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Malaysian Medical Association*

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Identify precisely all drugs and chemicals used, including generic name(s), dosage(s) and route(s) of administration. Do not use patients' names, initials or hospital numbers. Include numbers of observation and the statistical significance of the findings when appropriate.

When appropriate, particularly in the case of clinical trials, state clearly that the experimental design has received the approval of the relevant ethical committee.

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

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#### Acknowledgements:

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Several effective drugs are available at fairly low cost for treating patients with hypertension and reducing the risk of its sequelae.<sup>1,3,5</sup>

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If you are citing the author's name in your text, you must insert the citation number as well. Jewell BL (8) underlined that as focus in the SARS-CoV-2 pandemic shifts to the emergence of new variants of concern (VOC), characterising the differences between new variants and non-VOC lineages will become increasingly important for surveillance and maintaining the effectiveness of both public health and vaccination programme. If you are citing more than one author's name in your text and you want to cite author names in your text, use 'et al.' after the first author. Example: Rampal et al. (9) highlighted that the disregard of the manuscript guidelines and instruction to authors of the journal you submit, is one of the common reasons for 'Rejection' of the article.

#### Example references Journals:

##### Standard Journal Article

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

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

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

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

#### Books and Other Monographs:

##### Personal Author(s)

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

##### Chapter in Book

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

##### Corporate Author

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

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

World Health Organization. Novel Coronavirus (2019-nCoV) Situation Report 85, April 14, 2020. [cited April 2020] Accessed from: <https://www.who.int/docs/defaultsource/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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# Social scaffolding: Enhancing neuroplasticity and Alzheimer's prevention through interpersonal engagement

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## ABSTRACT

**Introduction:** Alzheimer's disease is defined by a relentless accumulation of amyloid- $\beta$  plaques and neurofibrillary tangles, which drive the progressive cognitive decline seen in aging populations. With pharmacological options currently limited in their ability to halt disease progression, there is an urgent need for non-pharmacological strategies that support 'cognitive reserve'. This project targets the critical gap in social engagement within elderly care, aiming to harness the brain's inherent capacity for neuroplasticity. By focusing on low-cost, high-impact social interventions, we aim to prove that meaningful interpersonal connection can serve as a powerful, accessible tool for enhancing both the neurobiology and the quality of life for the elderly. **Materials and Methods:** The proposed program incorporates a series of structured group activities aimed at enhancing cognitive, emotional, social, and physical functioning among older adults. **Results:** Reminiscence-based discussions are used to facilitate the sharing of meaningful life experiences, thereby supporting memory activation and strengthening social engagement. Complementing this, gardening activities provide opportunities for light physical engagement while promoting motor coordination, psychological well-being and a sustained sense of purpose. Cognitive functioning is further reinforced through interactive tasks such as puzzles, drawing, and board games, which collectively stimulate attention, memory processes, and fine motor skills. Additionally, music and movement sessions are integrated to encourage emotional expression, trigger memory recall and maintain physical activity, ultimately contributing to a holistic improvement in overall quality of life. Based on existing neurobiological studies, we expect the intervention to demonstrate a measurable increase in participant engagement. We hypothesize that these social stimuli will promote hippocampal neurogenesis and strengthen synaptic connections, providing a biological buffer against neurodegeneration in elderly with and without Alzheimer's disease. **Conclusion:** Social scaffolding plays an important role in supporting neuroplasticity and may help reduce the risk of Alzheimer's disease. Regular, meaningful social interaction strengthens cognitive processes, reinforces neural connections, and supports the brain's ability to adapt over time. Through collaborative learning and emotionally supportive relationships, individuals can build cognitive reserves and potentially delay cognitive decline. As Alzheimer's rates continue to increase worldwide, promoting social engagement offers a practical and accessible strategy for maintaining brain health. Further research is needed to better understand how social connections directly influence neuroplasticity and dementia prevention.

# Dietary Intake, Insulin Resistance and Glycaemic Control (DIRG Study) among adults with type 2 diabetes mellitus in Malaysia compared with healthy individuals: An ongoing cross-sectional pilot study

Kan Yin Wong<sup>1,2</sup>, Leeynesh Sooriyapiragasam<sup>1,2,3</sup>, Bhuwaneswaran Vijayam<sup>1,2</sup>

