practices.

Conclusion: This study highlights the need for targeted interventions, including continuous education and training programs, to enhance AMOs' knowledge and skills in triage. Addressing these gaps can improve the accuracy and efficiency of triage, Future studies should explore organizational and cognitive factors influencing triage performance.

Keywords: Malaysian Triage System, Emergency Department, Assistant Medical Officers, Decision-Making

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ACUTE INTESTINAL OBSTRUCTION DUE TO RAPUNZEL SYNDROME IN A CHILD

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Introduction: Trichobezoar is a mass of accumulated ingested hair (hair ball) in gastrointestinal tract mainly caused by trichotillomania, is a condition characterized by an urge to pull out one's hair and ingest it. Rapunzel syndrome is an extension of these bezoars beyond the pylorus. Human hair is indigestible, trichobezoars often cause intestinal obstruction, distension of the stomach, and abdominal pain

Case Description: We received a 5 years old girl, no known medical illness She has a history of colicky abdominal pain associated with non-bilious vomiting after every feed for 2 weeks. There was no history of fever, urinary symptoms, or constipation. Symptoms worsening 3 days prior to hospital visit. Child was treated as constipation colic, given symptomatic treatment however abdominal pain remains. Upon arrival to ED, child looks very irritable and crying. Vital sign stable. Abdominal examination guarding and unable to palpate any mass on the abdomen. Ultrasound abdomen and CT abdomen showed two separate abdominal mass with target sign suspicious of ileo-colic and colocolic intussusception. The child underwent surgery with successful removal of the trichobezoar

Discussion: This report records the typical case of a young girl suffering from Rapunzel syndrome. Trichobezoars are large accumulations of swallowed hair stuck in the gut, usually the stomach but also extending into either intestine in which case it can be called Rapunzel Syndrome. Young women who usually have episodes of trichotillomania and trichophagia, both rare psychiatric problems marked by hairpulling or hair eating respectively are prone to trichobezoars. Trichobezoars are a very rare condition, only 1% resulting from trichophagia. However, they may also occur in a rare complication from abuse, anorexia nervosa, pica, obsessive compulsive disorder, or depression. Surgical removal is necessary for patients with large trichobezoars, those who are symptomatic because of the bezoar, or those who have gastrointestinal obstruction from a bezoar. If a trichobezoar is not removed that fulfils one of these criteria, it can result in perforation of the bowel or Rapunzel syndrome. Furthermore, because the predisposing psychiatric illness cannot be ignored, both removal and prevention measures of some type are needed to keep such behaviors from recurring. Treatment with SSRIs and regular counselling are common approaches.

Conclusion: Trichobezoar is a rare entity that should be considered as a differential diagnosis in young female patients with vague, non-specific clinical symptoms and a palpable, upper-abdominal mass. Small bowel obstruction secondary to trichobezoars, though extremely rare, should raise suspicion that is further supported by presentations of alopecia, a history of trichophagia and trichotillomania, pica or other behavioural disorders

Keywords: Trichobezoar, Rapunzel Syndrome, surgical removal

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SEEING WHAT'S NOT THERE: POCUS CLUES TO A SILENT RENAL EXPLOSION

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Introduction: Emphysematous pyelonephritis (EPN) is a rare, life-threatening necrotizing kidney infection characterized by gas formation, most commonly in diabetic patients. It often presents with vague or nonspecific symptoms, making early diagnosis challenging. Misdiagnosis as uncomplicated pyelonephritis, if treated with antibiotics alone, can be fatal. While CT imaging is the diagnostic gold standard, point-of-care ultrasound (POCUS) can provide early, actionable clues, particularly in patients without overt sepsis signs, enabling quicker clinical decision-making.

Case Description: A 54-year-old woman with diabetes and hypertension presented with a 3-day history of colicky left flank pain radiating from the loin to the groin. She was afebrile and hemodynamically stable, with no urinary symptoms. Physical examination revealed left renal angle tenderness and a positive renal punch test. Full blood count showed leucocytosis (WCC 11) and thrombocytopenia (platelets 19 × 10^9/L). Urinalysis was positive for nitrates, leukocytes, and blood. Bedside POCUS revealed reverberation artifacts and dirty shadowing obscuring the left kidney, suggestive of intrarenal gas. A plain abdominal X-ray showed mottled gas shadows in the left renal area. CT urography confirmed extensive gas in the kidney, ureter, bladder, and perinephric space, consistent with ruptured EPN. The patient was admitted to the urology ward and underwent CT-guided drainage.

Discussion: This case highlights the diagnostic value of POCUS in detecting EPN early—even in patients without classical sepsis signs. Recognizing hallmark sonographic features like dirty shadowing, echogenic foci, and reverberation artifacts can prompt timely investigation before clinical deterioration occurs. The inability to visualize the kidney due to intrarenal gas should raise immediate concern. EPN often mimics acute pyelonephritis, with symptoms such as fever, flank pain, and dysuria. In emergency settings, POCUS offers a rapid, repeatable, and non-invasive tool that may expedite triage and reduce delays in definitive imaging. Early recognition can prevent misdiagnosis as simple pyelonephritis or renal colic, ensuring timely intervention and improving outcomes.

Conclusion: In diabetic patients presenting with flank pain—even without systemic signs—POCUS can be a crucial tool for early EPN detection. It helps emergency physicians identify subtle yet life-threatening conditions, facilitating rapid care escalation and potentially saving lives.

Keywords: Emphysematous pyelonephritis, POCUS in EPN, Renal Ultrasound, Gas-forming infection

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BURSTING SMALL LESION WITHIN CONFINED SPACE

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Introduction: Pituitary apoplexy is a potentially life-threatening but rare case that results from complications of pituitary gland or tumors causing hemorrhage or infarction. It presents with subtle symptoms that may be missed during first presentation due to mild presentation and wide range of differential diagnosis.

Case Description: 49-year-old gentlemen presented with persistent headache for the past 6 days associated with non-vertiginous dizziness and nausea. The headache was throbbing in nature and not resolved by painkiller. He also had blurring of vision and discomfort over left eye. He seek treatment at private clinic at day 2 of illness but was discharged with migraine medications. His symptoms were not resolved and he went to emergency department for further evaluation. On examination, he was alert and conscious and hydration was fair. His vital signs were normal. On eye examination, pupils were bilaterally reactive and RAPD was negative. His left eye had hypertropia and exotropia on natural gaze with no diplopia. For his bilateral eye vision, his right eye was 6/24 and left eye was hand movement. Otherwise, other cranial nerves were normal. Neurological assessment of bilateral upper limb and lower limb were unremarkable except his gait was broad base during walking. Urgent plain and contrasted brain CT with CT Angiogram and CT Venogram revealed Large sellar mass with suprasellar extension associated with intralesional hemorrhagic component causing mass effect, with the lesion suggesting pituitary macroadenoma complicated with apoplexy. For blood investigation results revealed all normal. Acute pituitary surgery was done in view of clinical symptoms of acute headache and visual disturbance.

Discussion: Diagnosis of Pituitary apoplexy depends on clinical symptoms, thorough physical examination and neuroimaging findings. The most common symptoms are headache consists of 82% of cases, visual disturbances with 39% of the cases, and nausea with 36% of cases . It may presents with hypopituitarism due to rapid decline of pituitary function such as vascular collapse due to decreased level of ACTH and cortisol but it occurs only in 55% of cases.

Conclusion: Headache is the most common symptoms for pituitary apoplexy. The thorough examination on visual disturbance is important to decide further neuroimaging evaluation.

Keywords: Headache, Pituitary gland, Macroadenoma, Apoplexy

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THE MYSTERIOUS DISAPPEARING KIDNEY: A POCUS TALE OF HIDDEN TRAUMA

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Introduction: Point-of-care ultrasound (POCUS) is a quick, non-invasive imaging tool commonly used in the emergency department to assess trauma patients for intra-abdominal injury. However, its sensitivity in detecting certain types of renal injuries, particularly severe ones like shattered kidneys, remains uncertain. This case highlights the correlation between POCUS findings, including the inability to visualize the kidney, and a confirmed shattered kidney upon CT imaging.

Case Description: A 28-year-old male motorbike rider presented to the emergency department following a traumatic motor vehicle accident (MVA). The patient was run over by a lorry, resulting in left-sided abdominal and hip pain. His initial physical examination was unremarkable except for pelvic tenderness on the left side. Given his abdominal pain and risk of injury, an eFAST was performed, which revealed free fluid in the splenorenal pouch and an inability to visualize the left kidney. The lack of kidney visualization on POCUS prompted a more detailed imaging approach, and a CT scan was performed. The CT findings revealed a shattered left kidney, multiple splenic lacerations, and a retroperitoneal hematoma, which confirmed severe intra-abdominal trauma

Discussion: This case presents a rare but clinically significant instance where POCUS was unable to visualize the kidney due to the severity of the injury, and the subsequent CT scan revealed a shattered kidney. The absence of the kidney on ultrasound could be attributed to the degree of damage, which may cause renal tissue destruction or reverberation artifacts from surrounding structures, preventing accurate visualization. Several studies have highlighted the importance of a thorough clinical evaluation and the complementary role of CT when POCUS findings are inconclusive or when high suspicion for severe injury, such as shattered kidneys, exists. POCUS remains a valuable tool in trauma, but its limitations in detecting certain renal injuries necessitate further imaging.

Conclusion: In cases of severe renal injury, POCUS findings may be inconclusive, as demonstrated by the inability to visualize the kidney in this case. CT imaging remains essential for confirming the diagnosis, especially when POCUS cannot clearly identify such complex injuries. This case underscores the importance of multimodal imaging in trauma care to ensure accurate diagnosis and appropriate management

Keywords: POCUS in trauma, renal ultrasound, shattered kidney

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SATURDAY NIGHT ROULETTE: UPPER, DOWNER, OR BOTH

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Introduction: About 5 percent of drug abusers in Malaysia are poly-drug abusers[1]. Managing patients intoxicated with two different drug classes presents a challenge during the initial emergency department encounter. We present a case of poly-drug intoxication involving an amphetamine-type stimulant and a benzodiazepine.

Case Description: A 45-year-old female with no known medical illnesses or allergies was brought in by ambulance for reduced consciousness. On assessment, she had a patent airway, normal breathing, was saturating well on room air, clear lungs, a blood pressure of 142/88 mmHg, good pulse volume, and a capillary refill time (CRT) under 2 seconds. Her pupils were 4 mm and dilated, non-reactive to light, with hypertonia and hyperreflexia of the bilateral limbs. Her temperature was 37.2°C. Other findings were unremarkable. Bedside urine toxicology was positive for benzodiazepine, amphetamine, and methamphetamine. ECG showed sinus tachycardia, no ischemia, and a normal QTc. Cardiac troponin was normal, and other blood tests were unremarkable. Her son reported she attended a party with him and her boyfriend, playing roulette games and consuming cocktails. She was well until home, then developed hyperventilation followed by unconsciousness without jerky movements. Attempts to rouse her failed, prompting an ambulance call. She was managed with intravenous hydration and monitoring. After 30 minutes, she regained consciousness and obeyed commands. She was admitted for observation and discharged stable.

Discussion: Amphetamine-type stimulants are the most abused drugs in Malaysia[1], followed by benzodiazepines[2]. Abusers often combine them to achieve a specific high[3]. This is dangerous as stimulants can mask depressant effects, potentially leading to overdose. Reports suggest this combination may increase the risk of cardiac ischemia and myocardial injury[4]. Our patient presented with sympathomimetic toxidrome. While benzodiazepines are typical treatment, her prior self-medication with an unknown amount made this challenging. Benzodiazepines were withheld as she wasn't in crisis. On the other hand, Flumazenil was also withheld due to her stable respiratory system and intact airway reflex. Giving reversal might trigger a sympathomimetic crisis which causes more harm.

Conclusion: Managing poly-drug intoxication requires identifying the dominant toxidrome and administering antidotes if indicated. Supportive care is equally crucial in these patients.

Keywords: Poly-drug interaction, Sympathomimetic toxidrome, Benzodiazepines, Amphetamine-type stimulants

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BLEEDING STOMA: A RACE AGAINST TIME IN HAEMORRHAGIC SHOCK

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Introduction: Haemorrhagic shock, a critical and life-threatening condition arising from substantial blood loss, necessitates prompt recognition and aggressive management to prevent irreversible organ damage and mortality. This case highlights the challenges in managing acute haemorrhagic shock in a patient with concurrent severe hyperglycaemia.

Case Description: 58-year-old gentleman with underlying Diabetic Mellitus, hypertension, and mid-rectal carcinoma presented to Emergency and Trauma Department Hospital Kuala Lumpur complaining stoma bleeding. Upon arrival, patient was agitated and exhibited signs of haemodynamic instability: hypotension (84/52mmHg), heart rate of 92/minutes, respiration rate 21 breaths per minute, an oxygen saturation 98% on room air and hypothermia (35.9ºC). Patient was in haemorrhagic shock with shock index greater than 1.0. A point-of-care blood glucose test was markedly elevated at 24.9 mmol/L while serum ketone was low at 0.3mmol/L. Approximately 150mls of fresh blood was observed in the stoma bag. Full Blood Count (FBC) showed a haemoglobin level of 9.7g/dL. Resuscitation was started with one pint of Normal Saline and blood transfusion (Safe O) was commenced. Despite one- pint Safe O blood was transfused, patient remained haemodynamically unstable with a systolic pressure in the range of 80-90mmHg. Subsequently, thawed plasma transfusion was initiated. Following the completion of the blood and thawed plasma transfusions, his haemodynamic status improved, with his systolic blood pressure stabilizing in the range of 110-120 mmHg. This patient was referred to surgical team for definitive bleeding control.

Discussion: Haemorrhagic shock is a subtype of hypovolemic shock characterized by severe reduction in circulating blood volume due to acute haemorrhage. Early and adequate blood transfusion is a cornerstone in managing haemorrhagic shock, proving more effective than sole reliance on crystalloid resuscitation. Studies have demonstrated that delaying in initiation of blood transfusion in patients with haemorrhagic shock is associated with increased mortality and morbidity.

Conclusion: In acute haemorrhage with shock, it’s crucial to transfuse early, transfuse adequately, especially in comorbid patients where physiological compensation may be blunted, thereby, improving the likelihood of positive outcomes.

Keywords: Bleeding stoma, haemorrhagic shock, mid-rectal carcinoma, resuscitation

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"THE GREAT IMITATOR": A CASE OF NEUROSYPHILIS MASQUERADING AS ACUTE PSYCHOSIS

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Introduction: Neurosyphilis is a complication of syphilis that occurs when Treponema pallidum invades the central nervous system, typically as a result of untreated infection. It can present at any stage of the disease, ranging from the asymptomatic phase to the late severe parenchymatous phase, which includes general paresis and tabes dorsalis. While early diagnosis with antibiotics treatment can lead to a complete cure, it remains a global health concern. Its incidence is notably increasing among men who have sex with men, and co-infection with HIV. This case emphasises the need to consider neurosyphilis as a potential differential diagnosis, initiating early treatment in emergency department (ED), and conducting diagnostic investigations as soon as they become available.

Case Description: A 33-year-old male presented with acute behavioural changes and dermatological findings consistent with secondary syphilis. Empirical treatment with intravenous ceftriaxone and acyclovir was initiated to cover for meningoencephalitis. Laboratory investigations revealed lymphocytopenia and elevated C-reactive protein (CRP) levels. CT scan of the brain showed a well-defined hypodense lesion in the right cerebellopontine angle. Lumbar puncture was subsequently performed, however, cerebrospinal fluid (CSF) analysis was negative for syphilis. Despite this, serological tests confirmed the diagnosis of syphilis. Clinical improvement was seen post-antibiotic initiation and the patient later disclosed his high-risk behaviour.

Discussion: Although there are a variety of laboratory testing aids in diagnosing neurosyphilis, no single test is definitive. CSF analysis may show mononuclear pleocytosis, mild elevation of protein level, and reactive CSF-VDRL or CSF-RPR. When CSF non-treponemal tests are negative, CSF treponemal tests may be warranted. In cases where laboratory findings are inconclusive, a presumptive diagnosis of neurosyphilis can be made if clinical suspicion remains high. Given the limitations of CSF analysis, empirical treatment may be initiated even before a lumbar puncture is performed. The Centers for Disease Control and Prevention (CDC) recommends administering 18-24 million units of aqueous crystalline penicillin G daily for 10-14 days.

Conclusion: Neurosyphilis should be considered in patients presenting with neuropsychiatric symptoms, especially those at risk. Early recognition and timely intervention are keys to preventing irreversible neurological damage and improving clinical outcomes.

Keywords: Neurosyphilis, Syphilis, Acute Psychosis, Treponema pallidum

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BEYOND RECTAL PROLAPSE: A CASE OF TRANS-ANAL PROTRUSION OF INTUSSUSCEPTION

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Introduction: Intussusception is a leading cause of intestinal obstruction in the pediatric population, particularly affecting infants and toddlers. It typically presents with the classical triad of colicky abdominal pain, a palpable abdominal mass and 'currant jelly' stools. However, in rare instances, intussusception can manifest as trans-anal protrusion of intussuscepted bowel segment, also known as trans-anal protrusion of intussusception (TAPI). This rare presentation can closely mimic rectal prolapse, leading to misdiagnosis and delayed management.

Case Description: We report the case of a 2 year-old malay boy who presented with abdominal pain and a bleeding rectal mass, preceded by two days of moderate vomiting and diarrhea. Initial clinical assessment revealed a lethargic, pale child with cold extremities and a dark blue-black mass protruding from the anus, initially diagnosed as a prolapsed, thrombosed rectum. Laboratory investigations showed leucocytosis and metabolic acidosis, while imaging studies ruled out bowel perforation or obstruction. Initial treatment including fluid resuscitation, analgesia and broad-spectrum antibiotic were administered. Re-evaluation by the pediatric surgical team raised suspicion for intussusception. Manual reduction under procedural sedation was unsuccessful. Urgent abdominal ultrasonography confirmed the diagnosis of a long segment intussusception. The patient underwent emergency laparotomy, manual reduction and appendicectomy, followed by admission to the Pediatric Intensive Care Unit (PICU) for postoperative monitoring. He was discharged in stable condition on postoperative day six.

Discussion: TAPI is a rare but critical variant of intussusception that necessitates urgent recognition and management. Differentiating TAPI from rectal prolapse can be challenging but is crucial, as treatment strategies differ significantly. While rectal prolapse can often be managed conservatively, TAPI typically requires surgical intervention to prevent complications such as bowel ischemia, necrosis or perforation. Digital rectal examination, imaging particularly ultrasonography and maintaining a high index of suspicion are pivotal for accurate diagnosis.

Conclusion: This case underscores the importance of considering TAPI in children presenting with a rectal mass, particularly when associated with systemic signs of illness. Prompt differentiation and early surgical intervention are vital in improving outcomes and preventing life threatening complications.

Keywords: Intussusception, Trans-anal protrusion, Rectal Prolapse, Intestinal Obstruction

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"I THOUGHT I WAS DONE WITH BLOOD THINNERS?" – A CASE REPORT OF FULMINANT PHLEGMASIA CERULEA DOLENS

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Introduction: Phlegmasia cerulea dolens (PCD) is a rare, life-threatening complication of extensive deep vein thrombosis (DVT). Delayed recognition increases risks of limb loss and may lead to mortality. Early diagnosis and intervention are crucial for favorable outcomes

Case Description: A 28-year-old female with psoriasis, three months postpartum following caesarean delivery, and completed her postpartum thromboprophylaxis, presented with acute (4-hour) onset of left lower limb pain and darkening of psoriatic lesions on the affected limb. Examination revealed diffuse swelling of the left lower limb, with cyanosis, calf tenderness and feeble distal pulses. Bedside ultrasonography confirmed left femoral and popliteal vein thrombosis without right heart strain echocardiographic finding. Immediate anticoagulant and pain control were initiated, along with limb elevation. CT venography demonstrated extensive thrombosis involving the left iliac, femoral, and popliteal veins, with partial inferior vena cava (IVC) thrombosis. The patient underwent endovascular thrombectomy and IVC filter placement at a tertiary center, with successful recovery and no acute complications.

Discussion: PCD requires high clinical suspicion. Treatment focuses on preventing thrombus propagation and preserving venous patency. Initial measures include anticoagulation, limb elevation, and fluid resuscitation. Endovascular thrombectomy demonstrates superior patency rates compared to thrombolysis alone. IVC filter may be considered to reduce pulmonary embolism risk.

Conclusion: This case highlights PCD's fulminant onset and the importance of prompt intervention. Early heparinization and endovascular therapy can mitigate morbidity and mortality in this critical condition.

Keywords: Phlegmasia cerulea dolens, deep vein thrombosis, postpartum, anticoagulation, thrombectomy.

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FROM A PRICK TO A PUFF: A RARE CASE OF SUBCUTANEOUS EMPHYSEMA AFTER MINOR HAND TRAUMA

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Introduction: Subcutaneous emphysema is characterized by the presence of air or gas beneath the skin and soft tissues. It is commonly linked to infections caused by gas-forming organisms. This report describes a rare case of traumatic subcutaneous emphysema of the hand and forearm, precipitated by a nail prick injury followed by irrigation with hydrogen peroxide.

Case Description: A 38-year-old Malay man was referred to the emergency department following a nail puncture injury to his left hand. Upon arrival, the patient was stable, afebrile, and appeared non-toxic. He reported pain and swelling starting from the site of the puncture and gradually spreading up his forearm. He noted that the swelling began after the wound was irrigated with hydrogen peroxide at the clinic. Inspection of the left upper limb revealed a 1x0.5 cm puncture wound on the thenar area of the palm. Crepitus was palpable from the hand up to the shoulder, with the most pronounced swelling and tenderness extending to the distal third of the forearm. Neurovascular function remained intact. Comprehensive investigations demonstrated leukocytosis (WBC 22 × 10^9/L) while the remainder of the blood work was within normal limits. Radiographs showed extensive gas shadows within the soft tissues up to the shoulder. The patient was started on broad-spectrum antibiotics and pain management. After two days of hospital observation, he was discharged with oral antibiotics. A follow-up in the orthopedic clinic two weeks later showed complete resolution of the emphysema and full wound healing.

Discussion: Subcutaneous emphysema may result from a benign mechanism, such as a one-way valve effect at the wound allowing air to enter but not escape. However, it may also indicate serious infections like clostridial myonecrosis or necrotizing fasciitis, which require urgent intervention. Proper wound irrigation technique and the choice of irrigating agent are crucial, as high-pressure irrigation or certain chemical properties (e.g., hydrogen peroxide) may force air into tissue planes.

Conclusion: While most non-infectious subcutaneous emphysema cases can be managed conservatively, a thorough clinical evaluation is essential to distinguish them from life-threatening conditions. Close monitoring is important to ensure complete recovery and prevent complications.

