10TH MEDICAL RESEARCH SYMPOSIUM 2026

10TH INTERNATIONAL VIRTUAL MEDICAL RESEARCH SYMPOSIUM 2026

ETHICAL RESEARCHER IN THE AI ERA

ABSTRACT BOOK

ONLINE (ZOOM)

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PRE-SYMPOSIUM
3RD FEBRUARY 2026

MAIN SYMPOSIUM
4TH FEBRUARY 2026

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ORAL PRESENTATION (CLINICAL)

C-O1

Effectiveness of Head-Mounted Devices Versus Standard Ultrasound Guidance in Internal Jugular Vein Catheterisation: A Clinical Study

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ABSTRACT

Introduction: Ultrasound-guided internal jugular vein catheterisation (IJV CVC) is an essential procedure in critical care. While conventional ultrasound provides real-time visualisation and improves success rates, its fixed monitor position may compromise hand–eye coordination and ergonomic efficiency. Recently, head-mounted display augmented reality (HMD AR) offers a promising alternative that enables operators to visualise ultrasound images directly within their field of view. This study aimed to evaluate the effectiveness of HMD AR in performing IJV CVC compared to conventional ultrasound, focusing on procedural time, complication rates, ergonomic practices, and user experience. **Materials and methods:** Randomised controlled trial was conducted involving 35 medical officers. Participants performed IJV CVC on patients using both HMD AR and conventional ultrasound. Procedural time, number of attempts, ergonomic indicators, and complications were recorded. User experience with HMD AR was assessed using NASA Task Load Index (NASA-TLX). **Results:** The median procedural time for the HMD AR group was longer (260 seconds) compared to the conventional ultrasound group (186 seconds), with no statistically significant difference. First-attempt success rates and complication rates were comparable across both groups. Ergonomic assessments showed no significant differences between devices. NASA-TLX results showed a generally favourable user experience with HMD AR, although variation was observed in perceived effort and frustration levels. **Conclusion:** In this study, HMD AR did not show a significant improvement in procedural time or ergonomics. HMD AR was not associated with increased complication rates and was well tolerated by users. These findings support the feasibility and safety of HMD AR in ultrasound-guided procedures.

Keywords: Augmented reality; head mounted device; ultrasound-guided procedure

C-O3

Pilot Study on the Safety And Feasibility of Cyanoacrylate Glue For PICC Puncture Site

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ABSTRACT

Introduction: Peripherally inserted central catheters (PICCs) are widely used for long-term intravenous therapy but are associated with complications such as bleeding, infection, catheter dysfunction, and catheter dislodgement. Cyanoacrylate glue has been proposed as an alternative method to seal PICC puncture sites, potentially improving safety and patient comfort. The objective of this pilot study is to assess the feasibility and safety of cyanoacrylate glue prior to conducting a larger trial. **Materials and methods:** Twenty PICC follow-ups were included in this single-arm pilot. Cyanoacrylate glue was applied for puncture site closure. Data were collected on complications (bleeding, infection, catheter dysfunction, dislodgement), time to seal, and patient-reported pain and satisfaction. Descriptive statistics summarised outcomes. **Results:** Among 20 follow-ups, two patients (10%) experienced complications: one patient (5%) developed a mild inflammatory reaction at the puncture site, and one patient (5%) had catheter dysfunction. No bleeding or catheter dislodgement was reported. Median time to effective puncture site sealing was 1 minute, and patient satisfaction scores were high (median 4/5). No serious adverse events occurred. **Conclusion:** This pilot study demonstrates that cyanoacrylate glue application for PICC puncture sites is feasible and safe, with a low and manageable complication profile. These findings support the design and implementation of a larger trial to formally assess efficacy, safety, and patient-centred outcomes.