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## ABSTRACT

**Introduction:** Type 2 diabetes mellitus (T2DM) is one of the fastest growing and most burdened chronic diseases worldwide, where prevalence has been increasing drastically over the past decade, largely driven by lifestyle changes, urbanisation, and dietary modifications. Poor dietary patterns and increasing obesity contribute to insulin resistance, which plays a pivotal role in the development and progression of T2DM and its complications. While dietary modification remains another keystone of diabetes management, detailed evidence describing the relationship between dietary intake, insulin resistance, and glycaemic control among Malaysian adults is still limited. In addition, the ongoing nutrition transition in Malaysia has led to increased consumption of calories dense and highly processed foods, which may further worsen metabolic health. Understanding how dietary intake relates to insulin resistance and glycaemic control in individuals with T2DM may help to guide more targeted and culturally relevant dietary recommendations with possible similar alternatives. **Materials and Methods:** This is a cross-sectional pilot study at a primary care clinic. Adults aged 18 years and above are being recruited into two groups: individuals diagnosed with T2DM attending the clinic and healthy volunteers without metabolic disease. Baseline demographic information, medical history, anthropometric measurements, and biochemical parameters are obtained through clinical assessments and medical records. Participants are asked to complete a three-day image-assisted dietary record by submitting photographs and brief descriptions of all meals and beverages consumed using mobile messaging. Trained research personnel would analyse these dietary records to estimate daily energy intake and the composition of macronutrients. Insulin resistance is evaluated using the triglyceride–glucose (TyG) index and the TyG–BMI index; concurrently, glycaemic control is assessed through glycated haemoglobin (HbA1c) measurements. Planned statistical analyses encompass descriptive statistics, group comparisons, and correlation analyses, all designed to investigate the relationships between dietary intake, insulin resistance, and glycaemic control. **Results:** This ongoing pilot study aims to recruit approximately 80 participants, with half diagnosed with T2DM and the remaining half comprising healthy volunteers. Preliminary data during recruitment suggest substantial variability in dietary patterns, energy intake, and macronutrient distribution among participants. The final analysis will compare dietary intake, insulin resistance indices, and glycaemic control between the two groups and examine potential associations between dietary patterns and metabolic outcomes. **Conclusion:** The study eventually provides early insights into identifying dietary patterns that influence metabolic health. The findings are expected to inform future larger cohort studies and contribute to the development of more tailored nutritional strategies for diabetes management in Malaysia.

# The influence of maternal factors on the risk of developing colorectal cancer: A systematic review

Kavin Raj Purushottaman<sup>1</sup>, Saad Muhmood Hussain Arraki<sup>2</sup>, Miram Albasal<sup>2</sup>, Mariam Mohamed<sup>2</sup>, Nashwa Mahmood Kirmani<sup>2</sup>

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## ABSTRACT

**Introduction:** Colorectal cancer (CRC) is a leading cause of global morbidity and mortality, ranking among the three most commonly diagnosed cancers worldwide. While lifestyle and genetic determinants are well established, the contribution of maternal and reproductive factors remains less clearly defined. Increasing incidence among women has prompted interest in sex-specific mechanisms, particularly the role of oestrogen in colorectal carcinogenesis. Oestrogen is hypothesised to exert a protective effect through oestrogen receptor-beta, expressed in colonic epithelium, where it may reduce cellular proliferation and promote tumour suppression. This systematic review synthesises contemporary epidemiological evidence to evaluate associations between maternal and reproductive exposures and CRC risk. **Materials and Methods:** A systematic review was conducted in accordance with PRISMA guidelines. Electronic databases, including PubMed, Scopus, and Web of Science, were searched for studies published between 2014 and 2025. Eligible studies included prospective cohort, retrospective cohort, and case-control designs examining reproductive or maternal risk factors for CRC. Data were extracted and synthesised narratively from 25 studies. Extracted variables included study design, effect measures (hazard ratios, odds ratios, relative risks, incidence rate ratios, and standardised incidence ratios), corresponding 95% confidence intervals, and adjustment for confounders. Maternal exposures assessed included parity, age at menarche, pregnancy complications, birth outcomes, miscarriage, breastfeeding, hysterectomy, multiple gestation, menstrual irregularity, and use of hormonal therapies such as oral contraceptives and hormone replacement therapy. Studies represented diverse populations across Europe, North America, East Asia, and Nordic regions, enhancing generalisability. Associations were interpreted based on magnitude, direction, and statistical precision. **Results:** Findings across studies were heterogeneous. Protective associations were observed for parity (OR 0.67; HR 0.80), breastfeeding for at least one year (OR 0.74), and hormone replacement therapy (HR 0.57; RR 0.94). In contrast, increased risks were associated with hysterectomy (HR 1.406), multiple gestation (IRR 1.22), irregular menstrual cycles during adolescence (HR 1.36), and large-for-gestational-age births (HR 1.08). Associations with age at menarche were inconsistent, with some studies demonstrating a slight reduction in risk per increasing year (HR 0.97), while others reported no significant relationship. This variability may reflect differences in population characteristics, exposure definitions, and adjustment for confounders such as body mass index and hormonal use. Several exposures, including placental abruption, spontaneous miscarriage, age at first delivery  $\geq 40$  years, and serial endometrial thickness, showed no statistically significant association with CRC risk. Confounder adjustment varied substantially across studies, with inconsistent inclusion of lifestyle and metabolic variables. Notably, few studies stratified outcomes by tumour location or molecular subtype, potentially obscuring site-specific or biologically distinct associations. Maternal and reproductive factors demonstrate modest but clinically relevant associations with CRC risk. Parity, breastfeeding, and hormone therapy appear protective, whereas hysterectomy, multiple gestation, and menstrual irregularity may increase risk. **Conclusion:** These findings support hypothesis that cumulative hormonal exposure influences colorectal carcinogenesis through endocrine and metabolic pathways. However, heterogeneity in study design, exposure definitions, and confounder adjustment limits interpretability. Future research should prioritise large, standardised prospective studies with robust adjustment for confounders and stratification by tumour site, menopausal status, and ethnicity. A clearer understanding of these relationships may improve risk stratification and inform prevention strategies in women.