Keywords: subcutenous emphysema, hydrogen peroxide

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STARVED TO DEATH

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Introduction: The human body adapts through starvation by forming ketone bodies for fuel. However, in large amount, ketoacidosis may develop which is a potentially life-threatening metabolic disorder. We present a case of starvation ketoacidosis in a starved young patient.

Case Description: 18 years old lady presented with nausea, epigastric pain, loss of weight and appetite for past 3 weeks and recently lethargic with no prior significant history. Patient has been poorly taking orally due to dysphagia. Patient was conscious but tachycardic, cachexic and dehydrated. Blood parameters showed high anion gap metabolic acidosis(HAGMA) with ketosis (4.7mmol/l) but normal glucose (5.6 mmol/l), lactate (1.1mmol/l) and renal profile. Patient was initially started on 0.9% saline infusion upon which the acidosis worsened. Soon, dextrose infusion was initiated and the outcome improved steadily. Gastro referral was imminent.

Discussion: In cases of depleted glucose, the body rewires into metabolizing fats into ketone bodies for fuel. Toxic amount of ketone bodies may lead to ketoacidosis, upon which starvation ketoacidosis are commonly seen in pregnancy, breast-feeding and some cases of gastric-banding. Starvation ketoacidosis are usually mistaken for diabetic ketoacidosis which is more common that which the treatment differs by the insulin, essential in diabetic ketoacidosis. In starvation ketoacidosis, infusion of dextrose with electrolyte balance is the standard treatment to replenish the essential fuel of the body. Infusion of saline may be unnecessary as it may worsen the ketoacidosis.

Conclusion: Starvation ketoacidosis is not as common to diabetic ketoacidosis but may be missed. Proper diagnosis is necessary before executing the treatment to prevent worsening acidosis.

Keywords: starvation, ketone bodies, ketoacidosis, dextrose saline

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COMPLICATED URINARY TRACT INFECTION (UTI) IN A FEBRILE CHILD: A MISSED OPPORTUNITY FOR EARLY POCUS DETECTION OF UVJ OBSTRUCTION

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Introduction: Introduction: Complicated urinary tract infections (UTIs) in children present significant challenges in both diagnosis and management. They are often associated with undiagnosed congenital structural anomalies, such as ureterovesical junction obstruction (UVJO) during antenatal screening. Delayed diagnosis may result in serious complications, including pyonephrosis, renal failure, leading to permanent renal scarring. Point-of-care ultrasound (POCUS) serves as a valuable bedside tool for the early detection of hydronephrosis, thereby aiding clinicians in guiding further investigations and management strategies.

Case Description: Case Description: A 16-month-old boy presented with a two-week history of prolonged fever accompanied by non-specific symptoms such as vomiting and diarrhoea. He had multiple visits to health centres and was previously treated as a case of acute gastroenteritis (AGE) with several courses of antibiotics. On examination, all systemic findings were unremarkable except for a rash over the scrotal area. Laboratory investigations revealed marked leukocytosis and elevated C-reactive protein levels. The presence of a scrotal rash prompted the attending physician to perform urine microscopy, which demonstrated leucocyte in urine. Bedside ultrasound identified hydronephrosis with dilatation of the renal pelvis and ureter, suggestive of a complicated urinary tract infection. This finding prompted further imaging by paediatric physician, including formal abdominal ultrasound and micturating cystourethrogram (MCUG) in the ward, which revealed severe left urinary tract dilatation and pyonephrosis. Intraoperatively, a ureterovesical junction obstruction was confirmed, and a ureterostomy was performed. The patient showed significant clinical improvement postoperatively and is currently awaiting ureteric reimplantation.

Discussion: Discussion: This case underscores the diagnostic challenges associated with atypical presentations of complicated UTIs. Earlier utilisation of POCUS during the emergency department visit could have facilitated the prompt detection of hydronephrosis and enabled timely urological referral. Emergency physicians should consider the use of POCUS as a key adjunct in the evaluation of children presenting with prolonged febrile illnesses.

Conclusion: Conclusion: POCUS is an invaluable tool in the early assessment of pediatric UTIs, particularly for identifying underlying structural abnormalities such as UVJO. Its routine incorporation into emergency department protocols may enhance diagnostic accuracy and improve clinical outcomes for children with atypical or prolonged febrile presentations.

Keywords: Point-of-Care Ultrasound ,Pediatrics complicated Urinary Tract Infections,UVJ Obstruction, hydronephrosis

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USER-CENTERED EVALUATION OF A DIGITAL BLS LEARNING PLATFORM IN A HYBRID EDUCATION MODEL

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Introduction: As education evolves in the digital era, resuscitation training must also adapt to remain effective, accessible, and engaging. Universiti Teknologi MARA (UiTM) developed and implemented the Online Basic Life Support (BLS) Certification Module and Platform© within the past three years, using a hybrid model of self-paced online learning and face-to-face skills training. The platform is now used for the BLS certification of hospital staff, students, and members of the public seeking certification. This study aimed to evaluate the platform's usability and identify factors influencing user experience.

Methodology: A two-phase cross-sectional study was conducted. Phase 1 involved the development and validation of a composite questionnaire by adapting items from the FIXED Questionnaire, Perceptions of Learning Management System (LMS) Quality Questionnaire, and the System Usability Scale (SUS). In Phase 2, the validated questionnaire was distributed to 169 participants who completed the course. Descriptive statistics and binary logistic regression were used to assess usability (SUS score ≥ 68 as "good") and associated variables.

Results: Participants' mean age was 30.2 years with 82.2% female. Overall, 66.3% rated the platform as having good usability, suggesting generally positive user acceptance. Mean scores for system quality, learning quality, and information quality were 4.52, 4.59, and 4.61, on a 5-point Likert scale. Information quality significantly predicted good usability (Adjusted OR 6.845, 95% CI: 1.52-30.434, p=0.012).

Discussion: The platform demonstrated acceptable usability for an early-stage system, with information quality emerging as the strongest predictor of positive user experience. Although system and learning qualities received high ratings, they did not significantly predict usability outcomes, highlighting the critical role of strong and reliable educational content. Maintaining the face-to-face component remains essential not only for skills practice, but also to address gaps that online modules alone cannot fulfill. Future enhancements may incorporate technologies such as artificial intelligence to provide real-time feedback during skills training.

Conclusion: The UiTM Online BLS Certification Module and Platform© provides an accessible hybrid solution for resuscitation training, demonstrating acceptable usability in its early stage of implementation. Sustaining strong educational content and exploring innovative learner support technologies will be key to advancing future hybrid resuscitation training models.

Keywords: Usability, Hybrid Learning, Basic Life Support (BLS), Learning Management System

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SUCCESSFUL MANAGEMENT OF SIMULTANEOUS AIRWAY AND ESOPHAGEAL OBSTRUCTION IN AN ELDERLY PATIENT

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Introduction: Choking or foreign body asphyxia predominantly affects children but can also occur in the elderly, often due to swallowing difficulties or certain food textures. Obstruction of the airway or esophagus may lead to life-threatening complications, including respiratory distress, aspiration pneumonia, and esophageal injuries. We report a case of successful endoscopic management of an airway obstruction complicated by an esophageal foreign body.

Case Description: A 63-year-old male presented to the emergency department with acute choking and shortness of breath after eating meat, accompanied by a persistent foreign body sensation in the throat. A Heimlich maneuver performed by family provided partial relief. On examination, he had signs of upper airway compromise—facial congestion, hypersalivation, intermittent stridor, hoarseness, and tachypnea—with oxygen saturation of 92% on room air. The Otorhinolaryngology (ORL) and Anesthesiology teams were activated for airway support. Supplemental oxygen via nasal prong was provided. Lung auscultation revealed equal air entry bilaterally with no bronchospasm. Upper airway obstruction was relieved with Intravenous dexamethasone and nebulized adrenaline were administered to reduce airway edema. Bedside nasopharyngolaryngoscopy revealed no foreign body above the vocal cords, only mild edema. Point-of-care ultrasound (POCUS) of the airway and chest radiography ruled out intratracheal or bronchial obstruction. Given the persistent hypersalivation and negative upper airway findings, an esophageal obstruction was suspected. Urgent bedside esophagogastroduodenoscopy (OGDS) was arranged. Pre-endoscopy, the patient received IV glucagon, metoclopramide, and hyoscine butylbromide to relax esophageal musculature. Endoscopy confirmed a piece of meat lodged at the cricopharyngeal inlet with surrounding mucosal erosion. The obstruction was successfully removed, and the patient's symptoms resolved. He was monitored overnight and discharged in stable condition with outpatient follow-up.

Discussion: This case illustrates how esophageal foreign bodies can mimic airway obstruction due to anatomical proximity and compression. Delay in diagnosis and management can result in severe complications, including perforation or mediastinitis. This case also highlights the importance of rapid, multidisciplinary evaluation in suspected upper aerodigestive tract obstruction.

Conclusion: Choking can result in simultaneous airway and esophageal necessitating urgent, coordinated intervention. Early recognition, imaging, and timely endoscopic intervention are critical to avoid respiratory failure or surgical complications.

Keywords: Choking, Esophageal foreign body, Airway obstruction, Endoscopic intervention

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ASTHMA-COPD OVERLAP SYNDROME (ACOS) IN EMERGENCY PRESENTATIONS: CHALLENGES IN EARLY RECOGNITION AND MANAGEMENT

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Introduction: Asthma-COPD Overlap Syndrome (ACOS) represents a complex clinical entity characterized by overlapping features of asthma and chronic obstructive pulmonary disease (COPD), resulting in more severe respiratory impairment and worse outcomes compared to either disease alone. In the Emergency Department (ED), prompt recognition and appropriate management of ACOS are critical yet often overlooked, leading to delays in effective treatment.

Case Description: This case series describes three patients who presented to the ED with acute shortness of breath. In each case, initial management was directed toward either asthma exacerbation or COPD exacerbation without consideration of ACOS. Subsequent detailed clinical evaluation, including comprehensive history-taking and, where available, spirometric findings, revealed features consistent with ACOS. The initial failure to recognize the overlap syndrome delayed the implementation of optimal, targeted management strategies, potentially impacting the patients' immediate and long-term outcomes.

Discussion: Differentiating between asthma, COPD, and ACOS is essential in the acute care setting, particularly as management strategies differ significantly. Asthma is typically characterized by reversible airway obstruction and younger onset, whereas COPD presents with irreversible obstruction and is strongly associated with smoking history. ACOS, however, displays characteristics of both conditions, including persistent airflow limitation combined with airway hyperresponsiveness. Misdiagnosis or incomplete diagnosis can result in suboptimal treatment, as ACOS often requires a combined therapeutic approach involving inhaled corticosteroids and bronchodilators. Emergency physicians must maintain a high index of suspicion for ACOS in patients exhibiting mixed clinical features, particularly in older adults or smokers presenting with atypical patterns of exacerbation.

Conclusion: Early identification of ACOS is imperative for initiating appropriate, evidence-based treatment during acute exacerbations and for planning long-term management. Recognition of this overlap syndrome facilitates not only improved acute stabilization but also appropriate specialist referral and structured follow-up, thereby enhancing symptom control and reducing future exacerbations. Increasing awareness of ACOS among emergency care providers is vital to improving clinical outcomes and optimizing resource utilization in both acute and chronic care settings.

Keywords: ACOS; Shortness of breath; Diagnosis; Management; Emergency Department

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"A STING TO THE HEART: MYOCARDITIS IMITATING ST- SEGMENT ELEVATION MYOCARDIAL INFARCTION (STEMI) IN DENGUE INFECTION"

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Introduction: ST-segment elevation myocardial infarction (STEMI) is typically caused by acute coronary occlusion. However, in infectious diseases like dengue, myocarditis can mimic STEMI on electrocardiogram (ECG), posing diagnostic and therapeutic dilemmas, especially in endemic regions. Dengue myocarditis is rare but increasingly reported, with presentations ranging from subclinical dysfunction to fulminant cardiac failure. We describe a case of dengue fever complicated by myocarditis mimicking STEMI and the challenges faced in its clinical management.

Case Description: A 39-year-old male with no underlying comorbidities presented on day five of dengue illness with persistent fever, myalgia, and one episode of vomiting. He denied chest pain, dyspnea, or palpitations. On examination, he was afebrile, hemodynamically stable, and well-perfused. ECG revealed dynamic ST-segment elevation in leads V2–V3 with reciprocal depressions in the inferior leads, suggestive of anterior STEMI. Echocardiography showed preserved cardiac contractility and no pericardial effusion. Laboratory findings included NS1-positive dengue, transaminitis, elevated cardiac biomarkers and normal lactate without hemoconcentration or plasma leakage. The patient was managed conservatively with phase-based fluid titration. ECG changes resolved over time, and he remained stable without cardiac decompensation. The patient made a good recovery and was discharged with normal cardiac biomarkers.

Discussion: This case highlights the challenge of managing ST-segment elevation in the absence of classic ischemic symptoms and echocardiographic wall motion abnormalities. Endothelial dysfunction, changes in vascular permeability, and localized cardiac damage, have been proposed as potential pathophysiological mechanisms underlying the cardiac manifestations of dengue. The inappropriate use of antiplatelets or thrombolytics in such cases, particularly during the thrombocytopenic phase, can be harmful. Serial ECGs and bedside echocardiography were pivotal in avoiding unnecessary interventions. Myocardial involvement in dengue is likely underdiagnosed due to nonspecific presentations and limited access to advanced imaging. Prompt recognition and supportive management remain the cornerstone of care.

Conclusion: In dengue-endemic regions, clinicians should maintain a high index of suspicion for dengue myocarditis in patients presenting with STEMI-like ECG changes. Further research is necessary to establish effective management strategies for myocarditis associated with dengue fever.

Keywords: Dengue fever, myocarditis, ST-segment elevation

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THE MISSING BITE

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Introduction: Python bites are non venomous but can cause significant soft tissue injury. The pythons' teeth can also be embedded into soft tissue and joint spaces. Routine X-ray examination of the bitten part is a must to rule out the presence of embedded teeth in the wound.

Case Description: Patient presented to the emergency department after he was bitten by a snake over his right hand. Patient had taken a picture of the snake which was identified as a python. The patient had a significant puncture wound over the thenar area of his right palm. No other significant injury was noted. An X-ray was taken but did not show any foreign body at the thenar area. The patient presented to the emergency department again one week later complaining of pain over the tip of his fourth right finger. It was then noted than the patient had a second minor injury on his finger sustained during the initial python bite a week earlier. Reexamination of the X-ray revealed a foreign body which was identifed as the python's tooth.

Discussion: Python bites with the snake's tooth or teeth embedded into the soft tissue or joint space is not uncommon. The size or depth of the wound can be misleading. Injuries that appear superficial maybe significant. An X-ray which covers all bitten areas should be ordered to rule out the possibility of an embedded tooth.

Conclusion: Careful examination for any and all wounds should be conducted after a python bite to rule out the presence of embedded tooth or teeth by X-ray.

Keywords: Python, teeth, wound, X-ray

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BLUE OCEAN STRATEGY : METHYLENE BLUE IN REFRACTORY SHOCK

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Introduction: Majority patients in shock will respond to vasopressors for haemodynamic stabilization. Common vasopressors used are noradrenaline, adrenaline and vasopressin. Methylene blue is an evolving vasoactive agent and not routinely used. We share our experience in using methylene blue for refractory shock at our centre.

Case Description: A 49 years old male with no known medical illness and allergy presented at our centre with persistent vomiting, loose stool and rapid breathing. He was profoundly hypotensive and tachypnoeic. However, he was afebrile and not tachycardic. The patient was in severe metabolic and lactic acidosis with pH of 7.09, bicarbonate of 8.2 and lactate of 8.0. His full blood count revealed leukocytosis, blood urea 19.7 and creatinine 454. The patient was intubated endotracheally and started on mechanical ventilator. He was started on intravenous ceftriaxone and required three vasopressors at maximum dosage. Due to refractory shock despite fluid resuscitation, he was started on methylene blue 2mg/kg bolus followed by infusion 0.3mg/kg for 6 hours. Following that, patient's hemodynamics improved and the acidosis resolved. Patient was admitted to intensive care unit (ICU) and underwent continuous veno-venous hemofiltration (CVVH) for 8 hours. Adrenaline was off on day 4 whereas noradrenaline and vasopressin on day 5 post methylene blue. His repeated blood urea and creatinine were normal. His blood for leptospirosis, malaria and atypical screening were negative. His blood and urine culture shows no growth. He was treated for severe infective acute gastroenteritis enterotoxin producer and successfully extubated on day 9 of intubation. He was transferred out to medical ward and discharged well.

Discussion: Sepsis often causes distributive shock which can cause multiorgan failure. It is caused by the release of nitric oxide in vascular endothelium causing vasodilation. Nitric oxide (NO) will activate the guanylate cyclase that convert guanosine triphosphate to cyclic guanosine monophosphate (cGMP) which lead to smooth muscle relaxation. Methylene blue inhibit the nitric oxide-cyclic guanosine monophosphate (NO-cGMP) pathways, decreases the vasodilation effect and increases responsiveness to vasopressors.

Conclusion: Our case shows that methylene blue in refractory shock helped to stabilize the blood pressure. It could be considered when other vasopressors had been maximized.

Keywords: Methylene blue, refractory shock, sepsis, vasopressors

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WHEN TRAUMA MEETS THE AORTA: THE UNSEEN DANGERS OF TRAUMATIC AORTIC DISSECTION

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Introduction: Traumatic aortic dissection (TAD) is a rare but life-threatening condition that results from blunt or penetrating trauma. It occurs when an injury causes a tear in the intimal layer of the aortic wall, leading to blood accumulation between the layers of the aorta. TAD most frequently results from a high energy impact due to rapid deceleration and high energy transfer through tissues including the aorta, such as in high-speed motor vehicle accidents.

Case Description: A 65 years old Indian gentleman with underlying hypertension, dyslipidemia and chronic kidney disease was presented to district hospital for alleged motorbike hits over buffalo. Patient remain hypotensive despite of bolus fluid resuscitation, completed 2 pints of packed cell transfusion and multiple negative e-fast scans. Upon arrival to hospital, patient was intubated and supported with IVI noradrenaline double strength, repeated eFAST noted bilateral hemothorax even though patient has no ribs fracture or any lungs contusion injury. Thus, patient was initially treated as suspected intra-abdominal injury, severe traumatic brain injury, bilateral hemothorax, open fracture of left big toe and neurogenic shock with C5-C6 fracture. Subsequently, CT Thorax Abdomen and Pelvis reveals there is aortic dissection between aortic arch, descending aorta and right proximal subclavian artery.

Discussion: Challenges to diagnosed TAD was due to patient's condition was critical, he had already intubated and unable to elicit symptoms such as sudden tearing pain over chest, difficulty in breathing, feeling syncope and body weakness. Trauma patients also often undergo rapid evaluation with a focus on airway, breathing, and circulation (the ABCs), which may not immediately include imaging studies eg CT thorax and CT abdomen that could detect an aortic dissection. Besides, TAD's symptoms can be easily overlap with other condition such as severe traumatic brain injury, polytrauma and spinal cord injuries. Furthermore, patient is showing subtle or non-classical presentation which present with hemothorax without ribs fractures/ lung contusion.

Conclusion: This case report highlights the clinical presentation and diagnosis of a patient with traumatic aortic dissection (TAD) after a motor vehicle accident. It emphasizes the need for high suspicion in high-impact injuries and recommends rapid CT angiography for quick and accurate diagnosis. The report stresses the importance of early identification and treatment to improve patient outcomes.

Keywords: Traumatic aortic dissection,ct angiography in motor vehicle accident

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"NO NEUROLOGIST, NO PROBLEM : TELEMEDICINE TRANSFORMS STROKE CARE IN RURAL HOSPITALS" - THE ROLE OF TELECONSULTATION AND EARLY THROMBOLYSIS IN A DISTRICT HOSPITAL WITHOUT NEUROLOGIST IN MANAGING PATIENTS WITH ACUTE STROKE

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Introduction: This case study examines the management of a 71-year-old patient presenting with TIA which developed into acute stroke characterized by sudden left-sided weakness while receiving treatment in etd. Acute stroke was identified with an NIHSS score of 4. In house physician and Neuromedical team from referral hospital was consulted and prompt CT brain done within 30 mins of request shows a right lacunar infarct (Aspect score 10) , prompting immediate referral to a Neuromedical specialist for thrombolysis consideration. Teleconsultation was done and thrombolysis was initiated in district setting followed by transfer of patient for further management.

Case Description: The patient's NIHSS score was recorded at 4, and the ASPECT score was 10, establishing him as a candidate for thrombolytic therapy. Following administration of thrombolytics (alteplase), the NIHSS improved to 1 and the patient was transferred to a tertiary care center, where he spent four days in the ICU before transitioning to the general wards for an additional week. Although he was discharged with residual symptoms (MRS of 2), he remains independent in his activities of daily living.

Discussion: This case highlights the importance of rapid identification and management of acute ischemic stroke, particularly in elderly patients with initial transient ischemic attack (TIA) symptoms.The timely assessment using the NIHSS score and rapid neuroimaging, with an ASPECTS score of 10 indicating minimal early ischemic changes, allowed for appropriate consideration of thrombolysis. Interdisciplinary collaboration between in-house physicians, teleconsulted neurologists, and the referral neuromedical team enabled effective thrombolytic treatment in a district setting—demonstrating the potential of telemedicine in improving stroke outcomes in resource-limited or non-tertiary environments. Early transfer post-thrombolysis ensured continuity of care and further management in a specialized center.

Conclusion: This case underscores the critical role of timely thrombolysis in district hospital settings, even in the absence of neuromedical specialists. The findings advocate for robust stroke protocols to enhance patient outcomes and mitigate the long-term consequences of stroke, highlighting the importance of timely intervention in saving patients from potential disabilities associated with acute strokes.

Keywords: teleconsultation, thrombolysis, stroke protocol, district hospital

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SADDLE UP FOR THE UNEXPECTED: DIZZINESS REVEALING A LIFE-THREATENING EMBOLISM

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Introduction: Being only 3-5% among the incidence of Pulmonary Embolism(PE) type, saddle PE ends up with deleterious effects on hemodynamics and mortality if left untreated. Saddle PE, rare type of PE that is life-threatening, defined by a large blood clot entrapped at the bifurcation of the pulmonary artery causing right ventricle strain.

Case Description: We received a morbidly obese 33 year old male from the nearest Klinik Kesihatan(KK), presented with dizziness and vomiting. This patient visited the KK for wound dressing on his leg which he attained from an accident months ago. Whilst dressing, he appeared dizzy, diaphoretic, followed by vomiting probably due to being hypotensive. He was given fluid resuscitation, subsequently responded well. On inspection, the wound on his leg was festering. He was referred for further management. At the emergency department(ED),a bedside echocardiogram(ECHO) was done for assessing fluid status which revealed right ventricle enlargement, flattened septum and McConnell sign indicating PE. However he was hemodynamically stable thus was started on anticoagulant. Blood investigations showed raised troponin I and D-dimer. We then proceeded with computed tomography pulmonary angiogram (CTPA) which discovered saddle PE. The patient was planned for thrombolysis if hemodynamically unstable. He was admitted to intensive care unit and discharged well after 9 days .