Keywords: Bleeding; cyanoacrylate glue; catheter dysfunction; infection; peripherally inserted central catheter

C-O4

Bone Scintigraphy in Prostate Cancer: Association with Prostate-Specific Antigen and Gleason Score at IIUM

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ABSTRACT

Introduction: Prostate carcinoma is a leading malignancy and significant health burden among men in Malaysia. Skeletal metastasis, a pivotal stage affecting management and prognosis, is commonly evaluated using bone scintigraphy (BS). While BS remains the standard staging of modality, routine imaging of all patients is resource-intensive. Prostate specific-antigen (PSA) and Gleason score (GS) are well-established indicators of metastatic risk; however, their optimal thresholds for guiding BS utilisation in the Malaysian population remain poorly defined. **Materials and methods:** A retrospective cross-sectional study was conducted involving 227 patients with histopathologically confirmed prostate carcinoma who underwent BS at the International Islamic University Malaysia (IIUM) Nuclear Medicine Centre, Pahang, between 2015 and 2024. Demographic, biochemical and histopathological data, including serum PSA, GS and BS findings, were analysed with a comprehensive statistical framework. **Results:** Bone metastasis was detected in 110 patients (48%). Both PSA and GS demonstrated significant associations with positive BS findings ($p < 0.001$). Multivariate analysis confirmed PSA > 50.0 ng/mL (odds ratio [OD] 6.50; 95 % confidence interval [CI]: 2.65 – 15.94) and GS > 7 (OR 4.06; 95 % CI: 1.43 – 11.47) as independent predictors of skeletal metastasis. Receiver operating characteristic (ROC) analyses showed fair discriminative performance for PSA (AUC = 0.74) and GS (AUC = 0.69). **Conclusion:** Serum PSA and GS are independent and significant predictors for positive bone scintigraphy findings in prostate carcinoma patients. The odds increase substantially with PSA ≥ 51.0 ng/mL and GS > 7.

Keywords: Bone scintigraphy; bone metastasis; Gleason score; prostate cancer; prostate-specific antigen

C-O6

Validation of Religiosity Scale among Muslim Elderly Patients in Kuantan Using Exploratory Factor Analysis and Rasch Model

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ABSTRACT

Introduction: Old age represents a natural final stage of life, often accompanied by biological changes that increase vulnerability to physical and mental illnesses. Religiosity has been shown to provide protective effects throughout illness, yet no validated Malay religiosity scale exists specifically for elderly Muslim patients. This study aimed to develop and validate a scale tailored for Malaysian Muslim elderly in a medical context. **Materials and methods:** Items were generated through literature review and expert input. Five experts assessed content validity, followed by face validation with older adults. A pilot study with 132 respondents was conducted. Reliability was examined using Rasch analysis, and factor structure was explored using Exploratory Factor Analysis (EFA). **Results:** Rasch analysis showed acceptable-to-excellent person and item reliability across Aqidah, Practice, and Ihsan domains. Person reliability ranged from 0.77-0.82, while item reliability ranged from 0.90–0.95. Infit and outfit MNSQ values (0.64-1.48) were within acceptable limits. EFA confirmed a three-factor structure (25 items) with excellent sampling adequacy (KMO = 0.946) and significant Bartlett's test ($p < 0.001$), explaining 69.96% of total variance. Communalities (0.54–0.81) and factor loadings supported strong construct validity. **Conclusion:** The newly developed questionnaire demonstrates strong reliability and validity for assessing religiosity-covering Aqidah, Practice, and Ihsan-among elderly Muslim patients in primary care.

Keywords: Muslim elderly patient; Rasch model; religiosity scale development

C-O7

Prevalence of Esophageal Dysmotility and its Correlation with Endoscopic Findings among GERD-like Symptom Patients in Sultan Ahmad Shah Medical Centre @ IIUM

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ABSTRACT

Introduction: Gastroesophageal reflux disease (GERD) is commonly caused by reflux barrier dysfunction. However, growing evidence suggests that esophageal dysmotility also plays a key role in pathogenesis of GERD. The relationship between GERD and esophageal dysmotility has not been extensively studied in Malaysia. This study was conducted to determine the prevalence of esophageal dysmotility in GERD-like symptom patients and its correlation with endoscopic findings. **Materials and methods:** This prospective, cross-sectional study was conducted at a single tertiary centre in Pahang, Malaysia. A total of 80 patients with GERD symptoms were recruited. All patients underwent both Oesophagogastroduodenoscopy (OGDS) and High-Resolution Manometry (HRM). The endoscopic findings were graded using Los Angeles classification while HRM results were interpreted according to Chicago Classification v4.0. **Results:** Results revealed a high prevalence of esophageal dysmotility among GERD patients with 61.2% from cohort. The most common abnormality was Ineffective Esophageal Motility (IEM) which was found in 37.5% of patients. Notably, there was no statistically significant correlation between the presence of dysmotility and the erosive esophagitis ($p = 0.438$). However, significant associations were observed between dysmotility with both male gender and smoking status. **Conclusion:** The study concludes that esophageal dysmotility is highly prevalent in these GERD-like symptoms patient. The lack of significant correlation between esophageal dysmotility and erosive esophagitis suggest that conditions such as IEM may represent a distinct mechanism in GERD pathophysiology, independent of esophageal mucosal injury. While our study cannot prove a clinical causation, these findings highlight the need for further research to clarify the role of motility disorders in GERD.