# The expanding rash: Early recognition of suspected Lyme disease in primary care

**Shanjanaa Parthiban<sup>1,2</sup>, Leeynesh Sooriyapiragasam<sup>1,2,3</sup>**

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## ABSTRACT

**Introduction:** Lyme disease, caused by *Borrelia* species is the most common tick-borne infection in Europe and North America. Early identification is necessary to prevent progression to cardiac, neurological or rheumatological complications. In primary care, diagnosis may be challenging due to diverse presentations, overlapping symptoms, and diagnostic uncertainty especially among patients with autoimmune diseases. **Case Presentation:** 54-year-old of mixed ethnic background academic with underlying autoimmune hypothyroidism and systemic sclerosis presented with a three-week history of an expanding rash over the right inner arm following a suspected insect bite. She recently returned from Northern Europe and had adopted an unscreened domestic cat, raising additional differential considerations for zoonotic exposure. On examination, she was afebrile with full GCS and hemodynamically stable. Skin lesion over the right arm initially demonstrated a classical “bull’s-eye” appearance suggestive of erythema migrans and later evolved into a macular lesion measuring about 2.5×2.5 cm. Assessment of associated symptoms such as arthralgia was limited due to chronic analgesia usage for musculoskeletal conditions. Given the travel history and typical cutaneous rash, clinical diagnosis of suspected Lyme disease was made, and empirical antibiotic therapy was prescribed. **Conclusion:** This case highlights the diagnosis complexity of suspected Lyme disease in patients with autoimmune conditions, where symptoms may overlap with inflammatory disorders. In primary care, thorough travel history and recognition of *erythema migrans* are key to enabling early diagnosis and timely empirical treatment. Awareness of Lyme disease in returning travellers is essential for early clinical diagnosis and timely treatment, helping to prevent progression to more serious complications.

# Eating plenty, missing essentials: A case report of modern-day scurvy in an obese child

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## ABSTRACT

**Introduction:** Scurvy, although reported uncommon in the modern world, still remains relevant in present-day clinical practice. Children with restrictive eating behaviours and autism spectrum disorder (ASD), are at risk of micronutrient deficiencies. The recent SEANUTS II survey highlighted “triple burden of malnutrition”, where micronutrient deficiencies coexist with undernutrition and overnutrition, while vitamin C deficiency remains under-recognised in children, particularly in Southeast Asian population. **Case Presentation:** We report a 7-year-old obese boy with ASD and intellectual disability who presented with one-week history of progressive lower limb weakness, deteriorating from walking with support to complete inability to ambulate. The upper limbs were unaffected. His parents also noted a loose tooth. Dietary history revealed restrictive eating behaviour of high-carbohydrate food with minimal fruits and vegetables intake. There was no history of trauma, infection, neurological symptoms and family history of neuromuscular disorders. Examination showed perifollicular petechiae, follicular hyperkeratosis, gingival bleeding, and gum hypertrophy. Neurological assessment revealed preserved tone, reflexes, and sensation. Investigations showed hypochromic microcytic anaemia, normal creatine kinase levels, normal hip and knee radiographs. Clinical diagnosis of scurvy was made, with subsequent improvement following vitamin C supplementation. **Conclusion:** This case illustrates the coexistence of obesity and micronutrient deficiency due to poor diet. Scurvy may mimic neuromuscular conditions. Careful clinical assessment, accurate diagnosis, and prompt vitamin C supplementation, leads to full recovery and prevents complications. Scurvy remains an important differential diagnosis for lower limb weakness. Although often considered a disease of the past, clinician awareness is important for timely recognition and effective treatment.