Discussion: Saddle PE is typically a huge blood clot in the pulmonary artery. that can lead to heart failure and death. In this case, patient presented with dizziness and vomiting especially during dressing, may lead to cognitive bias on the atypical presentation rendering doctors to think of vasovagal pre-syncope or sepsis, thence delaying the need for CTPA and early referral. Also, the benefit of a bedside ECHO has discovered positive findings of McConnell sign indicating PE.

Conclusion: It clearly a challenge diagnosing PE with atypical symptoms. It is imperative to include PE in the differentials, when a morbidly obese patient presents with dizziness and transient hypotension where the diagnosis is uncertain. In the era of having ultrasound handy in the department, we can always perform bedside scan to look for event such as embolus that may guide us to expedite intervention apart from just evaluating the blood investigations.

Keywords: pulmonary embolism, dizziness , vomiting

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A CASE OF HYPERAMMONEMIA IN A ORNITHINE TRANSCARBAMYLASE (OTC) HETEROZYGOUS CARRIER

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Introduction: Ornithine Transcarbamylase deficiency (OTCD) is characterized by X-linked inheritance with phenotypic expression variability, and is the most prevalent genetic disorder within urea cycle disorders. We would like to discuss on a case of a heterozygous female with OTC deficiency exhibited mild cognitive deficits with impaired functional capability and hyperammonemia.

Case Description: A 32 years old Female with underlying OTC Heterozygous Carrier with (c.275G>A) gene mutation, presented with confusion, short term memory loss, nausea and headache for 2 days. Similar event occurred 4 years ago during her first pregnancy, where this pathogenic genetic mutation had only been detected after comprehensive genetic workup after experiencing her first neonatal death. She was confused, not orientated to time and place upon arrival. Overall stable haemodynamically with GCS E4V4M6, and fluctuating consciousness in Emergency Department. Serum Ammonia shown significantly raised level of 166.1µmol/L. Intravenous hydration was provided at first, subsequently patient's condition improved to her usual self with full consciousness. She was then arranged for medical ward admission with regular dosage of Syrup Lactulose and inpatient dietician referral for limitation of protein intake.

Discussion: Heterozygous females with ornithine OTC deficiency could be either ranged from asymptomatic, intermittently symptomatic, or to recurrent episodes of hyperammonemic coma, depending upon the degree of enzyme deficiency in that particular gene mutation. During birth, OTC deficiency is not included in our routine neonatal screening, therefore the diagnosis is occasionally a challenge and is often delayed. There are documented cases where young aged affected individuals were even misdiagnosed as psychiatric disorder. Rapid correction of hyperammonemia to less than 200 µmol/L is recommended at acute phase to avoid hyperammonemic crisis. Comprehensive measures including adequate hydration, discontinuing protein intake, and reversing catabolism are primary goals in acute management. In severe cases, parenteral nitrogen scavenger therapy and Continuous venovenous hemodialysis (CVVHD) are recommended.

Conclusion: OTCD is a rare and potentially lethal medical condition. Detection of OTC gene mutation at early stage allows for effective management. Collaborative care among an interprofessional team, including geneticists, physicians, nurses, dieticians, and pharmacists, aid in holistic management in this patient.

Keywords: hyperammonemia, ornithine transcarbamylase deficiency (otcd), x-linked inheritance

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UNVEILING AORTIC DISSECTION: POCUS-GUIDED DETECTION WITH NORMAL CHEST RADIOGRAPH

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Introduction: Aortic dissection (AD) is a challenging clinical emergency and remains difficult to diagnose with 1 in 6 being missed during initial ED visit. For AD, both misdiagnosis and over testing are key concerns, with initial chest radiograph and electrocardiogram can be misleadingly normal.

Case Description: A 43-year-old male, active smoker with no known medical history, presented to the emergency department with severe tearing chest pain radiating to the back, ongoing for the past 4 hours. Upon arrival, the patient was alert but in severe pain, rating it 7/10. Cardiovascular examination revealed no radiofemoral or radioradial delay, normal heart sounds, and no signs of heart failure. His blood pressure on arrival was 168/88 mmHg, which later elevated to 220/102 mmHg. Point-of-care testing showed normal blood gas, and the ECG indicated lateral ischemia with T-wave inversion in leads I and aVL. The chest radiograph, showing a normal mediastinal width of 7.5 cm, initially suggested acute coronary syndrome. However, bedside echocardiography revealed a dilated ascending aorta measuring 4.7 cm, with a normal aortic root, no aortic regurgitation, no pericardial effusion, and preserved regional wall motion and contractility. Despite fentanyl infusion, the patient's blood pressure remained resistant to labetalol, requiring oral ACE inhibitors and calcium channel blockers. CTA confirmed a Stanford type A AD starting from the ascending aorta and extending to the celiac trunk.

Discussion: The International Registry of Acute Aortic Dissection (IRAD) study showed absence of mediastinal widening and absence of both mediastinal widening and abnormal contour in 37.4% and 21.3%, respectively. Chest radiograph can be normal in 12.4% of patients. Employing a combination of the Aortic Dissection Detection Risk Score and D-dimer alongside point-of-care echocardiography assists emergency clinicians in reducing unnecessary computed tomography for lower risk patients. Echocardiography findings of AD include the presence of an intimal flap, true and false lumina, aortic regurgitation, and pericardial effusion. Nonetheless, negative echocardiography does not rule out AD and further imaging techniques must be considered if clinical suspicion is high.

Conclusion: A high clinical suspicion is crucial, and the usage of bedside predictive tools, D-dimer, and echocardiography facilitate prompt AD diagnosis in the ED.

Keywords: aortic dissection, echocardiography, chest radiograph, point-of-care ultrasound

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YOUNG STROKE IN AN ALLEGEDLY ASSAULTED GENTLEMAN

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Introduction: Globally, stroke has been one of the leading causes of morbidity and mortality over the years. Although stroke is more commonly seen in older adults, it is not rare among younger population. As young stroke aetiology profile differs from older population, it requires a thorough workup to prevent recurrence. This case report is an evident.

Case Description: A 37-year-old gentleman was allegedly assaulted by two people. Mechanism and time of injury were unknown. Patient presented to emergency department with a reduced Glasgow Coma Scale of E4V1M5 and pupils were 2/2 reactive. There was no scalp hematoma or wound, and no carotid bruit. Patient was aphasic with right facial asymmetry. Gag reflex was present. On right side, power of limbs was graded 0, hyperreflexia with upgoing Babinski reflex, whereas findings on left side were normal. Left otoscopy showed blood stained and perforated tympanic membrane. Electrocardiogram showed sinus rhythm with no ischemic changes. Blood investigation showed mildly raised white blood cell count, otherwise normal. Computed tomography (CT) angiography of brain/carotids and contrast-enhanced CT of brain revealed no evidence of carotid artery dissection, with a partially occluded M2 segment of left middle cerebral artery (MCA) causing left MCA territory infarction. No focal enhancing brain lesion. Patient was admitted and treated as acute ischaemic young stroke secondary to left MCA infarct with National Institutes of Health Stroke Scale (NIHSS) of 24.

Discussion: Young stroke causes diagnostic challenges, even though the most common cause is stroke of unknown aetiology. Cervical artery dissection (CAD) is one of the important causes of young stroke. CAD are associated with different forms of trauma, such as sudden high velocity head movement, sneezing and vomiting. CAD can be idiopathic. CT angiography is one of the diagnostic modalities of CAD where it reveals eccentric or crescent-shaped vessel wall thickening, but false-negative is still possible. Antithrombotic treatment is the treatment of choice for CAD-related ischaemic stroke.

Conclusion: Young stroke is a growing concern worldwide. A comprehensive evaluation is essential to elicit the cause of stroke in younger population, especially in cases of trauma as CAD cannot be ignored.

Keywords: young stroke, ischaemic stroke, cervical artery dissection

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SILENT LEAK: DELAYED PRESENTATION OF INTRAPERITONEAL BLADDER RUPTURE AFTER A MINOR FALL

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Introduction: Bladder injuries are rare, seen in about 1.6% of blunt trauma cases, and are mainly associated with pelvic fractures. Motor vehicle accidents are the leading cause, while penetrating and iatrogenic injuries are much less common.

Case Description: A 49-year-old man who presented with hip pain, urinary difficulty, fever, lethargy, and gross hematuria with clots several days after falling from a stationary pickup truck. Initially he was ambulatory hence did not seek medical attention. Examination on arrival revealed generalized abdominal tenderness, and insertion of a Foley catheter drained gross hematuria with clots. Bedside ultrasound showed free fluid in the abdomen and clots in the bladder. Laboratory investigations revealed electrolyte and metabolic abnormalities with severe metabolic acidosis. A contrast-enhanced CT (CECT) confirmed an intraperitoneal bladder rupture at the dome, with the Foley catheter tip visible through the defect. The patient underwent successful laparoscopic bladder repair, was monitored in the ICU, and later transferred to the general ward. He was discharged well with scheduled urology follow-up.

Discussion: Bladder injuries are uncommon due to the protection provided by the pelvic bones. Pelvic pain and gross hematuria are common, but physical exam findings can be inconclusive. The presence of blood at the urethral meatus or gross hematuria is an important clue (sensitivity 90%). However, FAST (Focused Assessment with Sonography in Trauma) exam is not sensitive enough for detecting bladder injuries. In delayed presentations, signs of peritonitis or ileus may occur due to urine extravasation into the peritoneal cavity, often from rupture at the bladder dome. Intraperitoneal rupture initially results in urine and blood leakage, causing reduced urine output and electrolyte/metabolic abnormalities; anuria may develop. Later, hematuria may reappear as abdominal pressure pushes urine back into the bladder. Retrograde urethrogram (RUG) should be done before bladder imaging but is not a substitute for cystography, the gold standard (sensitivity 95%). Intraperitoneal bladder injuries require urology consultation and almost always surgical repair to prevent peritonitis, sepsis, and poor outcomes.

Conclusion: Intraperitoneal bladder rupture is rare, but early clinical suspicion, timely diagnosis, and prompt surgical repair are essential to prevent severe complications.

Keywords: bladder rupture, haematuria, fall

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DEADLY TEAR: EARLY RECOGNITION AND MANAGEMENT OF BOERHAAVE SYNDROME

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Introduction: Boerhaave syndrome, is a spontaneous perforation of the esophagus that results from a sudden increase in intraesophageal pressure combined with negative intrathoracic pressure from severe straining or vomiting.

Case Description: A 46-year-old gentleman with no known medical illness presented to the emergency department with a 3-day history of shortness of breath, vomiting, and epigastric pain, following alcohol intake. On arrival, he was alert (Glasgow Coma Scale 15) with SpO_2 83% on room air, tachycardic, and tachypneic. Physical exam revealed reduced bibasal air entry and subcutaneous crepitus at the neck. Chest X-ray showed left hydropneumothorax and right pleural effusion; a chest tube was inserted, draining pus. He developed respiratory failure requiring intubation and ICU admission. CT scan showed air pockets near the esophagus, and upper endoscopy confirmed a 3 cm esophageal perforation located 2 cm above the cardioesophageal junction. He was treated with antibiotics and bilateral chest drainage. The patient was admitted to the ICU for 5 days, then transferred to the surgical ward, and later discharged home well.

Discussion: Esophageal perforation is a critical, life-threatening condition with high mortality due to leakage of gastric contents into the mediastinum, leading to mediastinitis, empyema, sepsis, and potential pneumothorax. Diagnosis is often delayed due to nonspecific symptoms like chest pain and dyspnea. While Mackler's triad (chest pain, vomiting, subcutaneous emphysema) is a classic sign, it lacks sensitivity and specificity. Risk factors include forceful vomiting, bulimia, and heavy lifting. CT scan is the diagnostic modality of choice, especially in unstable or uncooperative patients. Endoscopy may be used cautiously when both diagnosis and intervention are needed. Early management involves broad-spectrum IV antibiotics with anaerobic coverage, ICU admission, and early consultation with surgery, gastroenterology, and critical care teams. Chest tube placement may be needed for associated pneumothorax or effusion. Even patients who appear stable should be considered critically ill, as deterioration can be rapid. Prompt recognition and a multidisciplinary approach are key to improving outcomes in esophageal perforation.

Conclusion: Always keep esophageal rupture in our differential diagnosis when evaluating chest, epigastric, or back pain—it's rare, but real, and can be rapidly fatal if missed.

Keywords: Boerhaave syndrome, Mackler triad, esophageal perforation

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REVOLUTIONISING TOXICOLOGY EMERGENCY TRAINING THROUGH GAME-BASED LEARNING

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Introduction: Toxicology is a core component of emergency medicine (EM) training, yet traditional lectures offer little opportunity to practise the rapid recognition and management of poisoning. We created Tox Fiesta, a game-based workshop, to enhance postgraduate EM trainees' toxicology knowledge, confidence and decision-making.

Methodology: A total of 18 postgraduate EM trainees attended the one-day workshop featuring five competitive scenario-based stations focusing on different toxicology topics, followed by a rapid-fire quiz. Activities were designed with constructive alignment. Data were collected through feedback surveys to assess knowledge, engagement and confidence.

Results: The results showed that 92% of participants reported increased confidence in handling toxicology cases, with a significant improvement in their understanding. 85% of participants rated the interactive activities as highly engaging, and 90% of attendees preferred game-based learning over traditional lectures. Furthermore, 85% of participants found the workshop improved their clinical decision-making in toxicology emergencies.

Discussion: Game-based learning has been increasingly recognised as an effective approach to enhance learner engagement, motivation and skill development in high-stakes fields such as EM. The creative design of the stations demanded not only knowledge but strategic thinking, leadership, and communication, making the learning holistic and memorable. The competitive spirit and surprise twist at each station mimicked the unpredictability of real emergency settings and fostered camaraderie and adaptive thinking.

Conclusion: The Tox Fiesta workshop demonstrates the feasibility and perceived effectiveness of game-based learning for toxicology in EM postgraduate education. However, further research with larger controlled studies, objective assessments and long-term follow-up is needed to validate its educational impact. As medical education continues to evolve, game-based learning presents an exciting avenue for future innovations in training healthcare professionals.

Keywords: Game-based learning, Toxicology, Medical education

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AN UNEXPECTED CULPRIT: ARACHNOID CYST MASQUERADING AS A TOXIDROME

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Introduction: Fluctuating consciousness with respiratory depression is a critical emergency presentation. While toxicological causes are often considered, structural lesions in the posterior fossa can mimic central nervous system depression. We report a case of fluctuating consciousness and respiratory failure ultimately attributed to a cerebellomedullary arachnoid cyst.

Case Description: A 39-year-old male presented to the emergency department with sudden-onset fluctuating consciousness and somnolence following lunch. On arrival, he was bradypneic (RR 9–10 breaths per minute), had pinpoint pupils, and required supplemental oxygen. Given the clinical picture, opioid toxicity was initially suspected; however, urine toxicology was negative. A CT brain revealed a pre-existing cerebellomedullary arachnoid cyst. Despite a trial of naloxone, there was no improvement in his respiratory status, prompting the need for intubation. Neurosurgical consultation was obtained, and the patient subsequently underwent a right retrosigmoid craniotomy with fenestration of the cyst. He recovered fully postoperatively with a normal Glasgow Coma Scale.

Discussion: Arachnoid cysts at the cerebellomedullary angle, though often incidental findings, may intermittently compromise brainstem function, leading to impaired consciousness and respiratory control without visible mass effect on imaging. Dynamic brainstem dysfunction should be suspected when clinical findings outweigh radiological appearances. Early airway protection, critical care support, and neurosurgical intervention can significantly improve outcomes.

Conclusion: In cases of unexplained altered consciousness and respiratory depression, emergency physicians should consider both toxic and structural causes. Posterior fossa lesions, including arachnoid cysts, may present with subtle or intermittent symptoms despite unremarkable imaging. Timely recognition and coordinated multidisciplinary management are essential to prevent deterioration and ensure favourable outcomes.

Keywords: Arachnoid cyst, cerebellomedullary cyst, fluctuating consciousness, bradypnea

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WALLENBERG SYNDROME: A CLINICAL AND IMAGING PERSPECTIVE

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Introduction: Wallenberg syndrome, or lateral medullary syndrome, accounts for about 2% to 3% of ischemic strokes and is a common brainstem infarction in the posterior circulation. In some cases, imaging may show cerebellar infarction, but clinical signs may suggest lateral medullary involvement. Early recognition is essential for guiding treatment and preventing complications, as Wallenberg syndrome, although uncommon, is not rare.

Case Description: A 62-year-old woman with hypertension presented to the emergency department with sudden onset of vomiting, vertigo, dizziness, spinning sensation, and unsteady gait for one day. There was no history of trauma. On examination, the patient was alert but visibly distressed due to vertigo. Neurological exam revealed lateral and vertical nystagmus, suggesting involvement of cranial nerves III and IV. Hoarseness was noted on cranial nerve IX examination. Cerebellar signs were seen on the left side, with positive finger-to-nose and heel-to-shin tests, indicating ipsilateral limb ataxia. CT brain imaging showed left cerebellar infarction. The patient was admitted for further evaluation and neurologic care.

Discussion: Wallenberg syndrome, or lateral medullary syndrome, is usually caused by occlusion of the posterior inferior cerebellar artery (PICA) or vertebral artery. It often presents with vertigo, vomiting, nystagmus, dysphagia, and ataxia. A complete neurological examination is essential in patients presenting with neurological symptoms to differentiate between central and peripheral causes of vertigo. When the cause is central, patients often exhibit additional neurological signs such as weakness, dysarthria, sensory changes, ataxia, or confusion. Wallenberg syndrome can be diagnosed clinically based on the presence of these hallmark features, but early detection is crucial. Prompt identification of symptoms is necessary to guide further investigation with radiological tests like CT, MRI, and MRA, which help confirm the diagnosis and rule out other causes. This patient exhibited hallmark features of Wallenberg syndrome, CT brain can miss lateral medullary infarction, especially in the early stages or when the infarction is small. Early recognition and referral facilitated prompt imaging and intervention.

Conclusion: While Wallenberg syndrome has a better functional outcome than many stroke syndromes, accurate diagnosis is essential, especially in hospitals without advanced radiological testing.

Keywords: Vertigo, Wallenberg

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TCS: THE COMFORT SPACE, "WHERE COMPASSION MEETS COMFORT"

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Introduction: Emergency Departments operate under relentless pressure, rapid triage, critical interventions, and life-or-death decisions often leave little room for sensitive communication. Yet, clinicians are frequently required to deliver devastating news, death notifications, navigate Do-Not-Resuscitate (DNR) decisions, or initiate organ donation discussions. These conversations often take place in suboptimal conditions—crowded bays, noisy corridors, or behind curtains, compounding trauma for families and contributing to burnout among healthcare workers. To bridge this gap, The Comfort Space (TCS) was developed: a dedicated, technology-enhanced environment designed for compassionate and structured communication during critical moments.

Case Description: A 46-year-old female diagnosed with septic shock secondary to hospital-acquired pneumonia and intracerebral hemorrhage. Despite aggressive interventions, including mechanical ventilation and inotropic support, her prognosis worsened rapidly. The situation was chaotic, the key decision-maker was unavailable, and escalating conflict arose among distressed family members. Staff transitioned discussions to the Comfort Space. There, through secure video conferencing and AI-assisted empathy tools, remote relatives were engaged, enabling consistent, clear communication. The structured, calm environment facilitated consensus on a DNR decision, avoiding repeated explanations and minimizing emotional escalation.

Discussion: TCS represents an evidence-based solution to a systemic gap in emergency care. In a recent internal review, use of the Comfort Space led to a 90% improvement in family satisfaction scores, 77% reduction in repeated explanations by staff, 43% decrease in emotional fatigue and conflict-related incidents among care teams and significant boost in staff confidence when handling high-stakes conversations. Integrated features such as culturally adaptable AI-guided dialogue scripts, video conferencing access, and real-time feedback via QR codes to ensure every conversation is patient and family-centered, even under crisis conditions.

Conclusion: The Comfort Space transforms how emergency departments handle sensitive communication. In an era where patient experience and staff wellbeing are performance indicators, TCS is not optional, it's essential. This is not just an innovation—it's an imperative. The Comfort Space brings evidence-based empathy to emergency care, setting a new standard every hospital should adopt. With the Comfort Space, we embrace evidence, and envision eminence.

Keywords: Comfort Space, Compassion, AI in Emergency

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THE-THANOS

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Introduction: Tetanus is a life-threatening condition caused by potent neurotoxin from 'Clostridium tetani'. In 2018, the incidence rate of other tetanus was 0.09 per 100000 population indicates tetanus is uncommon in Malaysia due to widespread immunisation.

Case Description: A 32-year-old migrant worker complained of non-specific muscle spasm for 2 days. He refused admission because it does not affect daily activity. However, his symptoms worsened the next day with locked jaw, neck stiffness and worsening body spasm causing him unable to ambulate. Upon examination, he is alert but having generalized body tonicity, most pronounced over jaw and neck muscle, flexion of upper limb and extension of lower limb with the absence of arching of back. Blood Pressure 154/110 Heart Rate 110 bpm SpO2 98% under room atmosphere We could not identify any recent wounds. Neurological examination revealed hypertonia over all four limbs. Patient was electively intubated for airway protection prior transfer to tertiary hospital. During rapid sequence intubation, he required high dose sedation and paralytic agents. Infectious team initiated tetanus immunoglobulin (TIG), Metronidazole and Tetanus Toxoid. Patient was subsequently admitted to ICU for through care.

Discussion: This case strongly suggests generalized tetanus, supported by muscle spasms, rigidity, and trismus, along with a history of being a migrant worker and poor immunization. Diagnostic challenges arise from conflicting symptoms, such as muscle rigidity (resembling Extrapyramidal Symptoms or dystonic reactions), neck stiffness (which may mimic meningitis), and locked jaw (which could be confused with a dental infection). The absence of recent wounds further complicates the diagnosis, as tetanus is typically associated with contaminated injuries. Differentiating these conditions is crucial, as treatments for each are very different. Early intubation in generalized tetanus is crucial to prevent fatal respiratory distress, as it can affect the muscles involved in breathing. Despite requiring intubation, the patient's neurological condition improved during admission.

Conclusion: Tetanus is a clinical diagnosis with the absence of confirmatory labatory test. Precise history taking and identifying signs are important to avoid misdiagnosis of other differentials. Tetanus is a rare disease in Malaysia as newborn and pregnant mothers are scheduled with highly successful tetanus immunisation programme.

Keywords: Tetanus, trismus, challenges, immunisation

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POST THROMBOLYSIS MYOCARDIAL INFARCTION WITH FATAL FREE WALL RUPTURE

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Introduction: Free wall rupture (FWR) is a rare but fatal complication of myocardial infarction (MI), typically occurring within the first few days' post-infarct. It may present abruptly with cardiogenic shock or gradually with hemodynamic instability and pericardial effusion. Delayed presentation of MI is a major risk factor, and early diagnosis is crucial. Point-of-care ultrasound (POCUS) aids in rapid detection of pericardial effusion and tamponade. Despite medical advances, FWR remains poorly understood and carries a high mortality rate.

