



*Official Journal of the  
Malaysian Medical Association*

# *The Medical Journal of Malaysia*

**Malaysian Medical Association  
Congress 2025**

**20th - 22nd June 2025  
Royale Chulan Kuala Lumpur**

**June 2025**

**Volume: 80**

**Supplement: 4**



# MJM

*Official Journal of the  
Malaysian Medical Association*

Volume 80 Supplement 4 June 2025

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PP 2121/01/2013 (031329)

MCI (P) 124/1/91

ISSN 0300-5283

The Medical Journal of Malaysia is published six times a year.  
MJM is published bimonthly ie. January, March, May, July, September and November.

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## Example references Journals:

### Standard Journal Article

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

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

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

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

## Books and Other Monographs:

### Personal Author(s)

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

### Chapter in Book

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

### Corporate Author

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

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

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

## Online articles

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

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

## Other Articles:

### Newspaper Article

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

### Magazine Article

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

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# Thyroglossal Duct Carcinoma: A Rare Entity

**Tan Jin Wee Eric, MBBS, Irfan Mohamad, MMED ORL-HNS**

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## **SUMMARY**

Thyroglossal duct cysts (TDC) are the most common anomaly in thyroid development. It contributes around 70% of midline masses presenting in childhood and 7% in adulthood. Carcinoma arising from a thyroglossal duct cyst is a rare complication affecting less than 1% of cases, with the majority of the primary carcinoma to be papillary carcinoma. **Case Presentation:** We highlight a case of a 30-year-old man who presented with anterior neck swelling for a month which gradually increased in size. Subsequently post Sistrunk procedure with thyroid gland preservation, he was diagnosed with papillary carcinoma within a thyroglossal duct cyst. He recovered well with no evidence of recurrence with normal blood parameters after one year of follow-up. Overall, three-quarters of TDC carcinomas were diagnosed as incidental findings on final pathologic analysis. History and examination findings, in addition to imaging, such as USG or CT scans, are important workups for TDC. Imaging with tissue cytology such as FNA is always mandatory in order to evaluate the morphology of the nodule and presence of suspicious features of malignancy. The treatment of TDC carcinoma remains controversial among surgeons, with the concern of perseveration of the thyroid gland. The Sistrunk procedure is the gold standard for removal of TDC in literature. In general, patients are treated accordingly based on the risk assessment of different individuals. Clinicians should be aware of the incidence of this disease, and thorough history and examinations should be done. Surgery remains the mainstay of treatment for TDC. A multidisciplinary approach should be considered to safely identify high-risk patients who require a more aggressive treatment approach and follow-up.

# Early detection of chronic myeloid leukaemia (CML) in primary care: a case report

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<sup>1</sup>Faculty of Medical Sciences, Newcastle University, United Kingdom, <sup>2</sup>Newcastle University Medicine Malaysia (NUMed), Iskandar Puteri, Johor Darul Ta'zim, <sup>3</sup>Newcastle Medical Clinic, Iskandar Puteri, Johor Darul Ta'zim

## SUMMARY

Chronic Myeloid Leukaemia (CML) characterised by the Philadelphia chromosome (BCR-ABL1 fusion gene) is a myeloproliferative neoplasm that may present with non-specific symptoms and accounts for about 15% of adult leukaemia. **Case Presentation:** A 38-year-old Malay man with a history of childhood asthma presented with a 3-month history of intermittent cough, pleuritic chest pain, and sore throat. The patient has previously visited two other clinics and was prescribed a 5-day course of antibiotics without any investigations performed. He has denied constitutional symptoms such as fever, weight loss, or night sweats. On examination, he was afebrile with a full GCS and haemodynamically stable. His throat was injected without tonsillitis, and lung auscultations revealed equal air entry. No hepatosplenomegaly. A full blood count was done and revealed an alarming leucocyte count of  $305.6 \times 10^9/L$ , with all raised absolutes of neutrophil count  $243.6 \times 10^9/L$ , lymphocytes  $12.2 \times 10^9/L$ , monocytes  $13.8 \times 10^9/L$ , basophils  $26 \times 10^9/L$  and eosinophils of  $10.1 \times 10^9/L$  with mild anaemia of haemoglobin 12.8 g/dL (Mentzer Index: 25) and normal platelets, raising suspicion for a haematological malignancy. The patient was urgently referred to a nearby tertiary hospital and was confirmed to be diagnosed with CML Stage 1 within two days of extensive investigations. Prolonged cough is a common primary care presentation, often attributed to infectious or inflammatory causes. However, persistent symptoms alongside striking leucocytosis necessitate screening for haematological disorders such as CML. This case highlights the importance of vigilance in primary care for non-specific symptoms potentially indicating malignancy. A systematic approach to prolonged cough with appropriate investigations can facilitate early diagnosis plus treatment initiation and intervention, improving patient outcomes.