Keywords: Erosive esophagitis; esophageal dysmotility; gastroesophageal reflux disease; ineffective esophageal motility

C-O8

Clinical Outcomes of Extremely Low and Very Low Birth Weight Infants at a Tertiary Neonatal Intensive Care Unit: A Pilot Study

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ABSTRACT

Introduction: Local outcome data on extremely low birth weight (ELBW) and very low birth weight (VLBW) infants are essential for evaluating unit-specific practices and guiding future research. This study aimed to describe baseline characteristics and short-term clinical outcomes of ELBW and VLBW infants admitted to the study centre over a 2 year period as preparatory work for a 5 year retrospective study. **Materials and Methods:** This retrospective descriptive study included all ELBW and VLBW infants admitted to the Neonatal Intensive Care Unit (NICU) of Sultan Ahmad Shah Medical Centre (SASMEC) between January 2022 and December 2023. Exclusion criteria comprised infants with major lethal congenital anomalies, death and incomplete medical records. Data were obtained from medical records and NICU databases. Variables analysed included demographic characteristics, maternal risk factors, neonatal morbidities, and short-term outcomes, summarised using descriptive statistics. **Results:** Total subjects were 35. Median gestational age and birth weight were 31 weeks (IQR 29.0–33.0) and 1.3 kg (IQR 0.98–1.40) respectively. 80% of the infants were delivered preterm for maternal indications, including diabetes mellitus (51.4%), preeclampsia (45.7%) and hypertension (28.6%). Respiratory distress syndrome occurred in 88.6% of infants, followed by probable sepsis (85.7%), feeding intolerance (60.0%), anaemia of prematurity (54.3%), and necrotising enterocolitis (37.1%). Bronchopulmonary dysplasia occurred in 22.9%, while intraventricular haemorrhage was observed in 34.3%. **Conclusion:** This study demonstrates substantial morbidity among ELBW and VLBW infants at the NICU SASMEC and confirms the feasibility of extended retrospective evaluation.

Keywords: Infant, extremely low birth weight; infant, very low birth weight; neonatal morbidity

C-O11

Seeing Beyond Infection: An MRI-Based Predictive Model for Spinal Tuberculosis

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ABSTRACT

Introduction: Diagnosing tuberculous spondylodiscitis (TB spine) remains challenging, particularly in TB-endemic regions where imaging overlap with pyogenic spondylodiscitis (PS) may delay appropriate treatment. No standardised MRI-based scoring system is routinely applied to reliably differentiate TB spine from PS. This study aimed to develop and evaluate an MRI-based predictive model using routinely assessed imaging features. **Materials and Methods:** This retrospective cross-sectional study included 81 patients who underwent contrast-enhanced MRI spine for suspected infective spondylodiscitis at SASMEC @IIUM from 2018 to 2024. Clinicodemographic, microbiological, and MRI variables were analysed. Associations were examined using exact chi-square testing, followed by simple and multiple logistic regression analyses. Model performance was evaluated using receiver operating characteristic (ROC) analysis, Hosmer–Lemeshow goodness-of-fit testing, four-fold cross-validation, and bootstrap resampling. **Results:** Four MRI features were identified as independent predictors of TB spine: gibbus deformity and intraosseous abscess as positive predictors; intervertebral disc-space narrowing and disc abscess as negative predictors. The final model demonstrated excellent discrimination (AUC 0.867; 95% CI 0.787–0.947; $p < 0.001$) and good calibration (Hosmer–Lemeshow $p = 0.911$). At the optimal probability threshold of 0.443, the model achieved a sensitivity of 75.8%, specificity of 85.4%, and overall accuracy of 81.5%. **Conclusion:** An MRI-based predictive model incorporating a small set of robust imaging features can reliably differentiate TB spine from PS. Presenting model outputs as percentage probabilities enhances objectivity, improves clinical interpretability with possibility of reducing reliance on invasive biopsy, and supports earlier diagnosis and timely treatment initiation.