Case Description: A 58-year-old male with a history of hypertension, presented with chest pain that had begun 10 hours prior, associated with diaphoresis and shortness of breath. On examination, he was tachypnoeic with a blood pressure of 85/59 mmHg, heart rate 64 bpm, and oxygen saturation of 92% with bibasal fine crepitations. Serial electrocardiograms (ECGs) demonstrated ST-segment elevation in leads I, aVL, V3-V6, with reciprocal changes in inferior leads. Transthoracic echocardiography showed reduced ejection fraction of 30% and anterolateral wall hypokinesia. A diagnosis of anterolateral MI, Killip class IV, was made. He was commenced on inotropic support and thrombolysed with streptokinase. Post-thrombolysis, the ECGs showed no resolution of ST elevation. The patient became more tachypnoeic, requiring escalation of oxygen therapy. He continued to experience severe chest pain despite adequate analgesia, requiring increasing doses of inotropes. Due to clinical deterioration, he was intubated and mechanically ventilated. During intubation, he developed cardiorespiratory collapse. Repeat echocardiography revealed a pericardial effusion measuring up to 1.7 cm, with clotted blood evident within the pericardial space. Despite aggressive resuscitation efforts, the patient ultimately succumbed.

Discussion: Free wall rupture is a fatal complication of acute MI, especially in cases of late presentation. It often results in acute pulmonary edema, shock, or circulatory collapse. Timely diagnosis using POCUS is critical. In such cases, immediate intervention by a cardiothoracic surgeon is essential; without it, death is imminent. Early recognition and prompt surgical treatment are crucial to improving survival chances.

Conclusion: We would like to highlight the rare but fatal sequels complications of Free wall rupture post thrombolysis myocardial infarction that prompt diagnosis and surgical intervention to improve patient outcomes.

Keywords: Free Wall Rupture, Acute myocardial infarction

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RETURN FOR IMAGING: A DESCRIPTIVE STUDY OF A COMMON BUT UNDER-EVALUATED DIAGNOSTIC PATHWAY.

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Introduction: A 'return for imaging' pathway is a process where emergency department patients who present out of hours are discharged to return for imaging during daytime hours. It is a common and often informal pathway for those who require an urgent but not immediate scan. Despite its frequency of use, this pathway remains under evaluated. This study aimed to characterise the use and safety of a 'return for imaging' pathway in an emergency setting.

Methodology: We conducted a retrospective cohort study of patients at the The Mater Misericordiae University Hospital ED, Dublin, over an 85-day period. A total of 61 patients who returned for imaging were included. Patients with suspected DVTs and minor head trauma were excluded due to existing structured pathways. Data was extracted from the electronic handover system and electronic patient record. Data recorded included time to return, imaging type, clinical impressions, diagnoses, documentation quality, and follow-up status.

Results: The pathway was used predominantly for ultrasound (59%) and CT (39%), with the most common scans being ultrasound pelvis, ultrasound testes, and CT KUB. Frequent indications included urolithiasis, gynaecological pathologies, and epididymo-orchitis. Documentation gaps were notable: 31% lacked a recorded pre-scan impression, and 80% had no documented post-scan plan. Upon return, 83% of patients were reviewed by a different clinician, highlighting the importance of high quality handover and documentation. Few patients were deemed unsuitable for this pathway due to severity of the presentation. Six patients (9.8%) either missed imaging or follow-up, and three were retrospectively deemed inappropriate for the pathway due to non-urgent presentations.

Discussion: This study is, to our knowledge, the first to explore the use of a 'return for imaging' pathway. It revealed that the pathway is mainly used for CT and US imaging of specific pathologies. It highlighted inconsistent documentation and handover especially in regard to impressions and plans.

Conclusion: The return for imaging pathway plays a significant role in resource driven ED operations but lacks standardisation. Key areas for improvement include clinician documentation, patient selection, and ensuring continuity of care. Formalising and further exploring this process would inform safe implementation of similar pathways in other emergency care settings.

Keywords: Patient flow, pathways, management

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DIABETIC STRIATOPATHY

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Introduction: Diabetic striatopathy (DS) is a rare medical condition resulting from poorly controlled diabetes mellitus (DM), characterized by non-ketotic hyperglycemia associated with choreo-ballistic movement and/ or reversible characteristic basal ganglia abnormalities on brain imaging. The prevalence has been reported to be 1 in 100,000 and it is more prevalent in older diabetic Asian women with poor glycaemic control. We would like to report a case presented to our emergency department (ED) for its rarity.

Case Description: The patient is a 69-year-old housewife with underlying DM and hypertension whom defaulted her follow-up. She presented to ED with the first seizure episode of her life with the semiology of bilateral upper and lower limbs stiffening and up-rolling of eyeballs. She was noted to be unwell by her family for the past 7 days with lethargy. Upon arrival to ED, she was hypertensive with a Glasgow Coma Scale (GCS) of E1V1M1. She developed another episode of seizure during physical examination which was aborted with intravenous (IV) diazepam and subsequently loaded with IV phenytoin. Her blood sugar was noted to be high (33 mmol/L) and serum ketone was not raised. Computed Tomography (CT) scan of her brain revealed hyperdensity over left basal ganglia which was initially mistaken as a bleed. She was admitted for glycaemic control and she was seizure-free since then and discharged well after 4 days.

Discussion: Although the majority of DS manifested with unilateral dyskinesia, other rare presentations that were reported include altered consciousness, seizure, limb weakness, dysarthria and dysphagia. Our patient presented with seizure without any dyskinesia. The pathophysiology is unclear, but several hypotheses to explain the imaging abnormalities include petechial haemorrhage, mineral deposition, myelin destruction and infarction with astrocytosis. Glycaemic control with proper hydration to correct the underlying metabolic imbalance remain the mainstay of treatment.

Conclusion: Diabetic striatopathy is a rare complication of DM, due to a combination of different pathogenesis. It carries good prognosis if detected early, and the lesions are reversible with good glycemic control.

Keywords: Diabetic striatopathy, seizure

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CONCURRENT CARDIO-CEREBRAL ISCHEMIA (CCI)

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Introduction: Simultaneous acute myocardial infarction (AMI) and acute ischemic stroke (AIS), or concurrent cardio-cerebral infarction (CCI), is a rare but life-threatening clinical emergency. We report a case of a 55-year-old male who presented with cardiogenic shock secondary to an inferior ST-elevation myocardial infarction (STEMI) and subsequently developed a left middle cerebral artery (MCA) infarct during thrombolytic therapy. The case highlights the diagnostic and therapeutic challenges in managing dual vascular emergencies.

Case Description: Mr. B, a 55-year-old active smoker with no known medical illnesses, presented to the Emergency and Trauma Department (ETD) one evening after a presyncopal episode following exertion. He had preceding symptoms of left-sided chest pain, diaphoresis, and shortness of breath. On examination, he was restless, diaphoretic, and alert (GCS 15/15). Vital signs were: BP 85/41 mmHg, HR 30 bpm, SpO_2 93% on room air. Cardiovascular exam revealed dual heart sounds, respiratory exam was unremarkable. ECG showed ST-segment elevation in leads II, III, aVF, and V8, consistent with inferior and posterior STEMI. Intravenous atropine (1 mg) was given with improvement of HR to 98 bpm, but hypotension persisted. Noradrenaline infusion was started for cardiogenic shock. He was thrombolysed with IV streptokinase (1.5 million units). Thirty minutes into thrombolysis, he developed sudden aphasia, left-sided hemiparesis, and a drop in GCS (E3V1M5). Thrombolysis was stopped immediately. A non- contrast CT brain showed no hemorrhage. Diagnosis of CCI — inferior STEMI and left MCA infarction (NIHSS 24) — was made. Thrombectomy and primary PCI were not pursued due to resource limitations and high hemorrhagic risk. The patient was transferred to a cardiac centre for further management. He received dual antiplatelet therapy (DAPT), high- dose statin, fondaparinux, and pantoprazole. He showed clinical improvement with full neurological recovery and was planned for outpatient coronary angiography

Discussion: CCI is extremely rare, with an incidence of approximately 0.009%, but it carries a high mortality rate. Managing CCI poses significant therapeutic challenges because it requires balancing urgent interventions for two critical vascular territories, each with potentially conflicting treatment priorities. Several mechanisms have been proposed for CCI, including cerebral hypoperfusion due to cardiogenic shock, cardioembolic events from intracardiac thrombi, and neurogenic cardiac injury secondary to stroke. Understanding the underlying pathophysiology is essential to guide appropriate management decisions. When approaching CCI, immediate priorities depend on the patient's clinical stability. In cases of hemodynamic instability, cardiac support and stabilization must be prioritized. Conversely, if the patient is neurologically devastated but hemodynamically stable, thrombolysis for large-vessel AIS can be considered. Tenecteplase (0.25 mg/kg) is emerging as a preferred thrombolytic agent due to its ease of administration, higher fibrin specificity, and favorable safety profile compared to alteplase. In this case, early recognition of evolving neurological deficits during thrombolysis and prompt cessation of thrombolytic therapy were key to minimizing morbidity and preventing catastrophic hemorrhagic complications. Multidisciplinary

coordination — involving emergency, cardiology, and neurology teams — is vital in CCI cases. Dynamic reassessment, individualized treatment sequencing, and constant risk-benefit evaluation are crucial to optimize both cardiac and neurological outcomes.

Conclusion: Concurrent cardio-cerebral infarction (CCI) is a rare but critical emergency that demands swift diagnosis and decisive management. Prioritizing hemodynamic stabilization, vigilant neurological reassessment, and careful coordination between specialties are essential to improve survival and functional outcomes. Early recognition and individualized treatment strategies remain the cornerstone in managing this dual vascular catastrophe

Keywords: acute myocardial infarction (AMI), ischemic stroke (AIS), concurrent cardio-cerebral infarction (CCI), ST-elevation myocardial

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TIME IS AORTA: ADDRESSING DELAYS IN MANAGING STANFORD TYPE A AORTIC DISSECTION IN EAST COAST SABAH

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Introduction: Stanford Type A aortic dissection is a surgical emergency, with mortality increasing by 1–2% for every hour that elapses without intervention. Prompt diagnosis and rapid transfer to a cardiothoracic surgery-capable center are critical. However, systemic delays—particularly in non-tertiary and rural hospitals—often compromise patient outcomes. We present a case that highlights these failures and propose a strategy to improve early recognition, streamline interhospital communication, and expedite definitive care.

Case Description: A 70-year-old Sabahan male presented with 4 hours of severe chest pain radiating to the back. He was hypotensive and tachycardic; PoCUS revealed massive cardiac tamponade. Emergent pericardiocentesis was performed, followed by CT angiography, which confirmed Stanford Type A aortic dissection. Primary tear location at descending thoracic aorta extending until iliac arteries with no evidence of leak. Cardiothoracic surgery was planned at the nearest center, located six hours away. However, transfer was delayed by 12 hours post-diagnosis due to logistical constraints. MEDEVAC was arranged, but the patient suffered cardiac arrest during transfer to the helicopter and could not be revived. This case highlights critical delays in diagnosis-to-transfer workflow in rural settings. We propose the implementation of ‘Code Aorta’—a rapid activation protocol involving early CT imaging, cardiothoracic team notification, transport prioritization, and standardized pre-transfer care.

Discussion: Despite prompt clinical recognition and initial stabilization with pericardiocentesis, definitive surgical intervention was delayed by 12 hours post-diagnosis due to logistical constraints. To address these systemic gaps, we propose the introduction of ‘Code Aorta’—a structured, multidisciplinary activation protocol. This would include immediate access to CT imaging, early notification of cardiothoracic services, prioritized emergency transport coordination (including air transfers), and standardized pre-transfer optimization. Similar to 'Code Stroke' or 'Code STEMI' protocols, this approach could significantly reduce diagnosis-to-intervention time and improve survival in rural or resource-limited settings such as East Coast Sabah.

Conclusion: This case highlights the fatal consequences of delayed intervention in Stanford Type A aortic dissection. Time is aorta. A structured activation protocol like ‘Code Aorta’—focusing on early imaging, timely specialist notification, and prioritized transfer—can reduce delays and improve outcomes.

Keywords: aortic dissection, Borneo, interfacility transfer

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NAVIGATING THE CONTROVERSY OF THROMBOLYSIS IN INTERMEDIATE-RISK PULMONARY EMBOLISM: A CASE STUDY

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Introduction: Intermediate-risk pulmonary embolism (PE) involves hemodynamically stable patients with right ventricular (RV) dysfunction. Based on PESI Class III–IV and troponin levels, it is classified as intermediate-high (elevated troponin) or intermediate-low (normal troponin). About 9.6%–10% of normotensive PE patients are intermediate-high risk, with a 30-day mortality rate of 7%–10%, mostly due to PE.

Case Description: A 73-year-old woman with diabetes, hypertension, ischaemic stroke, and previously treated provoked left lower limb deep vein thrombosis (DVT) presented with lethargy and 3 days of recurrent left leg pain (calf to thigh). She was alert but tachypnoeic, and hypoxic, requiring high-flow nasal cannula (HFNC). Vital signs: BP 132/89 mmHg, HR 112 bpm. Respiratory examination revealed minimal crepitations, and she also reported tenderness in the left calf. Bedside ultrasound revealed non-compressibility of the left popliteal and femoral veins, suggestive of recurrent DVT. Bedside echocardiography showed signs of right heart strain, including a dilated right ventricle and interventricular septal flattening, with preserved cardiac contractility. CT pulmonary angiography revealed a large acute right-sided pulmonary embolism (PE) with pulmonary infarction in the right middle lobe and signs of right heart strain. Troponin was positive. Thrombolysis with non-accelerated dose of streptokinase was initiated in the Emergency Department. On Day 2, the patient remained haemodynamically stable but continued to require HFNC for adequate oxygenation.

Discussion: RV outflow obstruction, elevated RV pressure, hypoxic vasoconstriction, and decreased cardiac output contribute to right heart strain and RV ischemia. This creates a vicious cycle, leading to hypotension and severe respiratory failure. The European Society of Cardiology (ESC) guidelines emphasize the importance of early thrombolysis before the patient progresses to shock. Trials such as the MOPET and PEITHO studies have shown that thrombolysis can reduce pulmonary hypertension and help preserve cardiopulmonary function, but they still do not demonstrate a clear benefit in terms of short-term mortality.

Conclusion: The decision to initiate thrombolysis with streptokinase in this case remains highly controversial. Thrombolysis was able to stabilize the patient's condition and prevent further deterioration, with no signs or symptoms of bleeding observed.

Keywords: Intermediate-risk pulmonary embolism (PE), Thrombolysis, streptokinase, DVT

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"I CAN'T FEEL MY LEGS!" - SPINAL SHOCK FOLLOWING THORACIC SPINE FRACTURES: EARLY RECOGNITION AND STABILIZATION.

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Introduction: Traumatic vertebral fracture with spinal cord injury (SCI) is a rare occurrence in motor vehicular accident and it signals a significant high-energy impact. It is important for healthcare worker to recognize this and manage accordingly.

Case Description: This case involves a 27-year-old female passenger who was ejected through the window when her SUV skidded and spun uncontrollably, striking a retaining wall. Post trauma, she complained of back pain and reduced sensation over bilateral lower limb (LL). Cervical collar was applied and she was transported using spinal board. Her GCS was full but her blood pressure (BP) was hypotensive, 86/53 with the heart rate (HR) of 90. On examination, she was noted to have reduced air entry with hyperresonance on percussion over bilateral lung. Logroll revealed tenderness over mid thorax area with step deformity. Anal tone was lax. Neurological examination revealed power and sensation below T7 neurological level were severely impaired, ASIA A. Initial suspicion of thoracic vertebral fracture with SCI was made and immediate portable CXR was ordered. It revealed bilateral pneumothorax with T5 fracture dislocation. IVI Noradrenaline was commenced for persistent hypotension despite adequate fluid resuscitation and chest tubes. Prompt trauma alert was activated and CT TAP was ordered by orthopedics team. Patient was immediately pushed to OT for stabilization. Following two weeks of admission, she was discharged with improved neurological outcomes of 4/5 power of bilateral LL.

Discussion: SCIs are rarely isolated and often accompanied other injuries like this patient. Hence it is important to be vigilant in managing traumatic SCI. In managing SCIs, vital sign is important, especially BP and HR. Lariccia et. Al recommended maintaining MAP of > 85mmHg to preserve cord perfusion, commonly achieved through vasopressors like noradrenaline or dobutamine. Although glucocorticoid therapy is sometimes employed in the management of SCI, its use remained controversial as of recent guidelines as the therapy in inconsequential. Immediate orthopedic referral is essential, as early spinal stabilization within 8 hours is crucial for improved outcomes in SCIs.

Conclusion: While SCIs are infrequent following trauma, awareness of their associated morbidity is vital and rigorous clinical assessments is warranted.

Keywords: Spinal Shock, Management

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CARBONated URINE

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Introduction: Lower urinary tract foreign bodies complicated with bladder injury are not commonly seen thus required high index of suspicion.

Case Description: A single man aged 30 came to emergency department complaining that he had suprapubic pain and dysuria. Detailed history revealed that he had self-inserted a pencil with the blunt end inwards into urethra about 2 hours prior for autoerotic stimulation with lower urinary tract symptoms. There was no formal history of any previous psychiatric disorder. The patient revealed that he had multiple episodes of doing the same act since last year for sexual pleasure, but able to slip. However, in this occasion, he unable to retract the object and causing pain to him. On examination, he had minimal tenderness over suprapubic region. There was no bloody discharges nor extravasation of urine from the urethral orifice. Bedside scan showed foreign body penetrating the bladder with no free fluid. Pelvic imaging showed a pencil lying vertically in the pelvis behind the symphysis pubis and projecting into the abdomen. In surgical ward, CT Abdo-pelvis was arranged, finding showed pencil is perforated along fundus of bladder and protruded onto the peritoneum. Laparotomy for foreign body removal and bladder repair was done. Postoperatively, he was put on urinary catheter until cystogram appointment. A psychiatric evaluation was advised upon discharge.

Discussion: A wide range of foreign bodies that were self-introduced in the urethra and bladder has been reported in both sexes. The insertion of objects such as eyebrow pencil, cable, rubber tube, electrical wire, cocaine, hair, ballpoint pen, or even cucumber has been reported in the literature. The clinical presentation varies from asymptomatic to swelling of the external genitalia, dysuria, poor urinary stream or retention, bloody or purulent urethral discharge, and ascending urinary tract infection. Ideally, cystoscopic removal is sufficient in most of cases. As pertaining to this case, laparotomy is required in view of bladder perforation.

Conclusion: Always do consider foreign body in bladder if patient come with atypical presentation. Clinicians need a holistic approach for definitive management and treatment as to protect the urethra and bladder, preventing infection and psychological evaluation to prevent recurrence.

Keywords: Bladder, Urethra, Pencil, Emergency

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NOT ALL THAT STIFF IS MENINGITIS: WHEN HEADACHE HIDES A HEMORRHAGE IN A CHILD

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Introduction: In pediatric emergency practice, the triad of headache, fever, and neck stiffness often suggests meningitis. However, these symptoms can also be associated with intracerebral hemorrhage (ICH), a rare but potentially fatal condition in children. The overlap in presentation poses a diagnostic challenge. Here, we discuss a case where clinical features initially mimicked meningitis but ultimately revealed spontaneous ICH, highlighting the critical importance of high index of suspicion and the need for early neuroimaging.

Case Description: An 11-year-old previously healthy boy presented with sudden-onset severe headache during sleep, accompanied by multiple episodes of vomiting. There was no history of trauma or seizures. On examination, he was drowsy, responsive only to pain, with reactive pupils and poor visual tracking. He demonstrated questionable neck stiffness, weak limb movements, and hyperreflexia. Meningitis was initially suspected, but his consciousness deteriorated rapidly, prompting intubation.Urgent brain CT revealed a right occipital lobar hemorrhage with intraventricular extension, significant cerebral edema, and obstructive hydrocephalus. An emergency external ventricular drain (EVD) was placed. Further CT angiography and venography revealed no vascular malformations, aneurysms, or mass lesions. He was managed in the pediatric intensive care unit with neuroprotective strategies. He was discharged after 10 days of hospitalization without neurological deficits.

Discussion: This case illustrates the diagnostic complexity when features of meningitis and ICH converge. Headache, vomiting, altered sensorium, and neck stiffness are common to both, often leading to empiric treatment for infection. However, early signs of increased intracranial pressure (ICP), such as deteriorating consciousness, should raise concern for ICH and prompt neuroimaging. This approach is crucial to avoid unnecessary lumbar puncture in the presence of raised ICP, which could result in herniation or other catastrophic complications. In this patient, meningeal irritation was likely due to blood in the subarachnoid or intraventricular spaces.Notably, the absence of identifiable risk factors for hemorrhage supports the diagnosis of idiopathic spontaneous ICH, a rare condition in pediatric neurology.

Conclusion: Clinicians should consider ICH in pediatric patients with acute neurological symptoms and signs of raised ICP. Early neuroimaging is essential for safe and effective management.

Keywords: pediatric meningitis, ICH, neuroinfection

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ACUTE LABYRINTHITIS POST TICK INFESTATION

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Introduction: Ticks, which are most commonly found in the domestic animals, may present as a foreign body in the external auditory canal of the human ear. This infestation of the ear is also known as otoacariasis. Patients with this manifestation usually present to the accident and emergency department with otalgia. If left untreated, it can lead to ear infection, cranial nerve involvement and even mortality

Case Description: A 3 years old male patient, without known comorbidities, sought consultation at ETD outpatient department with 1 Days history of sudden onset of right facial asymmetry. Exacerbation of symptoms including unstable gait towards right and vomiting. History of visited ETD 2 days ago and was treated for Tick Manifestation at Right Ear where removed by Otolaryngology Department subsequently discharged well with analgesics. There was no preceding history of upper respiratory tract infection, ear discharge or instrumentation over ear. The patient demonstrated good orientation to time, place and person along with stable vital sign's. On Examination patient had loss of nasolabial fold at right side during smile and crying with drooling of water upon drinking. The facial nerve palsy was graded as House Brackman Grade IV. Otoscopy over Right Ear reveals minimal blood clots over external auditory canal .Tympanic membrane appears inflamed. The opposite ear appear normal with an intact tympanic membrane. Proceeded with Auditory Brainstem Response where Right Ear reveals severe hearing loss at high frequency, presence cochlear microphonic suggested normal cochlear function while Auditory Steady State Response reveals right moderate to profound hearing loss. The patient was initiated with high dose IV Ceftriaxone as a precautionary measure against potential infections. Completed IV Dexamethasone for 3 days and started on Syrup Prednisolone with tapering dose to address inflammation and prevent further complications. Discharged well after 2 weeks.