# Right facial nerve palsy with integrated acupuncture care: a case report

**Leeynesh Sooriyapiragasam, MD**

Faculty of Medical Sciences, Newcastle University, United Kingdom, Newcastle University Medicine Malaysia (NUMed), Iskandar Puteri, Johor Darul Ta'zim, Newcastle Medical Clinic, Iskandar Puteri, Johor Darul Ta'zim

## SUMMARY

Facial nerve palsy is a common neurological disorder that affects facial movement and expression. Although tapering corticosteroids remain the primary treatment, acupuncture has been increasingly explored as an adjunct therapy for functional recovery. **Case Presentation:** A 36-year-old Indian man with no known allergies and a history of childhood asthma presented with sudden right-sided facial weakness for an hour. Symptoms included right-sided drooping of the mouth, difficulty closing the right eye and reduced taste sensation on the right anterior two-thirds of the tongue. He complained of mild pain of 4/10 behind the right ear prior to symptom onset, along with a recent upper respiratory tract infection history. No trauma, stroke-like symptoms, or systemic illness was noted. On examination, he was afebrile with a full GCS and haemodynamically stable. Examination revealed absent forehead wrinkling, incomplete eye closure with Bell's phenomenon, nasolabial fold flattening, and weakness in cheek puffing and lip pursing. No other cranial nerve deficits or limb abnormalities were noted. Other examinations were unremarkable. The patient was treated accordingly and referred to a nearby tertiary hospital with outpatient acupuncture services. He obtained full recovery by the third week of treatment, suggesting that acupuncture effectively complements conventional treatments in facial nerve palsy recovery. Acupuncture in Bell's palsy is believed to stimulate nerve regeneration, reduce inflammation, and enhance blood circulation, thereby improving facial muscle function and accelerating recovery. Studies suggest its adjunctive role in reducing recovery time and enhancing nerve repair. This case highlights the potential role of acupuncture in accelerating facial nerve recovery, warranting further research into its efficacy in facial nerve palsy management.

# A case of guillain-barré syndrome (GBS) preceding systemic lupus erythematosus (SLE) diagnosis in a young woman

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## SUMMARY

Guillain-Barré syndrome (GBS) is an autoimmune cause of demyelinating polyneuropathy often triggered by infections. Systemic lupus erythematosus (SLE) is an autoimmune disorder caused by genetic and environmental factors. Although they are distinct conditions, there is a well-documented relationship between SLE and GBS. **Case Presentation:** A 41-year-old woman presented with progressive bilateral lower limb weakness which is ascending in nature over one week after experiencing diarrhoea and fever. Examination showed lower motor neurone weakness, hypotonia, areflexia, and loss of sensation in a stocking pattern. Nerve conduction studies showed non-length-dependent motor predominant axonal polyneuropathy. Her lumbar puncture was normal. She was diagnosed with GBS - AMAN subtype and was given IVIG for five days. Despite treatment, she deteriorated with respiratory failure, requiring intubation. Simultaneously, vasculitic rashes developed on her palms and toes. Blood tests showed hypocomplementemia, elevated ESR levels and positive for ANA, anti-dsDNA and anti-Sm. She was diagnosed with SLE and received plasmapheresis, hydrocortisone and hydroxychloroquine. Despite treatment, she succumbed due to severe sepsis. SLE and GBS can co-exist, likely due to shared autoimmune mechanisms. In GBS, infections may trigger immune responses that attack and damage peripheral nerves due to the molecular mimicry mechanism. In SLE, autoantibodies, vasculitis and cytokine overproduction can contribute to nerve damage, which can manifest as length-dependent neuropathy, mononeuritis multiplex, or a GBS-like pattern. While GBS and SLE respond to IVIG and plasmapheresis, SLE-related neuropathy may require more aggressive treatments like cyclophosphamide or rituximab. Early recognition of SLE in acute peripheral neuropathy allows for timely therapy, reducing morbidity and mortality.

# Strangulated epigastric hernia: an uncommon cause of small bowel obstruction

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## SUMMARY

Epigastric hernia involves tissue protrusion through a defect in the linea alba between the xiphoid process and the umbilicus, accounting for 1.6-3.6% of abdominal hernias. It typically occurs within 3 inches above the umbilicus and is 2-3 times more common in men, particularly those aged 20–50 years. **Case Presentation:** An 83-year-old man presented with an acute onset of an irreducible, painful epigastric mass and obstipation. Examination revealed a non-pulsatile, tender 10 cm x 10 cm mass with absent bowel sounds. Laboratory investigations were unremarkable. Abdominal X-ray demonstrated valvulae conniventes at the epigastric region, while contrast-enhanced computed tomography (CECT) of the abdomen confirmed an epigastric hernia containing small bowel and mesenteric content, causing small bowel obstruction. Emergency laparotomy revealed 30 cm of gangrenous small bowel. Resection with side-to-side anastomosis was performed. Postoperative recovery was uneventful. Proposed aetiologies include the vascular lacunae hypothesis, where neurovascular bundles perforate the linea alba, and the tendinous fibre decussation hypothesis, suggesting structural weakness due to inadequate fibre decussation. While 75% are asymptomatic, symptoms may include upper abdominal pain or swelling, vomiting, and absence of flatus or bowel opening. Proximal obstructions may mimic gastric outlet obstruction with postprandial nausea or vomiting. CECT is the gold standard for diagnosis, while X-rays have limited utility, especially in proximal obstructions or when assessing for strangulation. Early recognition of strangulated epigastric hernia is crucial due to its rapid progression. Prompt surgical intervention minimises the need for bowel resection and its associated complications.