# A case of recurrent uterine inflammatory myofibroblastic tumour and a review of the literature

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## ABSTRACT

**Introduction:** Uterine inflammatory myofibroblastic tumour (UIMT) is a rare mesenchymal tumour with low malignant potential, which has been known by various names in the past. According to the 2020 World Health Organisation (WHO) definition, it consists of spindle-shaped myofibroblasts and inflammatory cells; its clinical manifestations and imaging features lack specificity, resulting in a high rate of preoperative misdiagnosis. Treatment is primarily surgical, but some cases are invasive and prone to recurrence post-operatively. This paper reports a case of recurrent UIMT and reviews the relevant literature to provide guidance for clinical diagnosis and management. **Case Presentation:** A 53-year-old female patient presented with one month of weight loss and a pelvic mass discovered approximately one and a half months prior, accompanied by frequent urination and severe anaemia. Tumour markers (CA-125, HE4, NSE) were elevated; PET-CT and PET-MRI revealed a 12–13.7 cm mass in the abdomen and pelvis, suggesting possible metastasis. The patient had been misdiagnosed with dedifferentiated liposarcoma at another hospital; however, a consultation at our hospital suggested a spindle cell tumour. The patient underwent extensive surgery combined with six cycles of chemotherapy, and postoperative pathology confirmed the diagnosis of UIMT (ALK-positive). Tumour recurrence was detected in August 2023, and the patient underwent a second surgical intervention; pathology again confirmed UIMT. Follow-up until more than a year revealed no significant abnormalities. While the aetiology of UIMT remains unknown, but it is closely associated with ALK gene abnormalities; ALK D5F3 immunohistochemical testing shows high concordance with FISH results. This condition is easily confused with uterine fibroids and uterine sarcomas; histopathological examination is key to definitive diagnosis. Surgery is the treatment of choice, with targeted therapy (such as alectinib) serving as an adjunct. Prognosis is related to tumour size and the extent of surgical resection; recurrence does not necessarily indicate a poor prognosis. **Conclusion:** UIMT is clinically rare and prone to misdiagnosis; diagnosis relies on histopathological examination. Surgery combined with close postoperative follow-up constitutes the primary management strategy, with targeted therapy serving as an adjunctive option. Current research consists largely of small-sample case reports; large-scale, multicentre studies are required to refine clinical management guidelines.

# ***Fusobacterium spp.* infection complicated with liver abscess and right lung empyema in an immunocompetent individual**

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## **ABSTRACT**

**Introduction:** *Fusobacterium spp* is a rare cause of liver abscess with an incidence rate of 1 per 100,000. It is typically associated with oropharyngeal infections, but infection can occur in the gastrointestinal tract. Liver abscess commonly occurred as infection spread via the portal venous system. The mortality rate can be as high as 47%, hence early diagnosis is crucial for commencement of effective treatment. Infection with this pathogen should be considered in patients with liver abscess of unknown causes. **Case Presentation:** A 24-year-old gentleman with no known comorbidities presented high-grade fever, diarrhoea, vomiting, and abdominal pain. Blood investigations revealed leukocytosis and raised CRP and transaminitis. Chest X-ray shows extensive right pleural effusion. Ultrasound abdomen was done to investigate intra-abdominal collection and revealed hepatomegaly with segment VII partially liquefied liver abscess. CECT Thorax revealed right pleural empyema. Blood, pleural fluid, and pus cultures were negative. *Fusobacterium vincentii* detected from liver abscess drainage by 16S rRNA gene sequencing. Additionally, we uncovered that the patient had recently undergone tooth cavity removal. He recovered well with treatment and completed 8 weeks of antibiotics. **Conclusion:** This case illustrates an uncommon presentation of infection due to common colonizers of mouth microbiota, resulting in multiorgan involvement in an immunocompetent adult. This case highlights the role of molecular identification methods such as 16S RNA PCR, where conventional methods are unable to detect any causative pathogens.