Discussion: Domestic animals and pets are the natural environment for ticks and mites to live. These parasites may reside in humans when there is a direct contact of humans with these animals. There are many varieties and subspecies of ticks. They can be broadly classified into hard ticks and soft ticks. The difference between the hard tick and the soft tick is that the hard tick possesses a hard shield or scutum whereas the soft tick does not. Foreign bodies in the ear involving ticks has been widely documented in countries such as India, Sri Lanka, Nepal, South Africa, Chile and Malaysia. These blood sucking parasites feed from a wide variety of animals, especially mammals and birds. They are transmitted to humans through direct contact between humans and domestic pets. They can easily attach to body parts by using their hooked front legs. The most common complication of tick manifestation is otalgia, which accounts for almost 90% of cases, followed by bleeding (10%), giddiness (5%), tinnitus (5%) and facial paresis (5%). 3 This condition occurs in all age groups. Facial nerve paresis may occur due to the release of neurotoxin present in the tick's saliva. Usually, female ticks are the main culprit in secreting these neurotoxins.

Conclusion: The presence of an intra-aural tick can be extremely painful and can result in facial paralysis due to irritation of the nerve with tick toxin. Therefore, an urgent referral to the otolaryngologist is required. Careful visualisation and instrumentation by experienced health personnel are required to remove the tick safely.

Keywords: Acute Labyrinthitis, Tick Infestation, Right Facial Asymmetry, Imbalance Gait

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CAUGHT BETWEEN STROKE AND VASCULITIS: A COMPLEX CASE IN PEDIATRIC THALASSEMIA

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Introduction: Cerebrovascular accidents (CVAs), though uncommon in children, may occur in the setting of hematologic disorders associated with a hypercoagulable state. Beta thalassemia intermedia, while generally milder than thalassemia major, carries a risk of thromboembolic complications, including silent and overt cerebral infarctions. The pathogenesis is multifactorial, involving chronic anemia, endothelial dysfunction, thrombocytosis (especially post-splenectomy), and iron overload. We present a case of acute ischemic stroke in a 9-year-old boy with transfusion-dependent beta thalassemia intermedia, highlighting the diagnostic complexity in distinguishing thromboembolic stroke from primary central nervous system (CNS) vasculitis.

Case Description: A 9-year-old boy with transfusion-dependent beta thalassemia intermedia and iron overload presented with acute right lower limb weakness. On arrival, he was hemodynamically stable; neurological examination revealed flaccid paralysis of the right lower limb with hypotonia and areflexia. Cardiovascular exam noted a grade 3 ejection systolic murmur. Blood investigations were unremarkable. Urgent CT brain showed a left frontal acute infarct. MRI revealed multifocal acute infarcts in several arterial territories with occlusions in both anterior cerebral arteries (ACAs) and the left middle cerebral artery (MCA), suggesting a thromboembolic event. Echocardiography showed preserved ejection fraction (69%) with trace tricuspid regurgitation and no thrombus. Carotid Doppler identified narrowing of the right internal carotid artery. He was started on aspirin (75 mg daily). Multidisciplinary consultations supported a working diagnosis of primary CNS vasculitis. He was managed conservatively and discharged in stable condition after four days.

Discussion: This case demonstrates a rare but serious neurological complication of thalassemia intermedia. While thromboembolism is a recognized risk due to chronic anemia and iron overload, the presence of multifocal infarcts with vascular narrowing raised suspicion for CNS vasculitis. The absence of a cardiac embolic source and the involvement of multiple large vessels supported this possibility. Differentiating CNS vasculitis from a thromboembolic event remains challenging in such patients. This case underscores the importance of early recognition of stroke in children with thalassemia and highlights the potential role of cerebrovascular imaging in high-risk asymptomatic patients.

Conclusion: Pediatric stroke in beta thalassemia intermedia presents significant diagnostic and therapeutic challenges, necessitating individualized, multidisciplinary care and vigilance for vascular complications.

Keywords: Acute paediatric stroke, beta thalassemia intermedia, vasculitis

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DEEP VEIN THROMBOSIS IN THE ED: IDENTIFYING GAPS IN GUIDELINE-BASED CARE

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Introduction: Deep vein thrombosis (DVT) is a potentially life-threatening condition, associated with significant morbidity. Prompt recognition and evidence-based management are essential to prevent complications such as pulmonary embolism. NICE guidelines recommend using the Wells' Criteria alongside D-dimer testing to stratify risk and guide further investigation. Patients deemed at risk should be anticoagulated while awaiting definitive imaging. This process evaluation was undertaken to evaluate adherence to these guidelines in the emergency department of the Mater Misericordiae University Hospital (MMUH), Ireland. The evaluation aimed to identify gaps in adherence and opportunities to strengthen DVT management pathways. Based on our findings, we developed a structured clinical proforma to improve the consistency and quality of DVT assessment and management.

Methodology: We performed a retrospective evaluation of all patients placed on the "DVT Pathway for USS" in the Mater Misericordiae University Hospital ED between August and October 2023. Data collected included presenting symptoms, Wells' score documentation, D-dimer levels, use of pre-scan anticoagulation, and final ultrasound results. The evaluation aimed to assess compliance with NICE guidelines and identify areas for practice improvement.

Results: A total of 71 patients were included. Most (80.3%) presented with classical DVT symptoms such as unilateral leg swelling, pain, or erythema. A Wells' score was recorded in only 65.7% of cases. Of the 46 documented scores, 56.5% were "DVT likely" (score ≥2), and 43.5% were "DVT unlikely" (score 0–1). In the "unlikely" group, 90% had a raised D-dimer, while 10% (n=2) had negative D-dimers but were still referred for imaging. Notably, 60% of patients with risk factors did not receive anticoagulation while awaiting USS. Final scan results showed DVT in 20%, superficial venous thrombosis in 14.3%, non-VTE pathology in 27.1%, and no abnormality in 38.6%.

Discussion: This evaluation revealed inconsistent documentation of Wells' scores and suboptimal use of anticoagulation. These findings highlight potential weaknesses in DVT pathways and offer insights to support improved, guideline-based care across emergency departments more broadly.

Conclusion: Our findings prompted the development of a structured proforma to support guideline-based DVT assessment. This tool has been presented to the hospital's VTE committee for approval and is intended to standardise care and improve patient outcomes.

Keywords: process evaluation, DVT, guidelines

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VOMITING PUZZLE UNCOVERING PAEDIATRIC FOREIGN BODY INGESTION

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Introduction: Most cases of foreign body ingestion are low-risk objects and can be managed without imaging or surgical intervention. However, sharp object ingestion may require immediate removal to avoid serious complications including perforation or death.

Case Description: We reported a case of a 1-year and 3-month-old child presented to the ED with a complaint of recurrent vomiting of more than 15 episodes with a low-grade fever for one day. The vomiting was described as forceful non-bilious, and non-projectile. There was no diarrhoea, abdominal distension, or recent head trauma. Clinically, the child was hemodynamically stable with a soft abdomen. He was initially admitted with an impression of acute gastroenteritis with poor oral intake. During admission, he developed recurrent episodes of intractable vomiting, thus abdominal radiograph was requested to look for possible acute surgical conditions such as intestinal obstruction. Abdominal radiograph identified safety pins and rounded opaque structures projected over the upper part of the abdomen in keeping with foreign bodies. Ultrasound abdomen revealed signs of bowel perforation. He underwent exploratory laparotomy which intraoperatively revealed 3 perforations over the small intestine. Postoperatively, the child's condition improved with the resolution of symptoms.

Discussion: Recognizing foreign body ingestion in children can be challenging without a proper history and eyewitness. Although most foreign bodies can pass spontaneously without intervention, potential complications such as bowel perforation should not be ignored especially in sharp object ingestions.

Conclusion: Physicians should maintain a high index of suspicion of foreign body ingestion in a child with non-specific gastrointestinal symptoms and prompt for radiological surveillance.

Keywords: vomiting, foreign body

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RADIAL ARTERY ANEURYSM

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Introduction: Radial artery (RA) aneurysm is an exceedingly rare aneurysm subtype. Commonly due iatrogenic while traumatic cause are rare. Hence, we are reporting a case of RA aneurysm post trauma instead of diagnosed as post-operative abscess or hematoma.

Case Description: Case presentation: A previously well 28 years old Indonesian male presented with painful swelling over left wrist for the past three days. He had traumatic left wrist arterial cut 30 days prior which was repaired intraoperatively. Examination reveals a huge pulsatile bluish-blackish swelling with necrotic patch over distal radial measuring 5cmx5cm with compression symptoms over medial and radial nerve distribution. Otherwise, saturation all fingers sustained ranging >95% under room air. X ray reveals no gas shadow or bony erosion. Urgent ultrasound findings was impending rupture radial artery saccular aneurysm measuring 6cmx5cm. He was immediately referred and safely transferred to Vascular Surgery Selayang Hospital for further evaluation.

Discussion: A painful swelling post operatively might highly suggestive of infective causes unless proven otherwise. However, in this case, there were no complaint of fever, pus discharge or raised in inflammatory markers and he was well postoperatively until 3 days prior incident which point against infective cause. Dilatation the arterial wall to >1.5 times its normal diameter define aneurysm. Normal RA diameter was 2-3mm. From case report reviewed, most traumatic RA aneurysm had delayed presentation between month to years after incident. Clinical presentation varies from a locally increasing swelling to a painful mass with neurologic symptoms, pulsatile mass, and mass with necrosed skin or with a ruptured pseudoaneurysm. Abrupt expansion of an aneurysm and expanding way too large are more likely to rupture as it creates more dilatation and exceeded the tensile strength of the vessels as stated in Leplace law (wall tension = pressure x radius).

Conclusion: In Emergency Department, common presentations are often prioritized during the diagnostic process. However, this case illustrate that it is crucial to widened our differential diagnosis to the rarest one, since accurately diagnosed RA aneurysm will avoid serious complications such as rupture or thromboembolism.

Keywords: Aneurysm, Radial Artery

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A RARE POSTPARTUM PERIL: SPONTANEOUS SPLEENIC RUPTURE POST CESAREAN SECTION

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Introduction: Spontaneous splenic rupture in postpartum period is exceedingly rare but life-threatening cause of acute abdomen with hemodynamic instability. The presentation can mimic more common obstetric or surgical complications, especially after caesarean section, therefore the actual culprit can be missed.

Case Description: This is a case of 31-year-old woman with history of late onset PIH who developed sudden onset abdominal pain with signs of shock following one month of uncomplicated lower segment caesarean section. The examination finding revealed guarded abdomen with generalised free fluid, thus raised suspicion of intra-abdominal bleeding due to uterine origin. In view of worsening hemodynamic instability and lack of diagnostic clarity, the patient was sent straight away to operation theatre for emergency laparotomy. Intraoperatively, there was no evidence of bleeding from uterus and surrounding vessel hence the abdomen further explored and revealed bleeding from spleen with multiple laceration. Approximately 3.5L of blood in peritoneal cavity and the operation was end up with total splenectomy. Histopathological findings reported atraumatic splenic rupture with no obvious pathology. Patient had uneventful post-operative recovery and discharged well with scheduled vaccination and follow up.

Discussion: In the absence of trauma, infection and haematological disorder as the risk factor, spontaneous splenic rupture should be considered as one of the serious conditions in postpartum period. The exact aetiology remains unclear but it may involve hemodynamic changes during pregnancy, increased intraabdominal pressure, vascular fragility or intra-operative trauma. In this case, prolonged labor preceding caesarean delivery may have played a contributing role. The patient presentation with acute abdomen and shock may lead to diagnosis of common obstetric and operative complication. CT scan typically helps to diagnose intra-abdominal emergencies, however, in this case decision was made to proceed with immediate surgical exploration due patient hemodynamic instability and suspicion of massive internal bleeding. Intraoperative diagnosis of splenic ruptured was explored during laparotomy, and the patient underwent splenectomy with no fatal outcomes.

Conclusion: This case emphasizes on considering other life-threatening diagnosis such as spontaneous splenic rupture in postpartum period other than obstetric and trauma cause. High suspicion index, early imaging and immediate surgical exploration are essential for favourable outcomes.

Keywords: Spontaneous splenic rupture, Postpartum emergency, acute abdomen, emergency splenectomy

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"UNMASKING CRYPTOCOCCUS NEOFORMANS: A RARE CASE OF MENINGITIS IN A HEALTHY 19-YEAR-OLD"

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Introduction: Cryptococcus neoformans meningitis is an opportunistic fungal infection commonly seen in immunocompromised patients. However, it can occasionally affect immunocompetent individuals with devastating outcomes. This report presents a rare case of cryptococcal meningitis in a healthy 19-year-old male, emphasizing the clinical presentation, diagnostic importance of India ink staining, and the high mortality associated with delayed diagnosis and treatment.

Case Description: A previously healthy 19-year-old male presented to the emergency department with the chief complaints of fever for five days, vomiting, neck pain, and an acute onset of right eye squint. Upon examination, the patient was alert, not septic-looking, and hemodynamically stable. Neurological examination revealed cranial nerve III palsy. He had no known chronic illnesses, immunosuppressive conditions, or recent travel history. This patient underwent a lumbar puncture, which demonstrated encapsulated yeast cells with a characteristic clear halo, indicative of Cryptococcus neoformans, as observed through India ink staining. The cerebrospinal fluid (CSF) opening pressure was elevated and revealed turbid CSF. Subsequent cryptococcal antigen testing and fungal culture confirmed the diagnosis. His contrast-enhanced CT (CECT) brain scan showed no evidence of meningoencephalitis. Unfortunately, the patient deteriorated in the ward and was intubated before being managed in the ICU, despite being on intravenous amphotericin B and fluconazole, which were continued for two weeks since admission. Repeated lumbar puncture revealed the persistent presence of Cryptococcus neoformans. The patient remains confined to the ICU, fighting valiantly against the relentless grip of Cryptococcus neoformans.

Discussion: Cryptococcus neoformans has a predilection for the central nervous system due to its ability to cross the blood-brain barrier. Its polysaccharide capsule inhibits phagocytosis and contributes to virulence. Despite antifungal therapy, cryptococcal meningitis carries a high mortality rate up to 20–30% in immunocompetent individuals and higher in those immunocompromised. Delays in diagnosis, increased intracranial pressure, and inadequate management of complications contribute significantly to poor outcomes.

Conclusion: This case highlights the importance of considering cryptococcal meningitis in the differential diagnosis of meningitis, even in immunocompetent patients. Early identification via India ink staining and prompt antifungal treatment are crucial. Given the high mortality associated with delayed intervention, awareness of such atypical presentations is essential for clinicians.

Keywords: Cryptococcus neoformans, meningitis, India ink staining, antifungal

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BENEFIT OF RUNNING-MATE KNOWING CARDIOPULMONARY RESUSCITATION: CASE OF CARDIAC ARREST SURVIVAL

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Introduction: Myocardial infarction is the top cause of death in Malaysia. Coronary artery disease forms 21.86% of total national deaths in 2020. We present a case of out-of-hospital cardiac arrest (OHCA) in a marathon run that received timely basic life support (BLS) and cardiopulmonary resuscitation (CPR) with good outcome.

Case Description: A 61-year-old gentleman with no known comorbidities, collapsed while running in a marathon event in Malaysia. Standard Charted Kuala Lumpur Marathon. Fellow runners had BLS skills and upon witnessing the incident, immediately started CPR as he had stopped breathing. CPR was performed continuously while awaiting medical team and emergency services arrival. Subsequently the medical team arrived, took over the CPR and the Automated External Defibrillator (AED) was attached. Laryngeal mask was inserted and the AED delivered a single shock. Fortunately, the patient gained return of spontaneous circulation (ROSC) after 6 minutes. Post ROSC, he woke up and self-extubated at the scene. Upon transfer to our centre, he was alert, conscious and hemodynamically stable. He denied any chest pain or dizziness prior to collapse. Comparison of electrocardiogram (ECG) readings from scene and at ED showed dynamic changes with Q waves in V2-V3 leads. He was subsequently referred for urgent Primary Percutaneous Coronary Intervention (PCI) which revealed total occlusion of Left Anterior Descending Artery. He recovered well post PCI.

Discussion: Timely basic life support and CPR in OHCA is important for patient's survival. This case demonstrates the advantages of having fellow runners in marathon events knowing basic life support and early response saving this patient life.

Conclusion: In the event of cardiac arrest, fast intervention and preservation of chain of survival determines the outcome. CPR should be mandatory skill for all marathoner.

Keywords: Out hospital cardiac arrest, marathoner

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"WHEN THE EYE TURNS IN: UNCOVERING THE CAUSE OF AN ISOLATED ABDUCENS NERVE PALSY"

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Introduction: The abducens nerve is the most affected cranial nerve in isolated cranial nerve palsies due to its lengthy intracranial course, which highly susceptible to injury at various anatomic points. Despite its prevalence and progression made in neuroimaging, incidence of idiopathic cases continues to rise.

Case Description: An adolescent male with a high body mass index (BMI) presented with a one-week history of diplopia. He reported difficulty abducting his left eye, which was associated with horizontal double vision. The diplopia resolved when he closed his left eye. In addition, he experienced a persistent occipital headache described as throbbing in nature and progressively worsening, with a pain score of 8. He denied any recent trauma, signs of infection, or systemic symptoms. On examination, his vital signs were notable for elevated blood pressure at 157/90 mmHg and a heart rate of 90 beats per minute. Neurological assessment demonstrated an isolated left lateral rectus muscle weakness, consistent with a left abducens nerve palsy. Examination of the remaining cranial nerves and the rest of the neurological system was unremarkable. A fundoscopy examination revealed bilateral optic disc swelling. A contrast-enhanced computed tomography (CECT) of the brain was performed, revealing no abnormalities. Subsequently, a lumbar puncture was conducted, and cerebrospinal fluid (CSF) analysis yielding normal results. A diagnosis of idiopathic intracranial hypertension (IIH) was made and he was following up for close monitoring and management.

Discussion: Isolated abducens palsy is rare presentation of idiopathic intracranial hypertension (IIH), also referred to as pseudotumor cerebri. Due to its long intracranial course and sharp angulation at Dorello's canal, the abducens nerve is particularly vulnerable to the effects of elevated intracranial pressure, which can cause mechanical stretching or compression leading to palsy. The diagnosis of IIH relies heavily on the presence of papilledema and the systematic exclusion of secondary causes through neuroimaging and cerebrospinal fluid analysis.

Conclusion: In summary, early recognition and close monitoring are critical to prevent potential complications, particularly permanent visual impairment.

Keywords: diplopia, idopathic intracranial hypertension, abducens nerve

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"A TRAUMATIC TWIST: HORNER SYNDROME UNVEILING AFTER SUBARACHNOID HEMORRHAGE"

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Introduction: Horner syndrome is an uncommon neurological condition defined by a triad of ptosis, miosis, and anhidrosis, resulting from disruption of the oculosympathetic pathway. While it is more frequently associated with neoplastic or vascular etiologies, traumatic causes are less commonly observed.

Case Description: A 25-year-old previously healthy male presented to the emergency department after a motorcycle accident. On arrival, clinical examination revealed right-sided ptosis and a constricted, non-reactive right pupil, consistent with miosis. Assessment of anhidrosis was inconclusive in the acute phase. His Glasgow Coma Scale (GCS) was E1V1M4, necessitating intubation for cerebral protection. Hemodynamic parameters were stable. A non-contrast CT scan of the brain demonstrated acute subarachnoid hemorrhage (SAH) within the ambient cisterns. There were no signs of midline shift, mass effect, or skull fractures. CT imaging of the cervical spine showed no evidence of bony injury. In the absence of cervical trauma or vascular abnormalities, a diagnosis of right-sided Horner syndrome secondary to traumatic SAH was made. The patient was managed conservatively with supportive care and close neurological monitoring.

Discussion: Horner syndrome results from disruption along the oculosympathetic pathway, which extends from the hypothalamus to the eye. Trauma-related cases are relatively uncommon and typically involve injury to the cervical spine or internal carotid artery dissection. In this case, radiological findings excluded both. The most plausible mechanism was direct irritation or compression of the sympathetic fibers within the brainstem or upper spinal cord caused by localized subarachnoid hemorrhage. Although uncommon, traumatic SAH can lead to secondary neurological complications such as Horner syndrome. Identifying these subtle signs is critical, as they may indicate deeper structural or vascular injury not immediately apparent on imaging.

Conclusion: This case illustrates a rare instance of Horner syndrome resulting from traumatic subarachnoid hemorrhage, in the absence of cervical spine or vascular injury. It emphasizes the importance of comprehensive neurological examination in trauma patients, as early recognition of subtle signs like ptosis and miosis can aid in the diagnosis of underlying neuroanatomical injury. Prompt identification and close monitoring are essential for optimal patient outcomes

Keywords: Horner syndrome, subarachnoid hemorrhage, trauma

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'BUBBLE TROUBLE': SINGLE LUNG VENTILATION IN TRACHEOBRONCHIAL INJURY AIDED BY BRONCHOSCOPY

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Introduction: Selective or single lung ventilation involves the isolation of one lung from the other allowing independent ventilation. This approach is not common but necessary in certain thoracic injuries to isolate pathological lung from the healthy one in ensuring oxygenation and ventilation. We share such interesting case presenting at our center.

Case Description: A 32 years old gentleman was injured by cement mixer machine. Upon arrival patient GCS E2V2M2. Patient was stable hemodynamically. Examination showed sustained large open chest wound, measuring 7cmx8cm. He had multiple ribs fracture over right side (3rd-5th ribs) with tension pneumothorax and massive hemothorax. Decision made to intubate for airway protection. 3-way occlusive dressing with 2 chest tubes inserted on the right and prophylactically one on the left. Subsequently the ETT tube was filled with blood. The right drain had bubbles continuously indicating tracheobronchial injury. Emergency bronchoscopy was performed confirmed tracheobronchial injury and complete right lung collapse noted. ETT for single lung ventilation was inserted on the left lung. The oxygen saturation could be preserved above 98% and patient was sent for thoracic surgery. After repair, patient could be weaned off to room air and discharged well.

Discussion: Single lung ventilation can be a live saving procedure in tracheobronchial injury as shown in this case. Bronchoscopy in this case confirmed the injury and helped make decision.

Conclusion: When dealing with a case of polytrauma with confirmed tracheobronchial injury, single lung ventilation is necessary for favorable outcome as shown in this case. Department needs to have single intubation ETT available and bronchoscopy helps to assess the injuries for such decision to be made.

Keywords: Bronchoscopy, single lung ventilation

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TOXIDROME TUG-OF-WAR: UNMASKING DUAL SEROTONERGIC AND CHOLINERGIC TOXICITY IN POLYPHARMACY OVERDOSE

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Introduction: Managing patients with polypharmacy overdose poses significant diagnostic and therapeutic challenges, particularly when overlapping toxicities contribute to a complex or atypical clinical presentation. We present a case of a patient who developed features consistent with both serotonin syndrome and cholinergic crisis following an overdose involving both agents.