# Post-tonsillectomy haemorrhage in a patient with obstructive sleep apnea and morbid obesity: airway management challenges and the role of the salad technique – a case report

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## SUMMARY

Post-tonsillectomy haemorrhage is a life-threatening complication requiring urgent airway management, especially in obese patients with obstructive sleep apnoea (OSA). Active bleeding increases the risk of aspiration and failed intubation. The Suction-Assisted Laryngoscopy and Airway Decontamination (SALAD) technique facilitates airway control in such cases. **Case Presentation:** A 31-year-old man, with a body mass index of 45 and mild obstructive sleep apnoea (OSA) underwent elective tonsillectomy. Five days postoperatively, he developed profuse oropharyngeal bleeding but remained haemodynamically stable. Given the high aspiration risk and difficult airway, he was taken for emergency surgery. Rapid sequence induction (RSI) with the SALAD technique was performed. A large-bore suction catheter continuously cleared blood during laryngoscopy, enabling rapid, successful intubation without desaturation. Hemostasis was achieved, and he was admitted to the intensive care unit intubated for airway monitoring. He was extubated the following day and recovered without complications. Post-tonsillectomy haemorrhage in obese OSA patients presents airway challenges due to limited patency and aspiration risk. The SALAD technique, initially developed for massive regurgitation, effectively manages active upper airway bleeding by improving visualisation and reducing aspiration risk. In this case, RSI with SALAD ensured safe, efficient intubation, preventing hypoxia and airway obstruction. The SALAD technique is a critical airway management strategy in post-tonsillectomy haemorrhage, particularly in obese OSA patients. Its use enhances visualisation, facilitates rapid intubation, and optimises patient outcomes.

# Keep calm and beam on the use of palliative radiotherapy for cutaneous squamous cell carcinoma

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## **SUMMARY**

Squamous cell carcinoma is a type of skin cancer that arises from the squamous cells, which are flat cells found in the outermost layer of the skin. Radiotherapy is a common treatment option. It utilises high-energy radiation beams to target and destroy cancer cells while minimising damage to surrounding healthy tissues. **Case Presentation:** A 94-year-old man with multiple comorbidities presented with a painful progressive fungating growth over his right arm since January 2021. A skin punch biopsy performed in January 2023 showed a well-differentiated keratinising squamous cell carcinoma. He was unfit for surgery in view of age and comorbidities. He was given palliative radiotherapy to the right arm mass 8Gy/1#/1day at 100% using electron 9 MeV in March 2023. He was placed in supine position, right hand akimbo, a folded bed sheet was placed under the right elbow, a 1 cm gel bolus was placed over the mass, and a 1 cm folded wet gauze surrounding the mass to match the mass height. In two months post treatment, the mass has shrunk and flattened. He was pain-free and was able to carry out his daily activities well. Radiotherapy is a successful, time-efficient, well-tolerated, and cost-effective intervention that is crucial for the appropriate delivery of palliative oncology.

# Genitourinary melioidosis in a patient with horseshoe kidney and staghorn calculi

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## SUMMARY

Melioidosis is an infection caused by *Burkholderia pseudomallei*, presenting with various manifestations, including pneumonia, abscesses, and septicaemia. However, urinary tract infection (UTI) due to *B. pseudomallei* is an uncommon presentation and is rarely reported in the literature. **Case presentation:** A 60-year-old man with bilateral nephrolithiasis and horseshoe kidney presented with fever, diarrhoea, and poor oral intake for one month. He had a failed retrograde pyelogram stenting for a left proximal ureteric calculus and benign prostatic hyperplasia managed with oral doxazosin. On admission, the physical examination was unremarkable. Initial investigations showed leucocytosis and elevated C-reactive protein of 310 mg/L. Urine analysis revealed leukocyturia with a negative nitrite test. He was treated for urosepsis with intravenous piperacillin-tazobactam and later escalated to meropenem due to persistent fever. A CT scan showed lesion at isthmus of horseshoe kidney measuring 2.5x3.5x3.0cm (APxWxCC) with large left proximal ureteric stone causing obstructive uropathy, pyelitis, and cystitis, with no prostate abscess. Urine culture grew *B. pseudomallei*, susceptible to meropenem, co-amoxiclav, co-trimoxazole, and ceftazidime. Blood cultures were negative. Treatment included intravenous ceftazidime and oral co-trimoxazole for six weeks. A repeat CT scan after intensive phase of antibiotic showed reduction of lesion at isthmus of horseshoe kidney measuring 2.0x2.9x3.0cm (APxWxCC) with resolved pyelitis and stable calculi. He was discharged with co-trimoxazole for a planned 12-week duration and repeated CT assessment later. Structural abnormalities like horseshoe kidney and ureteric calculi increase the risk of urinary melioidosis. This case highlights the need to consider *B. pseudomallei* in urinary infections, especially in endemic areas and patients with urinary tract anomalies.