# Recurrent high-pressure supratentorial subdural collections following microvascular decompression: A multifactorial process involving altered cerebrospinal fluid dynamics and anticoagulation - A case report

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## ABSTRACT

**Introduction:** Microvascular decompression (MVD) is the gold-standard surgical treatment for trigeminal neuralgia and is generally associated with low morbidity. While recognised complications are typically confined to the posterior fossa, remote supratentorial haemorrhagic complications following infratentorial surgery are rare. Among these, recurrent supratentorial subdural collections are exceptionally uncommon and poorly understood. Proposed mechanisms include intracranial hypotension following cerebrospinal fluid (CSF) drainage, bridging vein traction, altered CSF circulation, and age-related cerebral atrophy. **Case Presentation:** A 76-year-old male with medically refractory trigeminal neuralgia who underwent elective right-sided retrosigmoid craniotomy and MVD. Preoperative CT demonstrated no subdural pathology but showed generalised cerebral atrophy. Serial postoperative CT imaging, operative findings, microbiological results, and clinical progression were reviewed narratively to characterise the temporal evolution of the subdural collections and explore plausible mechanisms of recurrence. The focus was placed on radiological progression, fluid characteristics at repeat evacuations, associated systemic complications, and later CSF diversion requirements. Within 24 hours of surgery, the patient developed acute neurological deterioration with dense left hemiplegia. CT imaging demonstrated a 17 mm right supratentorial subdural collection causing 9 mm midline shift and subfalcine herniation. Urgent burr-hole evacuation yielded high-pressure “machinery oil” fluid, consistent with chronic subdural haematoma. Despite initial improvement, serial imaging demonstrated persistence and early recurrence. Further deterioration was associated with reaccumulation to 24 mm, 15 mm midline shift, ventricular compression, and transependymal oedema, necessitating repeat evacuation. Intraoperative findings at second surgery revealed lower-viscosity dark red-brown fluid, suggesting progressive evolution of the subdural process. Subsequent imaging showed further recurrence up to 21 mm with recurrent mass effect before gradual evolution into a low-density CSF-like subdural collection. The postoperative course was further complicated by segmental and subsegmental pulmonary emboli requiring therapeutic anticoagulation, likely contributing to persistence and reaccumulation. The patient later developed hydrocephalus requiring ventriculoperitoneal shunt insertion, supporting a broader disturbance in CSF homeostasis. Microbiological cultures were negative aside from an initial likely contaminant. **Conclusion:** This case illustrates a rare but life-threatening complication of posterior fossa surgery characterised by recurrent, high-pressure supratentorial subdural collections with evolving fluid characteristics. The findings support a multifactorial mechanism involving initial bridging vein injury from intracranial hypotension, subsequent chronic subdural membrane physiology, possible arachnoid breach with CSF ingress, impaired CSF resorption, therapeutic anticoagulation, and age-related cerebral atrophy. The later development of hydrocephalus further reinforces the role of global CSF dysregulation. Early recognition, serial neuroimaging, cautious anticoagulation decisions, and a low threshold for repeat surgical intervention are essential. This case expands the limited literature by demonstrating progression from haemorrhagic chronic subdural fluid to CSF-density recurrent collections, suggesting a self-perpetuating subdural space process rather than an isolated postoperative bleed.

# An eye-catching case: Invasive *Klebsiella* syndrome with right eye endogenous endophthalmitis, bacteraemia and multiple septic emboli

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## ABSTRACT

**Introduction:** Invasive *Klebsiella* syndrome (IKS) is primarily caused by hypervirulent *Klebsiella pneumoniae* (hvKp), which is characterised by metastatic infection to various organs. We hereby report a case of IKS presented with endogenous endophthalmitis complicated with bacteraemia, brain abscess, and pulmonary septic emboli. **Case Presentation:** A 68-year-old non-diabetic man presented with severe right eye pain, redness and blurring of vision for 3 days. Initial evaluation showed right eye endogenous endophthalmitis with a choroidal abscess. Vitreous tapping fluid and blood culture grew *Klebsiella pneumoniae*, with positive "string test". CT orbit/brain showed features suggestive of cerebral abscess, and CT TAP showed multiple pulmonary septic emboli. Additionally, no sonographic evidence of hepatic abscess or cardiac vegetation. Consequently, right eye evisceration was done. The patient was responding with empirical intravitreal vancomycin and ceftazidime, then intravenous ceftriaxone, oral and eyedrops ciprofloxacin. Repeated CT brain showed a resolved cerebral abscess. Hepatic involvement was not evident. Generally, up to 80-90% of cases have hepatic liver abscess as a primary focus of infection, followed by renal or lung. The hypermucoviscosity phenotype is related to K1 and K2 capsular serotypes and virulence genes such as mucoviscosity-associated gene A (*magA*) and regulator of mucoid phenotype A (*rpmA*). Interestingly, such strains are susceptible to most antibiotics, as evident in this case. Intravenous ceftriaxone is recommended due to good vitreous and CSF penetration. **Conclusion:** This atypical case highlights the severity of IKS and the need for early diagnosis, source control, and appropriate antibiotic regimes to improve patient outcomes.