Case Description: A 29-year-old Chinese gentleman with a history of depression on sertraline and donepezil intentionally overdosed on both medications following a domestic conflict. He experienced multiple episodes of vomiting post ingestion. On arrival at the emergency department, he was confused with a GCS of E4V1M4. Vital signs were: temperature 37.0°C, BP 166/108 mmHg, HR 66 bpm, RR 30 bpm, SpO_2 97% on room air, and glucose 8.5 mmol/L. Examination revealed quadriparesis with rigidity and hypersalivation, without clonus or other clear features of cholinergic crisis. Blood investigations were within normal limits. ECG showed sinus tachycardia, and urine toxicology was negative. He later developed worsening respiratory distress with SpO_2 dropping to 88% on high-flow oxygen, requiring intubation. He was treated with intravenous atropine and benzodiazepines, admitted to ICU, extubated on day three, and discharged in stable condition following psychiatric assessment.

Discussion: Early recognition of overlapping toxidromes is crucial in cases of polypharmacy overdose, which may exert opposing pharmacologic effects. Sertraline toxicity may lead to serotonin syndrome while donepezil overdose may cause cholinergic toxicity. The simultaneous ingestion of these two agents can result in atypical or attenuated presentations, as certain features of one toxidrome may mask or counterbalance those of the other—potentially delaying diagnosis and appropriate treatment. For instance, donepezil-induced bradycardia may be masked by sertraline-associated tachycardia, or serotonergic hyperactivity may obscure signs of cholinergic neuromuscular weakness. Therefore, maintaining a high index of suspicion and recognizing the subtle interplay of symptoms is essential. Notably, oximes are not indicated in donepezil overdose, as it is a reversible cholinesterase inhibitor.

Conclusion: This case underscores the need for early recognition of mixed toxidromes, where opposing effects may obscure clinical features. Timely diagnosis and targeted supportive care are essential to optimize outcomes.

Keywords: Toxidromes, Serotonergic-Cholinergic Interaction, Polypharmacy

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ARE 999 CALLERS RUDE? A SURVEY ON RUDENESS AMONG EMERGENCY CALLERS

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Introduction: The MERS 999 call system in Malaysia is important to coordinate response in emergency situations. Nevertheless, some callers are rude and affects call takers' emotions. We conducted a survey to determine the prevalence of such incidents.

Case Description: This survey involved 131 calls at MERS 999 Call Centre. Call takers were asked to rate the callers based on their perception on a scale 1 to 5; 1 for very polite, 2 for polite, 3 for neutral (neither polite nor rude), 4 for rude (impolite or disrespectful), and 5 for very rude (insults or shouting). The proportion of the categories were then analysed in a descriptive manner. Based on 131 calls, 69 (52.67%) were polite, 20 callers (32.06%) were impolite, while the rest were neither. Among the 'impolite calls' 13 (65%) were males and 7(35%) were females. In terms of the category of cases with the level of politeness, it was found that there were no impolite callers for cases of stab wounds (2 cases), shortness of breath (15 cases), cardiac arrest (7 cases), and referral cases (6 cases). The 'impolite calls' were seen amongst those with headaches (3 cases), generally unwell persons (2 cases), road traffic accidents (3 cases), and fainting (3 cases).

Discussion: More males were impolite compared to females. Cases of shortness of breath and cardiac arrest tend to be 'polite calls'. Impolite calls tend to be among general cases of unwell and trauma. Socio-emotional factors such as stress levels, fear, frustration, or perceptions of the 999 calls may play a role in influencing caller's behaviours.

Conclusion: In conclusion, our survey showed that a third of callers were impolite and uncooperative. More males were impolite as opposed to females. Callers tend to be polite in life-threatening situations compared to generally unwell patients. Call takers could be counselled for emotional well-being in view of high incidence of rude callers.

Keywords: Rude Caller, MERS 999, Emergency, Online Triage

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'NERVE GAS ON FIRE: BURN PATIENT WITH ORGANOPHOSPHATE INHALATION EFFECTS

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Introduction: Burn inhalational injury are a significant cause of morbidity and mortality. Organophosphates (OP) compounds are widely used as pesticides and chemical warfare agents. When this substance accidentally involved in burn injuries, early detection of sign and symptoms are important in tackling such issues. We present a case of burn injury that involved suspected OP as part of the burnt material discovered much later.

Case Description: A 56 years old lady was brought in to Emergency Department with low GCS 7/15 (E4V2M3) post inhaled burn injury from burnt rise husk. Patient able to maintain her airway with SPO2 98%room air and no soot in airway noted with TBSA 5%, however noted patient to be involuntarily passing motions, diaphoresis, and persistent bradycardia. Initial parameters to have CK (Creatinine Kinase) raised, acute kidney injury and mild transaminitis. On further investigations noted patient to have diarrhoea, sweating and pinpoint pupils. Patient subsequently was intubated. CT Brain performed noted to have normal findings. Further history from relatives noted that patient burnt rise husk with a bottle of unknown content. Hence, atropine was given but much later of suspecting OP poisoning.

Discussion: In burn patients, OP exposure can further exacerbate respiratory compromise due to airway edema and inhalation injury. OP exposure in burn victims requires prompt and early administration of antidote ie atropine. In this case, the focus was much on the burn injury whereas the OP toxicity was only realized later.

Conclusion: This case highlights the need to be aware that burn injuries in the farm can also involve pesticides and herbicides which could be inhaled to complicate management. High index of suspicion should be maintained for early detection and better outcome.

Keywords: Burn Inhalation, Organophosphates Poisoning

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WHEN THE HIGH LEADS TO AIR LEAK: SPONTANEOUS PNEUMOMEDIASTINUM FROM CANNABIS USE

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Introduction: Spontaneous pneumomediastinum (SPM) is the presence of free air in the mediastinum without trauma, procedures, or infection. It is more common in young adults and is associated with activities that raise intra-alveolar pressure, such as coughing, vomiting, or Valsalva manoeuvres. Inhalational drug use, particularly cannabis, has been increasingly linked to SPM due to inhalation techniques that promote barotrauma. We present a case of SPM in a young male with cannabis exposure, who presented with behavioural symptoms.

Case Description: A 23-year-old Indian male presented to the Emergency Department with three days of aggressive behaviour and hallucinations. He had no known comorbidities, denied illicit drug use, but admitted to smoking and alcohol consumption. There was no history of trauma. On arrival, he was afebrile, not in respiratory distress but appeared agitated. Vital signs were stable: BP 129/71 mmHg, HR 71 bpm, SpO_2 99% on room air, dextrostix 8.4 mmol/L. Physical examination revealed crepitus over the neck and supraclavicular area. The trachea was central with normal breath sounds, and neurological exam was unremarkable. Chest X-ray showed subcutaneous emphysema and pneumomediastinum. CT thorax confirmed pneumomediastinum, pneumocardium, and subcutaneous emphysema extending to the neck, retropharyngeal space, and chest wall. The Macklin effect was noted, consistent with SPM. Laboratory investigations were normal, but urine drug screening was positive for tetrahydrocannabinol (THC). The case was referred to the surgical team and plan for conservative management. The patient was admitted for close observation. In ward, OGDS done revealed normal findings. Serial chest X-rays showed stable findings, and he was subsequently discharged after 5 days.

Discussion: SPM is a rare but recognized complication of cannabis use, often due to breath-holding and inhalation techniques that increase intrathoracic pressure. While it may present with chest pain or dyspnoea, it can also be asymptomatic or discovered incidentally. In stable patients, further imaging is crucial to exclude oesophageal or tracheobronchial injury. Management is typically conservative.

Conclusion: With increasing cannabis use, clinicians should consider SPM in young patients with atypical presentations. Early recognition prevents misdiagnosis and ensures appropriate management.

Keywords: Pneumomediastinum, cannabis, substance abuse

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PERIMORTEM CAESAREAN IN SEVERE ECLAMPSIA RESULTING IN CARDIAC ARREST

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Introduction: Eclampsia is a deadly situation for pregnant ladies. The management include arresting seizure and urgent delivery of baby. We present a case of eclampsia with status epilepticus complicated with cardiac arrest for which perimortem caesarean was performed.

Case Description: 37-year-old G5P3 + 1A lady at 35 week 2 days with underlying chronic hypertension, maternal obesity, and history of complete miscarriage in 2022 and perinatal death in 2018. She presented at our centre with continuous seizure – unconscious, drooling of saliva with clenching of teeth and up rolling eye. BP was 235/133 with pulse rate 122 and saturation 70% under room air. Patient was put on high flow mask and nasal prong and placed on lateral position. IVI Magnesium Sulphate started but patient arrested. CPR started and subsequently intubated. Obstetrics team was called and perimortem caesarean section was decided. Baby was delivered well in emergency department. Patient achieved ROSC after delivery with 5 cycles of CPR as per ACLS protocol. Mother subsequently recovered and discharged well.

Discussion: Perimortem caesarean section is a rare intervention and performed in maternal cardiac arrest during pregnancy. Rate of maternal cardiac arrest about 1 in 30,000 pregnancies and perimortem caesarean section within 4 minutes of event is a key intervention in such case. Our case was complicated as it started with eclampsia but compounded with cardiac arrest.

Conclusion: Our case showed that perimortem caesarean would be indicated in the extreme case of status epilepticus resulting with severe hypoxia and cardiac arrest. Department has to be prepared for such possibilities as quick perimortem casesarean would save both baby and mother.

Keywords: Peri mortem caesarean section

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'ONLINE CPR': return of spontaneous circulation guided by Medical Emergency Call Centre

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Introduction: Medical emergency call centre (MECC) functions to take 999 emergency calls. It also handles ambulance calls for cardiac arrest. We present case series of return of spontaneous circulation following effective CPR advisory provided by our centre

Case Description: Case 1 A 60-year-old female was found unconscious in the living room by her daughter. The daughter contacted 999, during which agonal breathing was identified. Pre-arrival instructions were provided, and the daughter was instructed to initiate Cardiopulmonary Resuscitation (CPR). The ambulance arrived approximately 15 minutes later. Upon EMS arrival, the patient had obtained spontaneous breathing. Case 2 A 32-year-old Chinese male, an OKU (person with disabilities), was found unresponsive by his brother. Emergency services were contacted, and pre-arrival instructions were provided by the call taker. The brother initially hesitated but was persuaded to proceed with cardiopulmonary resuscitation (CPR). The brother performed CPR as instructed and continued until the ambulance arrived, approximately 15 minutes later. Upon EMS arrival, the patient was semiconscious but responsive to stimuli. Case 3 A 58-year-old Malay male was waiting for his turn in the car wash when he began to feel faint and then collapsed. A bystander witnessed the incident and immediately contacted emergency services. Pre-arrival instructions were provided, and the caller was guided to begin Cardiopulmonary Resuscitation (CPR). The caller continued CPR as instructed until the ambulance arrived approximately 20 minutes later. Upon arrival of EMS, the patient was defibrillated with 200J. He was then transported to the hospital for further management. At the hospital, the patient regained consciousness and was subsequently referred to the Institute Jantung Negara for primary percutaneous coronary intervention (PCI)

Discussion: To provide effective advisory for layperson is a challenge. However, ability to remain calm and convince caller to follow instructions can have good result as shown in these three cases. Early CPR could result in good outcome. The call centre is the point of consultation in cases of cardiac arrest and can help guide callers to perform CPR despite them not being trained.

Conclusion: Emergency Call Centre's protocol to provide advisory is essential to assist effective CPR in cases of cardiac arrests for layperson. These case series show that staying calm and giving clear instruction via telephone could help revive patients in cardiac arrest.

Keywords: Pre arrival instructions, CPR, ROSC, EMS

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DAPSONE-INDUCED METHEMOGLOBINEMIA IN HANSEN'S DISEASE

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Introduction: Methemoglobinemia is a well-known complication of Dapsone, a drug which has been prescribed for multiple dermatological conditions. We present two cases of Dapsone-induced methemoglobinemia in patients taking Dapsone for treatment of Hansen's Disease or Leprosy.

Case Description: Case 1: A 59-years-old Female with underlying newly diagnosed Leprosy; 2 weeks on treatment with Dapsone, presented with fever and lethargy for the past one week. On assessment, she appears pink, tachypneic with 90% oxygen saturation on room air. Saturation increased to 96% on high flow oxygen 15 Liters. Arterial Blood Gas (ABG) analysis showed PaO2 of 179 mm Hg and Methemoglobin level of 4.0%. She was given Intravenous (IV) methylene blue and admitted. Repeated Methemoglobin level was 1.4% and she was discharged well after 4 days. Case 2: A 54-years-old Male with underlying Multibacillary Leprosy on Multidrug Therapy (MDT) blister pack (Dapsone, Rifampicin and Clofazimine), presented with shortness of breath for 1 month. On assessment, he appeared cyanosed, not tachypneic with oxygen saturation of 93% on room air. He was put on high flow oxygen 15 Liters and ABG analysis showed PaO2 of 502 mm Hg and Methemoglobin level of 4.5%. He was given IV Methylene blue, admitted and discharged well after 3 days. He was later changed to 2nd line MDT.

Discussion: Methemoglobinemia occurs due to conversion of iron from reduced ferrous (Fe2+) state to oxidized Ferric (Fe3+) state, making it incapable of binding oxygen molecules. Dapsone is a sulfone antibiotic and anti-inflammatory agent that inhibits folate synthesis. In our first case, patient was not presented with clinical cyanosis, making recognition challenging as cyanosis only occur when 10-20% of total hemoglobin turns into methemoglobin. While methemoglobin levels are readily available in modern ABG analysis, clinicians need to be aware of the "saturation gap" that may occur in these cases. IV Methylene blue is considered the first-choice treatment, along with other alternatives including high dose Vitamin C, hyperbaric oxygen therapy and even exchange transfusion.

Conclusion: Methemoglobinemia is potentially fatal if left untreated and not addressed in a timely manner. High index of suspicion and detailed medication history is crucial for prompt recognition and early treatment.

Keywords: Dapsone, Methemoglobinemia, Methylene Blue

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THE DUTCH LADS: DE WINTER IS COMING, BE WELL(ENS) PREPARED

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Introduction: The de Winter and Wellens ECG patterns are both highly suggestive of a critical stenosis of the left anterior descending coronary artery (LAD) triggering the need for urgent reperfusion strategies. It is uncommon to witness both ECG patterns co-existing in one patient.

Case Description: A 58-year-old Chinese gentleman was referred from another medical center for acute coronary syndrome with ECG features consistent with a de Winter pattern. He reported typical anginal symptoms—central chest discomfort lasting approximately one hour. On arrival, he was hemodynamically stable with unremarkable clinical findings and no signs of heart failure. Patient was reassessed during resolution of pain at our centre and a repeated ECG revealed a Wellens Type B pattern. Bedside echocardiography showed a preserved ejection fraction but revealed significant septal and anterior wall hypokinesia. Initial troponin levels were not elevated. Coronary angiography confirmed severe triple vessel disease, with a critically stenosed—but not completely occluded—LAD identified as the culprit lesion. He underwent successful percutaneous coronary intervention (PCI). A follow-up ECG six hours post-PCI showed normal evolution. The patient was discharged well with plans for an elective coronary artery bypass graft (CABG) surgery.

Discussion: The de Winter ECG pattern is an anterior ST-elevation myocardial infarction (STEMI) equivalent which is absent of typical ST elevation. Meanwhile, the Wellens pattern is a marker of impending anterior wall myocardial infarction. The de Winter pattern can progress to an anterior STEMI within 90 minutes of symptom onset, reflecting an acutely occluded LAD. In this case, the evolution from a de Winter to a Wellens pattern suggests spontaneous recanalization of the LAD. This rare ECG evolution reflects a dynamic process—shifting from near-complete occlusion to partial or transient restoration of flow in the LAD—likely due to an unstable thrombus.

Conclusion: Both de Winter and Wellens patterns are indicative of LAD ischemia. Early recognition and prompt intervention can prevent further myocardial injury. Awareness of their co-existence and dynamic evolution may enhance diagnostic accuracy and guide timely reperfusion strategies in the emergency setting.

Keywords: Emergency Cardiology, ECG, Coronary Syndromes, de Winter and Wellens

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A SWOLLEN THROAT TO METABOLIC CRISIS: A CASE OF DIABETIC KETOACIDOSIS TRIGGERED BY EPIGLOTTITIS

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Introduction: Diabetic ketoacidosis (DKA) is a life-threatening complication of diabetes mellitus characterized by hyperglycemia, ketonemia, and metabolic acidosis. It is often precipitated by infections such as urinary tract infections or pneumonia. However, upper airway infections like epiglottitis are rarely reported as triggers. Epiglottitis, a rapidly progressive bacterial inflammation of the epiglottis and supraglottic structures, poses a dual threat of airway obstruction and systemic inflammatory stress, which may precipitate metabolic crises, particularly in undiagnosed diabetics.

Case Description: A 56-year-old Malay woman with no known medical history presented with a four-day history of severe dysphagia, hoarseness, and vomiting after oral intake. She denied respiratory distress or foreign body ingestion. Examination revealed signs of dehydration, an injected pharyngeal wall, right-sided cervical tenderness, and lymphadenopathy. Flexible nasoendoscopy demonstrated epiglottic swelling with bilateral vallecula obliteration, consistent with epiglottitis. Blood gas analysis showed severe metabolic acidosis (pH 7.09, HCO_3^- 7 mmol/L) and hyperglycemia (26 mmol/L) with elevated serum ketones (4.1 mmol/L). Urinalysis confirmed glycosuria and ketonuria, and renal profile revealed mild acute kidney injury. She was diagnosed with DKA precipitated by acute epiglottitis. The patient was started on aggressive intravenous fluid resuscitation, insulin infusion, and broad-spectrum antibiotics (intravenous ceftriaxone). Airway management was prioritized with continuous monitoring for respiratory compromise in the ICU. She remained stable and did not require intubation. Over the next 48 hours, her metabolic acidosis resolved, and her symptoms of epiglottitis improved. She was subsequently diagnosed with new-onset diabetes mellitus and discharged with follow-up for glycemic management.

Discussion: The physiologic stress of infection, compounded by dehydration and insulin deficiency, can precipitate DKA. While infections are common precipitants, epiglottitis is rarely implicated. The combination of inflammation, hormonal dysregulation, and impaired oral intake synergistically contributed to the development of DKA in this case. Timely recognition and a multidisciplinary approach focusing on airway vigilance and metabolic stabilization were key to a favorable outcome.

Conclusion: This case highlights the rare but serious coexistence of epiglottitis and DKA. Clinicians should consider atypical infectious triggers in cases of unexplained metabolic decompensation. Early diagnosis and concurrent management of airway and metabolic complications are essential to prevent morbidity and mortality.

Keywords: Diabetic ketoacidosis, Epiglottitis, Upper airway infection, Airway management

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BOLT FROM THE BLUE: SURVIVING A SHARED LIGHTNING STRIKE

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Introduction: Malaysia has one of the highest lightning strike densities globally, with 132 lightning-related deaths reported between 2008 to 2019. While most victims are middle-aged construction workers in central regions, this report involves a young boy and his mother in Perlis state.

Case Description: An 8-year-old boy walking in an open field with his mother was struck by lightning, as witnessed by the father. Both lost consciousness at the scene. Upon arrival, child was alert but restless while mother was alert but amnestic; they were triage to red yellow zone respectively. Child had a patent airway and was immobilised. Lung auscultation was clear bilaterally. His SpO_2 was 96% on room air, respiratory rate 40, blood pressure 141/95 mmHg, and heart rate 120 bpm. No fractures were found, but he had circumferential second-degree burns on the neck and extensive second-degree burns on the chest, abdomen, and bilateral thighs (approximately 25% total body surface area). Capillary refill time was under 2 seconds, with fair pulse volume. Other neurological exam was unremarkable. ECG showed sinus tachycardia. Blood gas analysis revealed acute respiratory acidosis. Due to respiratory failure and circumferential neck burn, rapid sequence intubation was performed. Fluid resuscitation was administered according to the /Parkland formula. After wound cleaning, he was transferred to the paediatric burn unit at a tertiary centre. He was admitted for two weeks and discharged in good condition. The mother was diagnosed with a cerebral concussion and discharged from the emergency department after observation

Discussion: Public awareness of lightning injuries in Malaysia is low. Nearly 44% of individuals doubt that cardiopulmonary resuscitation (CPR) can save lives. Most fatalities occur in open fields or under shelters such as trees can commonly present as cardiorespiratory arrest, with head and neck being the most frequent injury sites. Child likely experienced a transient cardiopulmonary arrest at the scene. It was fortunate that he was promptly transported to the hospital. However, bystander CPR would become necessary should the cardiac event recur or persist.

Conclusion: Lightning injuries are preventable. This case, a near miss, highlights the urgent need for public education on lightning safety and basic life support.

Keywords: lightning injury, circumferential burn, paediatric emergency

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A RARE CASE OF ESCAPING DEATH EVENT: A SURVIVOR OF CARDIAC ARREST IN MARATHON

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Introduction: Physical activity predisposes not only athlete but anyone to develop cardiac arrest as a result of ventricular tachyarrhythmia. While long distance running races gain high traction of millions of participants worldwide, cases of sudden cardiac death among marathon runners were reported with few numbers of survivors.

Case Description: We present a 38 years old male, nonsmoker with underlying hyperlipidemia and compliant to medication, collapsed at kilometre two during a marathon event. Commencement of cardiopulmonary resuscitation (CPR) at the scene was performed by medical personnel and he was found to be in ventricular fibrillation thus early administration of automated external defibrillation (AED) followed by multiple defibrillation and intravenous adrenaline restored spontaneous circulation within 42 minutes effort of resuscitation. Echocardiogram later showed mild tricuspid regurgitation meanwhile coronary angiogram further revealed double vessel disease with complete occlusion at proximal left anterior descending artery (LAD) and mid right coronary artery, hence percutaneous coronary intervention (PCI) to LAD was performed. He was discharged one week later and planned for stage PCI to LAD during next follow up.

Discussion: Based on Race Associated Cardiac Arrest Event Registry (RACER) study, incidence of cardiac arrest was 0.54 per 100000 runners, with highest risk in male marathoners. Coronary artery disease is the commonest cause that predisposes runner to develop ventricular tachyarrhythmia leading to cardiac arrest. Further study found a mismatch between oxygen supply and demand in older male sportsman with ischemic heart disease which precipitate acute coronary events in race-related cardiac arrest. Hence, preparticipation screening to detect those with high cardiac risk is encouraged to athletes. Prompt emergency intervention by expert medical staffs and availability of AED in marathon event are strongest factors contributing to high resuscitation rates following race-related cardiac arrest.

Conclusion: Initiation of early bystander CPR and accessible AED at the scene increase likelihood of surviving cardiac arrest during a marathon thus organiser should be well equipped with trained medical response teams and available AED.