# Unveiling the “3-noes” right-sided infective endocarditis: a diagnostic dilemma in a non-IVDU patient

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## SUMMARY

Right-sided infective endocarditis (RSIE) is a rare but potentially life-threatening condition, accounting for only 5–10% of all infective endocarditis (IE) cases. Traditionally, RSIE is linked to intravenous drug use (IVDU), intracardiac devices, or pre-existing cardiac abnormalities. However, an emerging subset of RSIE termed “3-Noes RSIE”, defined by the absence of left-sided IE, IVDU, and intracardiac devices, thus presents a unique diagnostic challenge due to its atypical clinical manifestations. We present a 53-year-old Indonesian man with type 2 diabetes mellitus (T2DM) who presented with persistent fever. He denied any high-risk behaviour, IVDU, or prior cardiac history. Initial evaluation suggested community-acquired pneumonia; however, blood cultures later identified methicillin-susceptible *Staphylococcus aureus* (MSSA). Transthoracic echocardiography (TTE) detected a right ventricular mass, initially presumed to be a thrombus but later confirmed as vegetation. Despite not fully meeting Duke’s major criteria, a strong clinical suspicion guided the diagnosis of RSIE. The patient responded remarkably well to a two-week course of high-dose IV cloxacillin, achieving complete clinical resolution without surgical intervention. RSIE often mimics respiratory infections due to frequent pulmonary embolic complications, leading to delayed diagnosis. This case exemplifies the importance of considering RSIE in patients with persistent fever and bacteraemia, even in the absence of classical risk factors. The “3-Noes RSIE” phenotype is increasingly recognised in middle-aged, non-IVDU patients with healthcare-associated infections, particularly those with diabetes, which predisposes them to immunological compromise. Despite its rarity, early diagnosis and targeted antimicrobial therapy are critical to reducing morbidity and mortality.

# Heart Sign” - the epitome of bilateral medial medullary infarct

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## SUMMARY

Bilateral medial medullary infarction (BMMI) is a rare and severe subtype of stroke, accounting for less than 1% of all acute strokes. It typically presents with quadriparesis, bilateral hypoglossal palsy, bilateral sensory deficits, and respiratory failure. BMMI can mimic other neurological emergencies such as Guillain-Barré syndrome, myasthenic crisis, and brainstem encephalitis, often leading to misdiagnosis. Atherosclerotic disease is the most common cause. **Case Presentation:** A 61-year-old Malay man with diabetes and hypertension presented with a sudden onset of left-sided numbness. Neurological and cranial nerve assessments were normal, and a CT scan showed chronic lacunar infarcts. His symptoms resolved, and he was admitted for a transient ischaemic attack. On the second day, he developed left-sided hemiparesis, with blood pressure elevated to 200/112 mmHg. Over the next 24 hours, his condition progressed to quadriparesis, dysarthria, and dyspnoea. Muscle strength declined to 0/5 in all limbs. Despite permissive hypertension, his condition continued to deteriorate, requiring intubation. An MRI brain revealed acute BMMI with intracranial atherosclerotic disease (ICAD). Dual antiplatelet therapy was initiated. A tracheostomy was performed on day 12 due to failed extubation. After aggressive physiotherapy, he regained limited movement in the left limbs and was referred to a rehabilitation centre. BMMI is most often caused by ICAD. Diagnosis can be challenging due to overlapping symptoms with conditions like Guillain-Barré syndrome. The “heart sign” on MRI is indicative of bilateral pyramidal tract involvement, which is classical. Early recognition and intervention are critical for improving outcomes.

# When strokes and medications collide: unmasking stroke mimics and drug-induced movement disorders

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## SUMMARY

Drug-induced movement disorders (DIMDs) occur when medications affect the dopamine system, leading to abnormal motor symptoms. Common drugs include antipsychotics and antiemetics. Symptoms are typically reversible upon stopping the medication, making early identification and treatment essential. **Case Presentation:** A middle-aged woman, diagnosed with right glomus tympanicum, underwent endoscopic and microscopic excision with ossiculoplasty. Post-operatively, she was treated with intravenous metoclopramide, which was increased to 30 mg daily, along with prochlorperazine and cinnarizine. On day-2, she developed hand tremors, which were not addressed, but by day-5, she experienced a near fall and was evaluated for stroke mimics. She was found to have a robotic gait, tremors, cogwheel rigidity, jaw stiffness, and anxiety. All her antiemetics were discontinued and replaced with Granisetron. Non-contrast brain computed tomography was reported as normal. After starting intravenous hydration and adding procyclidine, benhexol, and clonazepam, her symptoms resolved, and she was discharged without rigidity. DIMDs can mimic conditions such as Parkinson's disease or stroke. Her post-op medications likely caused her symptoms. The resolution of symptoms after discontinuing the drugs underscores the importance of early recognition and intervention. Diagnosing DIMDs can be challenging, especially when multiple drugs are involved. DIMDs are common side effects of dopamine-blocking medications. Diagnosing the cause can be difficult, but discontinuing the offending medication is usually the most effective treatment.

# Case report of sclerosing angiomatoid nodular transformation of the spleen (SANT): a rare entity

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## SUMMARY

Splenic tumours are a rare occurrence with an estimated incidence of 0.1 to 0.2% globally. Benign splenic tumours include haemangiomas, lymphangiomas, hamartomas and cysts, while malignant tumours of the spleen are angiosarcomas, lymphomas and malignant secondaries. Sclerosing angiomatoid nodular transformation (SANT) of the spleen was first described in 2004. It is a rare benign vascular tumour of the spleen. **Case Presentation:** This is a case of an incidentally detected splenic tumour. A 58-year-old man who was admitted for chest discomfort. He did not have any comorbidities or past surgical history. His vitals were within normal limits, and abdominal examination did not reveal any mass. Cardiac assessment was done and ruled out cardiac disease. A CT scan done showed a splenic tumour. His blood parameters were within normal limits. Laparoscopic splenectomy was performed, and the entire spleen was sent for histopathologic examination. The biopsy confirmed a SANT. His wounds have healed well, and he was given a triple vaccine at day 10 post-op. Sclerosing adenomatoid nodular transformation (SANT) is a rare benign tumour of the spleen. It was first reported by Maritz Martel and the team in 2004. The majority of the SANT are diagnosed postoperatively upon histopathological examination of the resected specimen. The typical appearance on CT is a round, solitary lesion with smooth margins. Upon contrast infusion, a peripheral and septal enhancement is seen, and centripetal filling is seen on the delayed phase. Histological characteristics are angiomatoid nodules with internodular stroma consisting of myxoid to dense fibrous tissue. Due to its benign nature and relatively less vascular, it is an ideal tumour for laparoscopic excision. Benign splenic tumours, though asymptomatic, should be counselled for surgery, as percutaneous biopsy runs the risk of bleeding and bowel injury. We hereby report this for its rarity and stress the importance of surgery to diagnose SANT.

# Platelet-rich plasma for an atypical case of Morton's neuroma: a regenerative approach to long-term pain relief

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## SUMMARY

Morton's neuroma is a painful, frequently encountered yet challenging condition characterised by perineural fibrosis and nerve entrapment, commonly affecting the interdigital nerves of the foot. While conventional treatments include corticosteroid injections, orthotics, and surgery, their effectiveness is often yielding inconsistent results. Platelet-rich plasma (PRP) has emerged as an innovative alternative for chronic musculoskeletal and neuropathic pain conditions due to its growth factor-rich composition. We report an atypical case of a 26-year-old woman presenting with an atypical case of chronic Morton's neuroma localised to the fourth intermetatarsal space, an unusual anatomical site. The patient experienced persistent neuropathic pain despite multiple conservative treatments. Following a PRP injection, over a 12-month follow-up period, the patient demonstrated significant pain relief (VAS improvement from 9/10 to 1/10), functional recovery, and no recurrence of symptoms. PRP's autologous growth factors may contribute to nerve healing, neuromodulation, and pain alleviation, making it a compelling option for treating Morton's neuroma. Compared to corticosteroids, PRP offers prolonged symptom relief by addressing the underlying pathology rather than merely suppressing inflammation. This case highlights PRP's potential as a minimally invasive, effective alternative to conventional therapies. In conclusion, PRP therapy provided substantial pain relief and functional enhancement in this patient, suggesting its role as an innovative and regenerative treatment option for patients with atypical presentations of Morton's neuroma.

# The prevalence of depressive symptoms among older adults with hypertension and its associated factors in primary care clinics in Melaka Tengah and Jasin

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## ABSTRACT

**Introduction:** Hypertension is a prevalent chronic condition among older adults and is frequently accompanied by depressive symptoms that often go unrecognised. Depression in this population can negatively affect treatment adherence, quality of life, and overall health outcomes. In Malaysia, data regarding the burden of depressive symptoms in hypertensive older adults, especially in primary care settings, remains limited. This study aimed to determine the prevalence of depressive symptoms and identify associated sociodemographic and clinical factors among older adults with hypertension attending primary care clinics in Melaka Tengah and Jasin. **Materials and Methods:** A cross-sectional study was conducted over two years (September 2023 – September 2025) in five government primary care clinics across Melaka Tengah and Jasin districts. Older adults aged  $\geq 60$  years with physician-diagnosed hypertension for at least one year were included. Exclusion criteria comprised cognitive impairment, acute medical illness, psychosis, or inability to complete the self-administered questionnaire. Data on demographic and clinical variables were collected, including physical activity, comorbidities, blood pressure control, BMI, waist circumference, and living arrangements. Depression screening was conducted using the Whooley two-question screen, followed by the Patient Health Questionnaire-9 (PHQ-9) for those screening positive. Bivariate and multivariate logistic regression analyses were performed to identify factors associated with depressive symptoms. **Results:** A total of 260 respondents were included, with a median age of 69 years (IQR = 9). The prevalence of depressive symptoms was 23.1% based on the Whooley screen. Among those screened positive, 40.0% had mild depression and 6.7% had moderate depression, with no cases of severe depression. Female gender (28.7% vs. 16.9%,  $p=0.025$ ) and living alone (37.0% vs. 21.5%,  $p=0.069$ ) were more likely associated with depressive symptoms. Other variables, including comorbidities, blood pressure control, BMI, and waist circumference, were not significantly associated. Multivariate analysis showed that gender (OR=0.569, 95%CI: 0.308, 1.050) and family support (OR=0.441, 95%CI: 0.183, 1.058) approached statistical significance. **Conclusion:** Depressive symptoms were present in nearly one-quarter of older hypertensive patients in this study. Although most cases were mild, the association with gender and living arrangement highlights the need for psychosocial screening in this population. Incorporating routine depression screening in primary care for older adults with hypertension may facilitate early intervention, improve psychological well-being, and enhance management of chronic conditions.