Keywords: cardiac arrest, marathon, coronary artery disease, AED

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DOCTOR, I CAN'T SEE — A CASE OF AORTIC DISSECTION PRESENTING AS TRANSIENT VISION LOSS

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Introduction: Aortic dissection is a life-threatening emergency, typically presenting with chest or back pain. However, neurological symptoms such as visual loss are rare and can delay diagnosis. We present a case of a patient who presented with transient vision loss which was later diagnosed as Stanford Type A aortic dissection.

Case Description: A 42-year-old woman with no known medical illness presented to the Emergency Department with a one-day history of headache, vomiting, unsteady gait, and blurring of vision that progressed to transient complete vision loss around midnight. She denied any trauma. On arrival, her vital signs were blood pressure 184 over 94, heart rate 97, respiratory rate 20, oxygen saturation 97 percent, and capillary glucose 7.4 millimoles per liter. Neurological examination showed full motor strength in all limbs, normal tone and reflexes, and intact gag reflex. Stroke protocol was activated, and ophthalmology was consulted for suspected Amaurosis Fugax. A non-contrast CT brain was normal. CT angiography of the head and neck revealed a left common carotid artery dissection. Further CT angiography of the thorax and abdomen confirmed Stanford Type A aortic dissection extending from the aortic root to both common iliac arteries. Multiple branches, including the right subclavian artery, bilateral vertebral arteries, and left renal artery, arose from the false lumen. Notably, the patient's vision returned to normal after imaging. She was started on intravenous labetalol and referred to the vascular surgery team. After consultation with the cardiothoracic team at the National Heart Institute, the patient underwent urgent ascending aorta replacement (hemiarch). She recovered well and was discharged in stable condition.

Discussion: This case highlights an uncommon presentation of aortic dissection mimicking a neurological emergency. Involvement of carotid or vertebral arteries can result in transient neurological symptoms, even without chest pain.

Conclusion: Transient vision loss may be a sign of aortic dissection. High clinical suspicion, timely imaging, and multidisciplinary coordination are key to prompt diagnosis and definitive management.

Keywords: Aortic dissection, Amaurosis Fugax, Cardiothoracic, Stroke

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'CRASH IN RASH: STEVENS JOHNSON SYNDROME (SJS) SECONDARY TO ANTIEPILEPTIC DRUG'

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Introduction: Introduction Stevens Johnson syndrome (SJS) is a rare and serious hypersensitivity reaction with epidermis and mucosal membrane involvement. SJS typically affects <10% of total body surface area. Most common cause is reaction to medication. Others can be due to malignancy or infection.

Case Description: A 59-year-old lady with no known allergy and underlying stage IV breast cancer (metastasis to brain and liver) presented with generalised body rashes for past 4 days. She initially started having fever and flu then rashes with painful swollen lips and oral ulcer. Apart from that, she also had poor oral intake and lethargy. Upon further history, she was newly prescribed with T. Phenytoin 100mg TDS by the oncology team during last TCA which was a week prior to the symptoms. On Physical examination, noted generalised maculopapular rashes over trunk, limbs and face. There was multiple blisters seen on the lips with bilateral periorbital oedema and erythematous conjunctiva. Vital sign was stable with mild temperature of 37.9. She was given iv Hydrocortisone, analgesia and antibiotics. Tab phenytoin was stopped immediately and subsequently referred to dermatology and burn unit as primary team diagnosed as SJS probable secondary to Phenytoin.

Discussion: Pathophysiology of SJS is complex and severe immune response that leads to severe inflammation and skin reaction. Most common medication that triggers it such as antibiotics, anticonvulsants and analgesic (e.g. NSAIDs). Usually, two or more mucosal membranes are involved. Toxic Epidermal Necrolysis (TENS) should be considered if total body surface area affected is >10%. In this case, painful rashes, blister on lips, mouth ulcers and conjunctivitis are the hints that leads to SJS.

Conclusion: Stevens-Johnson syndrome (SJS) is a dermatological emergency that can be fatal. Since SJS is diagnosed clinically, it is important to do thorough physical examination and get full medication history from patients. A proper exposure during physical examination might give a hint to differentiate SJS from other differential diagnosis of rash.

Keywords: Stevens-Johnson syndrome, blister, hypersensitivity, conjunctivitis

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VENTILATION STRATEGIES IN SEVERE MONOLATERAL PNEUMONIA

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Introduction: Severe monolateral pneumonia presents as a unique entity in mechanical ventilation due to the stark differences in gaseous exchange physiology between the two lungs.

Case Description: A 24-year-old male with a history of young-onset hypertension and end-stage renal failure presented to the emergency department with fever, cough, massive haemoptysis, left-sided pleuritic chest pain, and vomiting. He was in respiratory distress with a SpO_2 of 77% under room air. Examination revealed reduced air entry and crepitations over the left lung; chest x-ray showed consolidations involving the left middle and lower lobes. A trial of high-flow nasal cannula oxygenation was attempted but patient remained tachypnoeic with SpO_2 at 89% on FiO_2 1.0. Patient was subsequently intubated for impending respiratory collapse and placed on pressure-controlled synchronous intermittent mandatory ventilation. Despite lung-protective ventilation, arterial blood gases showed concomitant metabolic and respiratory acidosis. The patient deteriorated into septic shock, requiring triple inotropic support, and succumbed to illness a day later.

Discussion: A myriad of strategies were employed to optimize ventilation. The patient was placed in right-lateral position, with the "healthy lung down", improving SpO_2 from 80% to 87%, likely due to enhanced perfusion to the dependent healthy lung and increasing ventilation to the diseased non-dependent one, alleviating ventilation-perfusion mismatch. Aggressive pulmonary toileting using an inline suction system was done. Lung-protective strategy targeted low tidal volumes, PaO_2 >55 mmHg, and permissive hypercapnia. In specialized centers, independent lung ventilation strategy may be implemented with a double-lumen endotracheal tube (DLT). This allows for individualized ventilation strategies to both lungs, which differ starkly in compliance. Anatomical and physiological isolation of the lungs are achieved, preventing contamination of the healthy lung and volutrauma to the non-diseased lung. Likewise, a one-lung ventilation strategy may be adopted with a bronchial blocker or endobronchial tube, collapsing the diseased lung. Though theoretically sound, these strategies are rarely implemented due to their complexity, lack of expertise and familiarity and need for bronchoscopy access.

Conclusion: Mechanical ventilation in patients with severe monolateral pneumonia is complex and associated with high mortality. A holistic and multidisciplinary approach is pivotal in maximizing chances of survival in such patients.

Keywords: Monolateral, pneumonia, ventilation

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THE BULLET THAT TOOK A DETOUR: A CASE OF A WANDERING GUNSHOT WOUND

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Introduction: Ballistic injuries are associated with significant morbidity and mortality. The severity of injury is affected by the speed and velocity of the bullet, magnitude and direction of energy transmitted, distance of the missile, contexture of bullet, and structures involved. This is a case of a rare and perplexing bullet path from the right chest to the rectovesical pouch.

Case Description: A 31-year-old gentleman presented to the emergency department with a gunshot wound over his right anterior chest wall. He was stable, alert, and only complained of localized chest pain. He denied experiencing any breathlessness and showed no signs of shock nor respiratory distress. Examination revealed an entry wound on the anteromedial aspect of the right chest, with no visible exit wound. A chest X-ray showed no significant findings, however, a pelvic X-ray revealed a bullet located within the pelvic cavity. CT scan confirmed the trajectory of the bullet directed inferiorly and obliquely entering the abdomen, resting posteriorly to the bladder at the level of mid rectum. Intraoperatively, a liver hematoma was identified, and the bullet was successfully retrieved. He recovered well and was discharged at day 5 of post-laparotomy.

Discussion: Peculiar ballistic pathway presents a diagnostic riddle, considering the presumed trajectory course. Early screening X-rays done including chest, pelvic, and cervical X-rays, though there was no suspected intra-abdominal or pelvic injury. The rotatory and forward movement of a bullet creates large amount of kinetic energy resulting significant damage, thus Computed Tomography was used to determine the extent of injuries including the trajectory of the bullet and exit point. Though the bullet travelled subcutaneously on the chest wall, it caused bilateral lung contusion and fractured the right 7th rib before entering the abdominal cavity. The bullet's trajectory remarkably avoiding major organs and vascular structures, was astounding.

Conclusion: A comprehensive understanding of bullet trajectory, along with a dispassionate and multidisciplinary approach, is key for effective management of gunshot wound.

Keywords: Gunshot Wound Trajectory

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"A BREATHLESS JOURNEY: REVEALING SEVERE RHEUMATIC HEART DISEASE THROUGH POINT-OF-CARE ULTRASOUND"

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Introduction: Rheumatic heart disease (RHD) remains a leading cause of cardiovascular morbidity and early mortality in children and young adults worldwide. Mitral stenosis, a hallmark of RHD, often leads to progressive heart failure. Timely diagnosis and intervention are essential to prevent complications and improve patient outcomes. Point-of-care ultrasound (POCUS) is an important tool for rapid, bedside diagnosis in emergency settings.

Case Description: A 38-year-old female with no significant past medical history presented to the Emergency and Trauma department with a one-month history of progressive dyspnea and abdominal distension. Upon examination, she was found to be tachypneic, with diminished breath sounds over the right lung and generalized edema. Chest radiography revealed a right-sided pleural effusion. Bedside echocardiography demonstrated severe mitral stenosis, moderate mitral regurgitation, and severe tricuspid regurgitation. Additionally, POCUS confirmed the presence of right pleural effusions, as well as peritoneal free fluid. Laboratory investigations were significant for an elevated Anti-Streptolysin O titre (ASOT), indicating a recent streptococcal infection, and positive antinuclear antibody (ANA), suggestive of autoimmune involvement. The patient was diagnosed with decompensated heart failure secondary to severe valvular heart disease, likely due to underlying RHD. She was initiated on intravenous diuretics, lifelong oral Penicillin, and a tapering regimen of antiplatelet therapy. The patient was subsequently referred for surgical valvular repair.

Discussion: This case emphasizes the importance of considering rheumatic heart disease (RHD) in young adults presenting with unexplained heart failure. The patient exhibited signs of right-sided heart failure secondary to severe mitral stenosis and tricuspid regurgitation. Point-of-care ultrasound (POCUS) was instrumental in rapidly diagnosing valvular lesions, enabling timely initiation of treatment. POCUS provided immediate bedside assessment, aiding both diagnosis and clinical decision-making. Early identification of RHD facilitates appropriate medical therapy and timely referral for surgical intervention, potentially preventing irreversible cardiac damage and improving outcomes, particularly in resource-limited settings where access to formal echocardiography may be delayed.

Conclusion: Timely identification of valvular pathology in acute settings is essential for guiding effective management. This case highlights the role of POCUS in rapidly establishing the diagnosis, enabling early intervention and improved prognosis in young patients with rheumatic heart disease.

Keywords: rheumatic disease, POCUS, heart failure

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"FIRES IN THE BRAIN: A BATTLE LOST IN FLAMES"

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Introduction: Febrile infection-related epilepsy syndrome (FIRES) is an extremely rare and devastating epileptic encephalopathy of unknown etiology. It affects previously healthy children following a nonspecific febrile illness.

Case Description: An 11-year-old previously healthy Malay boy presented to the Emergency and Trauma Department with a two-day history of abdominal pain and upper respiratory tract infection symptoms. During evaluation, he developed multiple episodes of generalized tonic-clonic seizures, evolving into status epilepticus (SE). Physical examination was unremarkable. Blood tests showed leukocytosis, but other parameters and cerebrospinal fluid analysis were normal. A computed tomography (CT) scan of the brain showed no evidence of hemorrhage or structural abnormality. He was administered an intravenous loading dose of phenytoin (20 mg/kg) and admitted to the pediatric ward for meningoencephalitis. He experienced recurrent seizures in the ward, necessitating endotracheal intubation for cerebral protection. Electroencephalogram (EEG) demonstrated frequent bilateral epileptic discharges and multiple focal seizures. Magnetic resonance angiography with time-of-flight imaging revealed no vascular abnormalities. Despite escalation of anti-seizure medications, initiation of immunomodulatory therapy, and implementation of a ketogenic diet, the patient continued to experience intractable seizures. His neurological status progressively deteriorated, and he unfortunately succumbed to the illness after two months of intensive care.

Discussion: FIRES is a subcategory of new-onset refractory status epilepticus. It is often referred to as a "one in a million" disease and shows a male predominance, although no genetic or familial link has been firmly established. The diagnosis is clinical, made in children with recent febrile illness followed by refractory SE, after other causes of SE are excluded. While the pathophysiology of FIRES remains poorly understood, treatment is extremely challenging and demands a multidisciplinary approach. Early and aggressive seizure control using high-dose anesthetics and anti-seizure medications is vital. Immunomodulatory therapies and ketogenic diet have shown promise in reducing seizure burden. Continuous EEG monitoring, intensive supportive care, and early rehabilitation are essential to optimize outcomes, although most survivors experience significant long-term neurological impairment.

Conclusion: FIRES poses a significant therapeutic challenge with a generally poor prognosis. Early recognition is crucial for initiating multidisciplinary consultation and arranging timely transfer to specialized tertiary centers, which may improve the likelihood of better outcomes.

Keywords: FIRES, seizure

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THERMOCAUTERY CIRCUMCISION: ESCAPING BLEED TO BURN INJURY

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Introduction: Circumcision is a common procedure be it for religious, cultural, or medical purposes. Circumcision lowers the risk of urinary tract infections, penile cancer, and sexually transmitted diseases. The conventional and thermocautery method lead to ranges of complications namely infections, bleedings, haemorrhages and even death. The thermocautery circumcision method even leads to burn injury and tissue necrosis.

Case Description: We report two cases of penile thermal burn injuries (tissue edema and necrosis) following thermocautery circumcision performed by private practitioners. The first case involved an 8-year-old boy who was previously well, came in to paediatric emergency with a thermal injury day 5 post-circumcision. He presented with pain, swollen and bluish discolouration of inner prepuce. Clinically he had mild hematoma with necrotic patch seen. The second case involved a 10-year-old child with no known medical illness, presented to us with blackish discolouration over proximal part of glans day 12 post-circumcision. Clinically child had circumferential necrotic patch with erythematous inner prepuce and was tender. For both patients, removal of necrotic patch, daily dressing was done in ward and was covered with antibiotic. Subsequent follow-ups showed both have well-healed scar.

Discussion: The advantages of thermocautery include less bleeding and shorter duration. However, the recovery time and duration of tissue oedema are longer. Thermocautery technique employs thermal energy for haemostasis and the sealing of blood vessels. Nevertheless, the electric current has a risk to penetrate deeply, causing vascular damage and penile gangrene. The most challenging complication is oedema whereby the heat-induced trauma increases local hypervascular permeability. The variety of oedema severity could possibly be contributed by lack of thermocautery temperature control. Emergency healthcare providers should be aware of this advance in circumcision method and its mechanisms so we will be able to look for its possible complications.

Conclusion: Burn injury post-circumcision might be infrequently encountered, even so this newly emerging method could have detrimental complications if not treated early. Emergency healthcare providers should recognize those complications and treat them in line with the concept of thermal burn injury. This helps to prevent unwanted complications that may affect child's reproductive health and well-being in the future.

Keywords: circumcision, thermocautery, burn injury

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A CASE REPORT OF DECOMPRESSION SICKNESS: A CHALLENGE IN DIAGNOSIS

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Introduction: Decompression illness results from the formation of gas bubbles within blood vessels or tissues during or following a reduction in environmental pressure. Decompression sickness (DCS) occurs when the combined tensions of dissolved gases (oxygen, carbon dioxide, nitrogen, helium) and water vapour exceed the local ambient pressure, leading to tissue supersaturation and bubble formation. While small venous gas emboli are common and usually asymptomatic due to filtration by the pulmonary circulation, a large burden can cause significant symptoms including dyspnoea, cough, and pulmonary oedema—referred to as cardiorespiratory DCS or "chokes." Infiltration of nitrogen bubbles to the spinal cord leads to muscular pain, weakness, or neurological deficit.

Case Description: We present a middle age man, recreational diver from Terengganu, with myalgia and back pain post diving and few episodes of haemoptysis prior to admission. The patient with experienced proper training reported adherence to recommended decompression protocols following his recent 34-meter dive in Pulau Kapas. The patient's presenting complaints, in conjunction with the diving history, ensue a working diagnosis of Type II Decompression Sickness (DCS) thus he was referred to hyperbaric centre.

Discussion: This case highlights the diagnostic challenge in recognizing DCS, especially when patients present with atypical symptoms. The presence of myalgia and back pain in a post-dive context raises suspicion for spinal cord involvement, a hallmark of Type II DCS. However, haemoptysis and pleuritic chest pain are rare initial manifestations and may lead to misdiagnosis of more common pulmonary conditions such as pneumonia or pulmonary embolism. These atypical respiratory symptoms can divert clinical attention away from a diving-related aetiology, especially in emergency settings. Therefore, early consideration of DCS in divers with unusual respiratory symptoms and spinal cord involvement is crucial, particularly when a recent dive history is evident.

Conclusion: A high index of suspicion is essential for diagnosing decompression sickness, especially in cases with atypical presentations like haemoptysis and pleuritic chest pain. Prompt diagnosis and referral for hyperbaric oxygen therapy can significantly improve outcomes and reduce the risk of long-term complications.

Keywords: Decompression sickness, haemoptysis, hyperbaric oxygen therapy

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'SUICIDAL CALLS': MEDICAL EMERGENCY CALL CENTRE'S ROLE TO PREVENT DEATH BY SUICIDE

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Introduction: Medical emergency call centre (MECC) functions to take 999 emergency calls. Very rarely, it also receives calls from individuals wanting to commit suicide. We present two case series of such situation and how deaths were avoided through our ways to handle the situation.

Case Description: Case 1: 'threat to jump off building' 32 Malay lady called saying that she wanted to jump off from tall building. She was at the 30 th floor when she called. Our centre immediately despatched an ambulance. She claimed that she was giving up on life as her husband did not listen to her and her family did not care nor loved her. She said that her child passed away because of family's treatment. We advised her to not rush to jump and allowed her to express her emotions. Offer made to call the husband to persuade her. She did not jump and our ambulance arrived in 20 minutes and taken to hospital for psychiatric care. Case 2: 'drug overdose' A 27 years old lady with psychiatric illness called and claimed to have taken an overdosage of her psychiatric drug (50 antipsychiatric drug). She just had an argument with her boyfriend. We dispatched the ambulance immediately and calmed her down and allowed her to express her feelings. She calmed down and ambulance arrived in 20 minutes and taken to hospital for psychiatric care.

Discussion: Abnormal behaviour psychiatric protocol in the MECC does have steps to follow in case of suicidal attempt situations. However, the communication skill displaying empathy and willingness to listen needs training. There is a need to adjust the conversation based on local culture.

Conclusion: MECC complements the effort to dissuade potential cases of suicide. The communication skill to calm patient down and listen are the most important skill to have in preventing suicide.

Keywords: abnormal behaviour, communication skill, suicide

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CASE REPORT: AGING IS NOT A BARRIER TO SUCCESSFUL THROMBOLYSIS IN ACUTE STROKE

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Introduction: Acute ischemic stroke is significantly more prevalent in elderly population and this increases markedly with age. The incidence rate of first ever stroke in elderly patient can be as high 18-20/1000 with an estimated overall prevalence of 7.4%. Elderly patients are more likely to present with severe stroke and have longer hospital stay. However, with timely recognition and treatment, meaningful recovery is still possible.

Case Description: A 96 years old gentleman with no known medical illnesses and able to perform daily activities independently presented to our centre with the complaint of slurred speech and left sided facial weakness. Upon arrival, his GCS was 15/15 with preserved power of bilateral upper limb and lower limb. Patient was hemodynamically stable with initial NIHSS score of 8. CT Brain was performed and showed no signs of intracranial bleed. As patient was presented to our centre within the time window of 4.5 hours with no absolute contraindication, he was thrombolysed with IV Alteplase. Post thrombolysis, his NIHSS improved significantly to 1 and repeated CT Brain showed no haemorrhagic complications. Patient was able to recover well with good neurological outcome.

Discussion: The benefits of thrombolysis in acute ischemic stroke have been proven. However, there is limited data of its benefit from randomised trials in patients aged more than 80 years old. In clinical practice, advanced age has been a factor for withholding thrombolysis in very elderly patients with acute ischemic stroke, fearing it to be associated with poorer prognosis, higher risk of haemorrhagic transformation and higher in-hospital mortality. The success of thrombolysis in our case highlights that age alone should not be a barrier for thrombolytic therapy in acute ischemic stroke.

Conclusion: This case has proven that with appropriate history taking, examinations and proper patient selection, including consideration of imaging findings and overall health status, thrombolysis can be a viable treatment options for very elderly patient with acute ischemic stroke.

Keywords: Acute stroke, elderly, thrombolysis

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I AM BLIND! TRAUMATIC OPTIC NEUROPATHY: A CASE REPORT

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Introduction: Traumatic optic neuropathy (TON) is a serious condition characterized by injury to the optic nerve resulting from trauma, which can lead to partial or complete vision loss. It commonly arises from direct or indirect injury to the optic nerve. Diagnosing TON is often challenging due to the absence of external ocular signs, requiring careful clinical evaluation and imaging studies such as CT or MRI. Early diagnosis and intervention are critical, though optimal management remains controversial.

Case Description: A case of a 6-year-old boy presented with car accident complained of epistaxis and left eye swelling. Initial imaging with CT scan demonstrated absence of bony injury. Three days post-accident he was brought to general practitioner complained of unable to see over the left eye. He was referred to hospital and done surgical decompression over the left eye.

Discussion: Traumatic optic neuropathy is a rare but potentially devastating consequence of craniofacial trauma. In this case, the patient presented with acute visual loss following blunt head trauma, consistent with indirect TON. The clinical diagnosis was supported by the absence of external ocular injury and the presence of a relative afferent pupillary defect (RAPD), which is a hallmark sign. Imaging studies, particularly CT of the orbit and optic canal, played a crucial role in identifying associated fractures and ruling out compressive lesions. The pathophysiology of indirect TON is thought to involve shearing forces transmitted through the skull to the optic nerve, leading to axonal injury, or swelling within the optic canal. Despite advancements in imaging and monitoring techniques, there remains no universally accepted treatment protocol. High-dose corticosteroids have been used in an attempt to reduce inflammation and secondary damage, but evidence regarding their efficacy remains inconclusive. Similarly, surgical decompression may be considered in cases with clear evidence of optic nerve compression. In this case, the patient's outcome underscores the unpredictable nature of TON and highlights the need for prompt diagnosis and approach to management.

Conclusion: This case highlights the diagnostic challenges and therapeutic dilemmas in managing traumatic optic neuropathy. Prompt recognition and individualized management are essential. Further research is needed to establish standardized treatment protocols.