# Inpatient diabetes care and outcomes: a clinical audit in a Malaysian District Hospital

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## ABSTRACT

**Introduction:** Effective inpatient care for people living with diabetes (PWD) is crucial for improving health outcomes and reducing complications. This audit aimed to evaluate inpatient diabetes care, regardless of admission reason, at a busy district hospital in Malaysia. **Materials and Methods:** A retrospective review was conducted on patient records from the general medical wards of the hospital of all people admitted between 1st and 20th July 2024. Records of patients with pre-existing or newly diagnosed diabetes were identified and reviewed in further detail. **Results:** 580 patient records were reviewed, identifying 183 (31.6%) PWD. Among them, 94 (51.4%) were female, and 89 (48.6%) were male. Most had type 2 diabetes (175, 95.6%), while 8 (4.4%) had type 1 diabetes. Common admission reasons included infections (48, 26.2%), cardiovascular disease (41, 22.4%), renal dysfunction (34, 18.6%), and diabetes-related emergencies (17, 9.3%). Diabetic ketoacidosis (DKA) accounted for 6 (3.3%) admissions, with one death from septic shock. Three PWD (1.6%) required intensive care. No cases of hyperosmolar hyperglycaemic state or inpatient hypoglycaemia were identified. The mean length of stay was  $7.5 \pm 6.3$  days, with a mortality rate of 14 (7.7%), primarily due to their underlying medical conditions. Laboratory results showed a mean glucose of  $11.5 \pm 5.9$  mmol/L at admission and creatinine of  $232.2 \pm 220.8$   $\mu$ mol/L. HbA1c was measured in 49 (26.8%) patients, with a mean of  $9.1\% \pm 2.7\%$ . Insulin was the most used medication for glycaemic control, increasing from 64 (35.0%) pre-admission to 136 (74.3%) during hospitalisation, then declining to 69 (37.7%) at discharge, with 4 (2.2%) new insulin initiations. Conversely, other agents were used less during hospitalisation. Metformin dropped from 69 (37.7%) pre-admission to 38 (20.8%) during admission and increased to 65 (35.5%) at discharge. Sulfonylureas decreased from 15 (8.2%) to 8 (4.3%) and 5 (2.7%) upon discharge. DPP-4 inhibitor declined from 5 (2.7%) to 2 (1.1%) but increased to 5 (2.7%) at discharge. SGLT2 inhibitor use dropped from 9 (4.9%) to 6 (3.3%) but increased to 14 (7.7%) post-discharge. GLP-1 RA use remained minimal (1, 0.5%). Only 6 (3.3%) patients, mostly with DKA, received an inpatient diabetes specialist review. Upon discharge, 74 (40.4%) were scheduled for follow-up at a district health clinic, though this number may be an underestimate due to incomplete documentation. **Conclusion:** Our audit identifies the need for structured data collection and evaluation of inpatient diabetes services to better address needs for PWD. Findings suggest a need for coordinated care, increased specialist involvement, and robust quality governance to improve acute diabetes care delivery and follow-up. Shifts in pharmacotherapy emphasise the importance of standardised protocols. Limitations include documentation gaps which may have underestimated management practices, emphasising the need for improved data collection, documentation and continuity of care. Strengthening inpatient management and follow-up is crucial to optimising outcomes and reducing complications in PWD.

# Intention to use mHealth mobile applications among medical doctors in Malaysia – an online survey

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## ABSTRACT

**Introduction:** Health-related mobile applications are useful in medical practice, but their use is reported to be low among Malaysian medical doctors. We aimed to study the intention to use, and the factors associated with their intention to use. **Materials and Methods:** An online survey was conducted among a convenient sample of medical doctors affiliated with the Malaysian Medical Association (MMA). We constructed a questionnaire based on the Theory of Planned Behaviour that includes attitude, perceived behavioural control, subjective norms, benefits, and barriers. Construct, discriminant validity and reliability were tested using structural equation modelling on SmartPLS software. Multiple linear regression was used to ascertain factors associated with intention to use mHealth. **Results:** Of 289 doctors invited, 208 (72%) completed the survey. The construct and discriminant validity and reliability indices of the questionnaire were satisfactory. Forty per cent of the doctors showed a positive intention to use mHealth applications. Intention to use was associated with participants' attitude ( $\beta=0.33$ ,  $p<0.001$ ), subjective norm ( $\beta=0.248$ ,  $p<0.001$ ), and perceived behavioural control ( $\beta=0.238$ ,  $p<0.001$ ). Benefit ( $\beta=0.142$ ,  $p<0.05$ ) also showed an association with intention to use mHealth apps. **Conclusion:** In conclusion, doctors' intention to use mHealth applications is influenced by positive attitudes, positive encouragement from peers, and those who perceived high self-control and efficacy. Factors identified would help develop strategies to improve the utilisation of mobile health apps to improve healthcare services.

# Assessing stakeholders' perspectives on commercial e-pharmacy systems in Malaysia: an ideal framework development

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## ABSTRACT

**Introduction:** The swift growth of commercial e-pharmacies has revolutionised medication access in Malaysia, offering unprecedented convenience while exposing critical regulatory vulnerabilities. Despite enhancing affordability and accessibility, this digital transformation has enabled concerning practices, including counterfeit drug distribution, prescription circumvention, and unauthorised medication sales. This study analyses stakeholder perceptions of e-pharmacy through the lenses of regulatory adequacy, enforcement efficacy, technological solutions, patient safety considerations, and ultimately proposes a framework requirement for a national e-pharmacy verification system. **Materials and Methods:** A qualitative approach was employed, utilising in-depth interviews and focus group discussions with regulators, e-pharmacy operators, and healthcare practitioners. Supplementary data were collected through observational analysis of Verified Internet Pharmacy Practice Sites (VIPPS) as a benchmark and document analysis of government guidelines. **Results:** Thematic analysis revealed four critical challenges in Malaysia's e-pharmacy sector: (1) Regulatory gaps stemming from outdated guidelines by government, inconsistent enforcement, and weak non-compliance penalties; (2) Consumer protection risks, including unauthorised access and absence of standardised prescription validation; (3) Stakeholder misalignment between public and social actors led to compliance confusion and hindered a unified policy development; (4) Implementation barriers, including technological limitation, industry resistance, and inadequate audits. Despite these challenges, stakeholders proposed viable solutions; a national e-pharmacy registry, AI monitoring and blockchain tracking while acknowledging cost and feasibility constraints. **Conclusion:** These findings highlight the urgent need for coordinated policy reform and technological integration, proposing an e-pharmacy verification model aligned with international norms to strengthen oversight and enhance patient safety in Malaysia.

# Botulinum injection as a treatment option in allergic rhinitis: a systematic review and meta-analysis

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## ABSTRACT

**Introduction:** Botulinum toxin type A (BTX-A) is used in treating a vast range of medical conditions for the past decade. BTX-A can be a possible choice in treating patients with allergic rhinitis. This study aimed to assess the potential treatment and effectiveness of BTX-A in treating refractory allergic rhinitis. **Materials and Methods:** Electronic searches for RCTs were conducted using CENTRAL (Cochrane Central Register of Controlled Trials), PubMed, Scopus and Google Scholar databases. Randomised controlled trials (RCTs) that assessed the effect of BTX-A in allergic rhinitis patients in comparison to either a placebo or an active comparator was included. The primary outcome was mainly to evaluate total nasal symptom score (TNSS) with secondary outcomes for individual nasal symptom score (INSS), disease-specific quality of life (QOL) and adverse effects. **Results:** Five RCTs had been identified from 244 potential articles. Most articles were reported from Middle Eastern countries. A total of 187 allergic rhinitis patients with a mean age of 31.8 years were included in the meta-analysis. As compared to placebo, the effects on total nasal symptom score (TNSS) favoured BTX-A; the  $\leq 4$ -week effect (SMD -2.07, 95%CI: -3.58, -0.5; three RCT;  $p < 0.01$ ). The beneficial effects were sustained up to 12 weeks (SMD -2.42, 95%CI: -4.22, -0.62; three RCTs;  $p < 0.01$ ). There was also improvement in the individual nasal symptoms score in rhinorrhoea (SMD -2.18, 95%CI: -3.74, -0.62; two RCTs;  $p < 0.01$ ), sneezing (SMD -1.88, 95%CI: -2.60, -1.15; two RCTs;  $p < 0.01$ ) and itchiness (MD -1.57, 95%CI: -2.45, -0.69; one RCT;  $p < 0.01$ ). Compared with active total comparators, triamcinolone injection (20 mg/mL) and cetirizine (10mg) showed no significant difference in the TNSS at four weeks (SMD 0.3, 95%CI: -0.96, 1.01; two RCTs;  $p = 0.96$ ). The risk ratio of adverse events favoured BTX-A over cetirizine (one RCT). However, there was no difference between BTX-A and cetirizine on quality of life (QOL) (one RCT). **Conclusion:** BTX-A had shown improvement in TNSS and individual nasal symptoms such as rhinorrhoea, sneezing and itchiness. The immediate effect within four weeks was demonstrated up to 12 weeks. BTX-A was safe, well tolerated and may be considered as an alternative option to refractory allergic rhinitis.

# Tracking sick building syndrome clusters among hospital staff: an iaq-based approach

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## ABSTRACT

**Introduction:** Sick Building Syndrome (SBS) poses a significant but under-recognised occupational health challenge in healthcare settings. With hospital workers often exposed to suboptimal indoor air quality (IAQ), identifying environmental contributors to SBS is critical for protecting healthcare staff and maintaining high-quality patient care. This study aimed to assess the prevalence and the association between workstation type and discomfort in a tertiary hospital in northern Malaysian. **Materials and Methods:** A cross-sectional study was conducted between December 2024 and February 2025, involving a walkthrough inspection of various hospital zones based on the Industry Code of Practice on Indoor Air Quality (ICOP 2010) and a structured online questionnaire completed by 265 healthcare workers. SBS symptoms and environmental discomfort factors were analysed in relation to workstation type (open vs. enclosed). **Results:** Enclosed workstations showed a higher prevalence of SBS symptoms, including respiratory symptoms (range 61-69%), headache (73.6%) and fatigue (78.10%). Significant associations were observed between workstation type and five key discomfort factors. Open-concept workstations reported higher levels of discomfort due to high temperature ( $p=0.025$ ), stuffy air ( $p=0.015$ ), dry air ( $p=0.016$ ), unpleasant odour ( $p=0.006$ ), and exposure to passive smoking ( $p=0.003$ ). Findings from the walkthrough inspection revealed inadequate ventilation, fungal growth, and chemical exposures from cleaning agents. **Conclusion:** These findings underscore the urgent need for targeted interventions, including improved ventilation, routine IAQ monitoring, and hospital-wide policy enhancements. Strengthening IAQ management strategies is essential to creating a healthier work environment in tertiary healthcare facilities and safeguarding the well-being of healthcare professionals.