Keywords: Traumatic optic neuropathy, blunt injury

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NAVIGATING PEDIATRIC DKA: A CASE OF SEVERE PEDIATRIC DKA AND THE IMPORTANCE OF FLUID PROTOCOLS

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Introduction: Diabetic ketoacidosis (DKA) is a potentially life-threatening complication of type 1 diabetes mellitus, particularly in children. Early recognition and timely intervention in the emergency department is essential to minimize associated morbidity and mortality. We describe an uncommon case of DKA, highlighting the clinical approach and management strategies used.

Case Description: An 11-year-old girl, weighed 26 kg, previously well, presented with a two-day history of vomiting, lethargy, and progressive right gluteal swelling, along with a two-week history of polyuria, nocturia, and weight loss. On examination, she was severely dehydrated with impaired level of consciousness (Glasgow Coma Score [GCS] of 13/15 [E 3, V 4, M6]). She was tachypnoeic with acidotic respirations at 35 breaths/minute. Her heart rate was elevated at 165 beats/minute, and her blood pressure was 112/70 mmHg. Bedside investigations confirmed severe DKA, with a capillary glucose of 32 mmol/L, unmeasurable high serum ketones, and venous blood gas showing a pH <6.8, PCO_2 of 23 mmHg, and unreadable bicarbonate levels. The patient received two boluses of intravenous normal saline at 20 mL/kg over one hour. Repeat tests showed persistent acidosis (pH 6.8, PCO_2 12, HCO_3 <3, ketones 6.8 mmol/L). Early referral to paediatric was made and the case subsequently discussed with paediatric intensivist. Fluid therapy continued with full maintenance (63 mL/hour sterofundin + 1.5 g KCl/pint) and 10% deficit correction (54 mL/hour over 48 hours). Insulin infusion was started at 0.1 U/kg/hour (2.6 mL/hour) after one hour of fluid resuscitation, along with IV Ceftriaxone 1 g (50 mg/kg). She was transferred to tertiary paediatric intensive care unit and was subsequently discharged well.

Discussion: Osmotic diuresis resulting from hyperglycaemia leads to profound dehydration. Despite this, patients may present with normotension, which can mask underlying hypovolemic shock. This case illustrates the importance prompt fluids management and early referral of severe DKA. Adherence to established DKA guidelines was crucial in preventing serious complications, notably cerebral oedema.

Conclusion: Prudent and appropriately administered fluid therapy, timely electrolyte monitoring and regular neurological assessments are key to effective paediatric DKA management.

Keywords: Paediatric DKA, fluid resuscitation, cerebral oedema

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NOT A PHANTOM BLUE LIMB: OBSTRUCTION OR SPASM CONUNDRUM

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Introduction: Acute limb ischemia (ALI) is a vascular emergency, mostly caused by diminished limb blood flow due to peripheral artery occlusion. Vasospasm is a very rare etiology of ALI, and only few cases reported in the literature described ALI due to cocaine or other strong vasoconstrictor agents. Hence, the conundrum.

Case Description: A 60-year-old male with comorbidities, presented to emergency department with 3 days history of bilateral lower limb pain, bluish discoloration and chest pain. He was a chronic substance abuser and symptoms started after snorting some substance. He was alert with prolonged capillary refill time, cold peripheries, irregular pulses and cyanosis over all limbs with no palpable distal pulses. His BP was 162/116mmHg and heart rate of 111 beats per minute. Bloods were unremarkable, bedside point of care ultrasound of heart, aorta and venous shows no evidence of aortic dissection or thrombus, however 10 panel bedside urine toxicology tests were positive for Amphetamine and Methamphetamine. He was started on Intravenous Glyceryl Trinitrate (GTN) infusion following which, his symptoms improved. Case was also referred to the surgical team to rule out aortic dissection, however in view of improving signs and symptoms, no CT angiogram was done.

Discussion: The initial management of typical ALI is to prevent thrombus propagation with intravenous infusion of unfractionated heparin, while making arrangements for Ultrasound Doppler or CT angiogram to decide on further intervention strategies. In this case, immediate referral to Surgical team was done, however the team did not proceed with imaging, as symptoms resolve completely, likely due to resolving vasospasm caused by acute on chronic substance abuse usage. The ideal management should be simultaneously searching for any evidence of dissection or thrombosis and at the same time to treat the substance abuse toxidromes with appropriate medication strategies.

Conclusion: In patients with substance abuse and significant comorbidities presented with peripheral limb insufficiencies, the cause needs to be investigated, the toxidromes need to be thoroughly examined and treated with multimodal approach. Careful comprehensive history taking and physical examination is valuable for overall patient management.

Keywords: vasospasm, limb ischemia, sympathomimetics

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BRAIN TANGLE ALERT: THE SEIZURE YOU DIDN'T SEE COMING!

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Introduction: This case highlights the importance of considering arteriovenous malformations (AVM) as a potential cause of refractory seizures as the patient's seizures persisted despite standard anticonvulsant therapy. AVM is an abnormal tangle of blood vessels that can disrupt brain function leading to symptoms like seizure.

Case Description: 60-year-old gentleman was brought to our Emergency Department (ED) following an episode of ongoing generalized tonic-clonic seizures (GTC). Despite the administration of IV Valium 5mg by paramedics the seizures persisted with the additional symptom of upward rolling of the eyeballs. Upon arrival at the ED, another 5mg IV Valium along with IV phenytoin 1g in 100cc over 1-hour started as well. Patient was unresponsive with GCS E4V1M1, developed stridor and tachycardiac (HR 150), hyperpyrexia 40, Non hypogylecmic 8.0mmol. Patient had lactate 20.0, pH 7.02, Pco2 56. Once stabilized improved to lactate 8.5, pH 7.41, Pco2 26. The patient was stabilized with IV Normal Saline (1L bolus) followed by IV Noradrenaline due to hypotension. After successful hemodynamic stabilization, the patient was intubated to secure the airway. Lactate levels decreased to 8.5 mmol/L, pH improved to 7.41, and PCO2 dropped to 26 mmHg. A Contrast Enhanced Computated Tomography brain (CECT) revealed a left posterior temporal arteriovenous malformation (AVM), which was likely the cause of the seizure activity. The patient was then referred to the neurosurgical team for further evaluation and management.

Discussion: In this case, the patient had elevated lactate, acidosis (low pH), and hypercapnia (high PCO2) which exacerbate brain dysfunction and increase the risk of further seizures. Severe metabolic abnormalities impair cellular function, worsen neuronal injury, and make it more difficult to control seizures. Hemodynamic instability such as hypotension and tachycardia can further compromise brain perfusion leading to hypoxia. In addition, addressing hypotension and ensuring adequate circulation through fluid resuscitation and inotropes support such as IVI Noradrenaline are key to stabilizing the patient and preventing secondary brain injury. Intubation may be necessary to protect the airway and ensure adequate ventilation further supporting hemodynamic and metabolic stability. CECT is crucial in this case to identify structural causes like AVM which may be the underlying cause of refractory seizures. Without CECT Brain, the causes of this patient's refractory seizure could remain undiagnosed resulting in ineffective treatment.

Conclusion: When seizures doesn't respond to typical treatments, structural brain abnormalities like AVM should be considered and timely imaging is crucial for accurate diagnosis and effective intervention. Managing blood abnormalities and hemodynamic instability in seizure patients is crucial because both can significantly impact the patient's neurological function and complicate seizure management. Early identification of AVMs through CECT imaging is a key in diagnosing the underlying cause of the seizures.

Keywords: Arteriovenous Malformation (AVM), seizure, Contrast Enhanced Computated Tomography brain (CECT)

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WHEN THE BRAIN TURNS TO BONE: SECONDARY FAHR'S SYNDROME AS A LATE COMPLICATION OF HYPOPARATHYROIDISM

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Introduction: Fahr's syndrome is a rare neurological disorder that affects fewer than 1 in 100,000 people, characterized by bilateral intracranial calcifications. While it is often idiopathic or genetic in origin, secondary forms, particularly due to chronic hypoparathyroidism, are well-recognized but frequently underdiagnosed.

Case Description: A 50-year-old lady with history of total thyroidectomy presented with a 2-day history of persistent throbbing headache. She denied any blurriness of vision, body weakness, and seizure. Her vitals were normal, and the systemic examination revealed no neurological deficit. The headache, however, was not fully resolved with analgesic. A non-contrast CT brain showed the presence of bilateral calcifications of the basal ganglia comprising the corona radiata, heads of caudate nuclei, and bilateral lentiform nucleus that raised the diagnosis of secondary Fahr's Syndrome. This patient responded well with oral calcium supplements and was scheduled for long-term follow-up to monitor his calcium and parathyroid hormone levels.

Discussion: Secondary Fahr syndrome is diagnosed when bilateral intracranial calcifications, especially in the basal ganglia and dentate nuclei, occur in association with a known cause. The most common causes are metabolic disorders like in hypoparathyroidism as reported in this case, alongside infection and autoimmune. Presentation may vary from asymptomatic to simple headache, movement disorder, seizure, and even psychiatric symptoms have been reported in extensive calcification. The gold standard for diagnosis is a non-contrast CT brain. Treatment will focus on underlying causes and alleviating the symptoms. From this case, we emphasize long-term calcium, phosphate, and parathyroid hormone monitoring post-thyroid surgery. The absence of regular follow-up will lead to prolonged metabolic imbalance, eventually contributing to the gradual deposition of calcium in the basal ganglia and other brain structures, causing Fahr's syndrome.

Conclusion: Secondary Fahr's Syndrome should become the differential diagnosis for post-total thyroidectomy patients presenting with central and neurological symptoms. Routine long-term endocrine follow-up post-surgery is the key to prevention.

Keywords: Fahr's Syndrome, Hypoparathyroidism, Thyroidectomy, Brain Calcification

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SUBMERSION DURATION AND RAPID RESCUE IMPROVE SURVIVAL IN PAEDIATRIC DROWNING: A RETROSPECTIVE STUDY AT PAEDIATRIC EMERGENCY DEPARTMENT

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Introduction: Drowning is a leading cause of accidental death in children, with outcomes closely linked to submersion duration and the timeliness of rescue efforts. Understanding local patterns and response effectiveness is crucial for improving paediatric survival and neurological outcomes.

Methodology: A retrospective review was conducted of paediatric drowning cases presented to the Paediatric Emergency Department of Hospital Tunku Azizah from January to December 2024. Data collected included patient demographics, incident location, submersion duration, presence of supervision, bystander intervention (CPR), and clinical outcomes.

Results: A total of nine paediatric drowning cases were reviewed, with seven incidents occurring in hotel swimming pools and two in residential toilets. Five of these cases happened while adults were present, but supervision was compromised as caregivers were engaged in other activities at the time. Immediate CPR was administered by parents or bystanders in seven cases. Four children with submersion durations of less than five minutes (specifically 1–2 minutes) presented with mild symptoms and achieved full recovery. In contrast, three children who were submerged for five minutes or longer exhibited more severe symptoms, including respiratory distress and altered consciousness, necessitating intensive medical intervention. One fatality was recorded in a case where the submersion duration was unknown, while another child with an uncertain submersion time presented with only mild symptoms.

Discussion: This study reinforces that submersion duration is the primary determinant of outcome in paediatric drowning. Children rescued within 5 minutes of submersion had favourable recoveries, while prolonged submersion was associated with more severe symptoms and complications. Immediate bystander CPR played a pivotal role in stabilizing patients and improving survival, consistent with global evidence. Notably, drowning occurred even with supervision, highlighting the risks of divided attention and the need for vigilant, undistracted monitoring.

Conclusion: Shorter submersion times and rapid rescue, particularly with bystander CPR, significantly improve survival and neurological outcomes in paediatric drowning. Enhanced public education on focused supervision and CPR training is essential to further reduce morbidity and mortality in this vulnerable population.

Keywords: Paediatric Drowning, Submersion Duration, Bystander CPR, Supervision

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LOCAL SMURF TURNS PINK, AFTER TREATED WITH MAGICAL BLUE PORTION

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Introduction: Sodium nitrite is commonly used as a preservative in the food industry. It is odourless, and is also used fashionably as a means for self-harm. Sodium nitrite toxicity causes methemoglobinemia, which is a fatal condition if not promptly identified and managed.

Case Description: A 22-year-old gentleman, who is a recreational marijuana abuser with major depressive disorder attempted to end his life by intentionally ingesting sodium nitrite, which he purchased from an online store. He was brought to the emergency department (ED) at a district hospital by an ambulance after experiencing headache, palpitation, and shortness of breath. Initial pulse oximetry showed 97% under room air. The patient subsequently deteriorated, with his lips and distal ends of both extremities turned cyanosed. His best pulse oximetry was 85% under a non-rebreather mask of 15L/min. Arterial blood gas noted partial oxygen pressure of 399 mmHg and methaemoglobin level was 13.1% g/dL. He was given 60 milligram intravenous methylene blue slow bolus. Fortunately, his symptoms resolved rapidly after completion of methylene blue and he was later admitted into the ward for observation.

Discussion: Sodium nitrite oxidises haemoglobin iron (Fe^{2+}) to methaemoglobin (Fe^{3+}), which is inefficient in oxygen delivery. Methemoglobinemia leads to hypoxia even if oxygen levels are normal, which was demonstrated in our patient. Prompt administration of methylene blue reduces methaemoglobin to functional haemoglobin, thus improving oxygen delivery to tissues.

Conclusion: Sodium nitrite, which is readily available in online shopping platforms, is toxic and can cause methemoglobinemia. Emergency clinicians should remain insightful in handling patients with sodium nitrite toxicity as timely identification and administration of methylene blue is vital to improve patient outcomes.

Keywords: Sodium nitrite toxicity, Methemoglobinemia, Methylene blue

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ASSESSMENT ON THE IMPACT OF ULTRASOUND GUIDED FEMORAL NERVE BLOCK (USGFNB) TEACHING MODULE ON THE LEVEL OF KNOWLEDGE AND ATTITUDE AMONG MEDICAL OFFICERS IN EMERGENCY DEPARTMENT (ED), HOSPITAL CANSELOR TUANKU MUHRIZ (HCTM)

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Introduction: Peripheral nerve blocks (PNBs) offer effective, targeted analgesia with fewer systemic side effects compared to traditional analgesics. Ultrasound-guided femoral nerve block (USGFNB) is increasingly valued in the emergency department (ED) for managing acute lower limb trauma. Despite its advantages, limited formal training opportunities have restricted its widespread adoption. This study aimed to evaluate the impact of a newly developed USGFNB teaching module on the knowledge and attitudes of medical officers in the ED at Hospital Canselor Tuanku Muhriz (HCTM).

Methodology: An interventional study was conducted among ED medical officers. Participants completed a pretest to assess baseline knowledge and attitudes towards USGFNB. Participants then attended a teaching module that included a lecture, instructional videos, live demonstrations by facilitators, and hands-on simulation practice Post-tests were administered immediately and at one month. Paired samples t-tests were used for analysis.

Results: There was a significant improvement in scores from pretest ($M = 52.87\%$, $SD = 6.71$) to immediate posttest ($M = 77.57\%$, $SD = 7.31$), $t(22) = -15.037$, $p < .001$. Knowledge and attitude scores remained significantly higher at one-month follow-up ($M = 68.70\%$, $SD = 8.24$), $t(22) = -8.230$, $p < .005$, compared to baseline. These results demonstrate both immediate gains and retention of knowledge and attitude improvements following the intervention.

Discussion: This study demonstrated that a structured USGFNB teaching module can enhance both the knowledge and attitudes of emergency department medical officers. The immediate post-intervention improvement underscores the effectiveness of combining didactic instruction with visual and hands-on simulation components. The sustained improvement at one-month follow-up suggests that the module not only facilitates short-term learning but also supports retention over time. Importantly, the positive shift in attitudes indicates increased confidence and willingness among medical officers to adopt USGFNB in clinical practice is an essential step toward improving pain management for lower limb trauma in the ED.

Conclusion: The results support the need for integrating such structured modules into continuous medical education, especially in settings where formal PNB training is limited.

Keywords: Medical education, Ultrasound guided regional anesthesia, Femoral nerve block, Pain management

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SILENT UNTIL IT STRIKES: BLUNT CEREBROVASCULAR INJURY

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Introduction: Blunt cerebrovascular injury (BCVI) is a potentially devastating complication of blunt trauma. Recent studies report an incidence of 1–3% of adult blunt trauma, largely due to improved imaging and expanded screening criteria. BCVI is often clinically silent in its early phase and may only be detected once neurologic injury has occurred, making timely diagnosis and intervention essential.

Case Description: A 40-year-old man was involved in a motorcycle-lorry collision. Despite the high-energy mechanism, he remained ambulatory after the incident. Six hours post-trauma, he was noted to have reduced consciousness and was sent to the emergency department. On arrival, he was breathing but unresponsive. Neurological assessment revealed a Glasgow Coma Scale score of E2V2M4 with left-sided hemiparesis. Intubation was done, and a non-contrast CT brain was performed, showing a large right middle cerebral artery (MCA) infarct with cerebral oedema. Computed Tomography Angiography (CTA) of the neck was then revealed non-opacification of the right internal carotid artery (ICA), MCA, and anterior cerebral artery (ACA), consistent with extensive BCVI. Emergency decompressive craniectomy was performed.

Discussion: This case highlights the diagnostic challenge of BCVI, particularly in patients who appear neurologically intact at initial presentation. In high-energy trauma, sudden hyperextension, flexion, or rotational forces can cause the internal carotid artery to stretch or compress against the cervical vertebrae. This mechanical stress may result in intimal tears, leading to thrombosis, dissection, or complete vessel occlusion — as seen in our patient. Despite the absence of external neck injury or focal deficits initially, he developed a large anterior circulation infarct within hours. Although screening tools such as the Modified and Expanded Denver Criteria help identify high-risk patients, injuries may still go undetected if clinicians rely solely on early clinical findings. Earlier recognition and imaging might have allowed for antithrombotic therapy prior to infarction. This case reinforces the need for institutional screening protocols, early imaging, and multidisciplinary management to improve outcomes in patients with suspected BCVI.

Conclusion: Blunt cerebrovascular injury should be considered in all trauma patients with significant mechanisms of injury. High vigilance, systematic screening, and prompt multidisciplinary intervention remain the cornerstones of improving survival and functional recovery in BCVI.

Keywords: BCVI, blunt injury

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RAPIDLY FATAL LEPTOSPIROSIS PULMONARY HEMORRHAGE SYNDROME IN A PREVIOUSLY HEALTHY YOUNG MALE: A CASE REPORT FROM SABAH.

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Introduction: Leptospirosis is a zoonotic disease endemic in Malaysia, ranking as the third most deadly infectious disease after dengue and malaria. Its clinical spectrum ranges from a mild flu-like illness to severe multiorgan failure. One rare and life-threatening complication is Leptospirosis Pulmonary Haemorrhage Syndrome (LPHS), which involves diffuse alveolar haemorrhage and carries a mortality rate exceeding 70%.

Case Description: A 31-year-old man with no known medical history presented with a 5-day history of fever, chills, rigors, epigastric pain, lethargy, reduced oral intake, and loose stools. On arrival at the Emergency Department (ED), he was in compensated shock and respiratory distress, with an oxygen saturation (SpO_2) of 88% on room air and a respiratory rate of 32 breaths per minute. Examination revealed jaundice, conjunctival suffusion, and bibasal crepitations. Initial chest X-ray (CXR) showed bilateral perihilar reticulonodular opacities. Due to worsening respiratory distress, the patient was intubated three hours after ED admission. A follow-up CXR performed one-hour post-intubation demonstrated features consistent with diffuse pulmonary haemorrhage. Despite high ventilator settings and appropriate resuscitation, the patient's condition continued to deteriorate, leading to multiorgan failure and eventual death.

Discussion: LPHS in leptospirosis is a rare but life-threatening complication characterized by acute respiratory distress and alveolar bleeding. This case highlights the rapid deterioration seen in LPHS, which requires intensive respiratory support. The cause of LPHS is thought to involve immune-mediated damage to capillaries, with the deposition of immune proteins in the alveolar lining. Early treatment with intravenous methylprednisolone and immunomodulatory therapies such as plasmapheresis or cyclophosphamide can improve survival. In severe cases, mechanical ventilation and extracorporeal membrane oxygenation (ECMO) may also be necessary. A study reported a low mortality rate of 9.1 % among LPHS patients who received ECMO.

Conclusion: This case highlights the severe and rare presentation of leptospirosis as LPHS, leading to rapid respiratory and multiorgan failure. Despite intensive treatment, the patient did not survive. Early diagnosis and prompt intervention, including immunomodulatory therapies and mechanical ventilation, are crucial for improving outcomes. Using ECMO may improve survival in severe cases and should be explored in Malaysia.

Keywords: Leptospirosis Pulmonary Haemorrhage Syndrome, LPHS, leptospirosis

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FROM CLINICAL TOXINOLOGY TO PROTEOMIC DISCOVERY: DECODING THE VENOM PROTEIN COMPOSITION OF CHIRONEX YAMAGUCHII FROM SABAH

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Introduction: Multi-tentacled box jellyfish endemic to Sabah, Malaysia, have been implicated in at least six pediatric fatalities between 2006 and 2022. An unpublished local investigation confirmed the species responsible as Chironex yamaguchii, one of the most venomous jellyfish globally. Clinically, stings can lead to rapid cardiorespiratory collapse and death within minutes, highlighting the urgency of understanding its venom composition. Currently, only one available box jellyfish antivenom targets Chironex fleckeri, with unproven efficacy against C. yamaguchii. Despite its clinical importance, no proteomic profiling has been conducted to identify the specific toxins and underlying mechanisms responsible for its lethality.

Methodology: Specimens of C. yamaguchii were collected from Lahad Datu's coastal waters, where prior severe envenomation was reported. Identification followed established morphological criteria. Venom was extracted via nematocyst autolysis, sonication, and centrifugation. Protein concentrations were measured using a Nanodrop spectrophotometer. Proteomic analysis included sodium dodecyl sulphate–polyacrylamide gel electrophoresis (SDS-PAGE) and reverse-phase high-performance liquid chromatography (rpHPLC). Tandem mass spectrometry (LC-MS/MS) was used for protein identification and toxin profiling.

Results: LC-MS/MS analysis identified 35 unique protein groups in the venom of C. yamaguchii. Among these, six toxins—CqTX-A, CfTX-1, CfTX-2, CfTX-A, CfTX-B, and a TX-like toxin fragment—were detected. These are associated with membrane pore formation, hemolysis, and cardiovascular toxicity, aligning with clinical features of rapid systemic collapse.

Discussion: This is the first venom proteomic profile of C. yamaguchii in Malaysia. The identification of cardiotoxic and hemolytic proteins reinforces clinical observations of sudden cardiac arrest. These findings contribute critical insights for translational research, with implications for species-specific antivenom development, diagnostic innovation, and emergency response protocols.

Conclusion: Proteomic analysis offers vital understanding of C. yamaguchii envenomation. Future studies should explore the functional and lethal properties of these toxins to guide evidence-based clinical management and improve survival outcomes in jellyfish sting cases.

Keywords: Box Jellyfish, Chironex yamaguchii, shotgun proteomics, toxin identification.