# Challenges to healthcare access for migrants in transit: a scoping review

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## ABSTRACT

**Introduction:** Migrants in transit face numerous health risks and challenges, many of which are exacerbated by barriers to accessing healthcare. Given the growing global migration crisis, understanding these barriers is essential for designing effective health interventions and policies that ensure equitable healthcare access for this vulnerable population. This scoping review aims to investigate the barriers and the existing health policies that complicate healthcare access for migrants in transit. **Materials and Methods:** This review scoped 26 papers written in English between 2011 and June 2024, including grey literature, using the Arksey and O'Malley framework and the PRISMA-ScR checklist. The databases searched included Medline, Migration Research Hub, Science Direct, Biomed Central, OECD, and third-sector websites. **Results:** Sixteen peer-reviewed articles and 11 grey literature reports were included in this review. Several key barriers to healthcare access were identified, including communication, financial and administrative barriers. Healthcare systems are often underfunded and unprepared to address the specific needs of transit migrants. Voluntary non-governmental and civil society organizations were found to be significant facilitators in accessing healthcare. Only a few studies identified policy gaps restricting healthcare access. **Conclusion:** Addressing these barriers requires coordinated efforts at both local and international levels, including policy reforms, improved healthcare infrastructure, and tailored interventions that consider the unique vulnerabilities of migrants in transit. Further research is needed to explore effective strategies to mitigate these challenges and ensure that migrants receive timely and appropriate healthcare during their journeys.

# Short term outcome of metabolic surgery in Hospital Fatimah Ipoh

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## ABSTRACT

**Introduction:** Metabolic surgery refers to surgical procedures that are carried out with the intention of inducing remission or reversing metabolic syndrome. Metabolic syndrome is a constellation of conditions that puts patients at risk of developing cardiovascular disease, cerebrovascular accidents, and type 2 diabetes mellitus as well as other serious conditions. It is characterised by a large waistline, high circulating triglycerides, high glucose levels and high blood pressure. Metabolic surgery is proven to reverse these conditions, particularly type 2 diabetes mellitus (T2DM). The common surgical procedures are sleeve gastrectomy, Roux-En-Y gastric bypass (RYGB) and one-anastomosis gastric bypass (OAGB). **Materials and Methods:** This is a retrospective study conducted in Hospital Fatimah Ipoh from May 2021 to May 2025. The records of all patients undergoing metabolic surgery were extracted and reviewed. The data was analysed according to the patient's preoperative demography, preoperative comorbidities, types of surgical procedures and postoperative outcomes. The post-operative outcomes that were reviewed were reduction in body weight, reduction of BMI and resolution of medical conditions. **Results:** A total of 32 patients underwent metabolic surgery from May 2021 to May 2025. Twenty-two had no medical conditions, while 10 had obesity-associated comorbidities. The comorbidities that were encountered are hypertension, T2DM, hyperlipidaemia, obstructive sleep apnoea, chronic kidney disease, infertility and osteoarthritis (OA). Thirteen patients had sleeve gastrectomy, eight patients had RYGB, seven had OAGB, two patients had revision sleeve to RYGB, and two patients had revision sleeve to OAGB. There was a 90% reversal in Type 2 diabetes, 100% remission in OSA, 80% in hypertension and 60% in hyperlipidaemia. One patient showed improvement in renal function with marked improvement in eGFR. Two patients with OA had their joint replacement deferred as they experienced improvement in their joints following weight loss. **Conclusion:** Metabolic surgery is rapidly becoming the treatment of choice for patients with metabolic syndrome and obesity-induced medical conditions. It is proven to have high success rates in reversing metabolic syndrome, particularly T2DM. Mechanisms that contribute to reversal and remission of T2DM are caloric restriction, re-routing of food into the distal small bowel, better intestinal adaptation, improved GLP-1 responses, enhanced incretin sensitivity and activity. Among the surgical procedures, the OAGB and the RYGB are found to have better long-term outcomes when compared to sleeve gastrectomy for metabolic syndrome. In addition to the above-mentioned procedures, newer surgical procedures that offer similar outcomes are sleeve plus procedures and single anastomosis duodenal ileal bypass. There are many studies that prove these surgeries to be superior to oral or injectable hypoglycaemic agents. The benefits of metabolic surgeries are clear and proven. It is no longer done purely for weight loss but more importantly for metabolic syndrome. When these surgeries are done early, it can potentially reduce the burden on the healthcare system, especially in treating complications resulting from metabolic syndrome.