Keywords: Logistic regression; magnetic resonance imaging; predictive model; pyogenic spondylodiscitis; tuberculous spondylodiscitis

C-012

Temporal Trends in Hysterectomy Surgical Approaches: An Eight-Year Institutional Analysis (2017-2024)

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ABSTRACT

Introduction: Understanding temporal trends in hysterectomy surgical approaches is essential for healthcare planning and quality improvement initiatives. This study examined the distribution and trends of hysterectomy techniques over an eight-year period at a university hospital to identify practice pattern evolution. **Materials and methods:** A retrospective analysis of 379 hysterectomy cases performed between 2017 and 2024 was conducted. Cases were categorised by surgical approach: abdominal (n = 229, 60.4%), vaginal (n = 89, 23.5%), and laparoscopic (n = 61, 16.1%). Annual case distributions were analysed, and the Cochran-Armitage trend test assessed linear temporal trends for each approach against combined alternatives, with statistical significance set at $p < 0.05$. **Results:** Total hysterectomy cases increased substantially from 23 cases in 2017 to 81 cases in 2024. Abdominal hysterectomy remained the predominant approach throughout the study period, increasing from 7 cases (30.4%) in 2017 to 46 cases (56.8%) in 2024. Vaginal hysterectomy ranged from 6 to 17 cases annually, while laparoscopic approach peaked at 18 cases in 2024. Statistical analysis revealed no significant linear trends for any approach: abdominal ($\chi^2 = 4.96$, $p = 0.26$), vaginal ($\chi^2 = 6.26$, $p = 0.12$), or laparoscopic ($\chi^2 = 0.006$, $p = 0.939$). **Conclusion:** Despite overall case growth, surgical approach distribution remained relatively stable over eight years, with abdominal hysterectomy maintaining predominance. The absence of significant trends toward minimally invasive techniques suggests institutional factors, case complexity, or resource constraints may influence approach selection more than temporal practice evolution.

Keywords: Abdominal hysterectomy; hysterectomy; minimally invasive surgery; surgical approaches; trend analysis

ORAL PRESENTATION (NON-CLINICAL)

NC-O1

Oral Bacteria Composition Between Healthy and Mild Cognitive Impairment Geriatric Patients Using Next-Generation Sequencing-A Pilot Study

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ABSTRACT

Introduction: Mild cognitive impairment (MCI) is the prodromal stage chosen for this pilot study, aiming to test the feasibility of the oral bacteria as a potential biomarker within the context of the dysbiosis hypothesis. This work establishes the protocol and quantifies the inherent inter-individual variance necessary to design statistically powered trials for the Oral-Brain Axis. **Materials and methods:** This cross-sectional pilot study included N = 20 geriatric patients, comparing 10 MCI cases against 10 healthy controls. Oral samples (mixed saliva and dental plaque) were collected and sequenced targeting the 16S rRNA gene V3-V4 regions. Data was processed using the DADA2 pipeline. Analysis included PERMANOVA and Regression models, controlling for sex and comorbidities. **Results:** PERMANOVA revealed non-significant group separation in beta diversity ($p = 0.636$), confirming the study was underpowered. The PERMANOVA analysis also quantified a massive 94.9% Residual Variance, demonstrating overwhelming unexplained noise. Linear Regression showed that 24.33% of the explained variance was caused by the significant confounders, sex and total comorbidities, statistically masking the microbial signal. Lower oral bacteria diversity was associated with a descriptive Adjusted Odds Ratio (AOR) of 1.77 for MCI status. Descriptive dysbiosis showed loss of defence (*Streptococcus* depletion) and enrichment of pro-inflammatory genera (*Prevotella*, *Fusobacterium*, *Porphyromonas*). **Conclusion:** The success of this pilot lies in Variance Quantification. The 94.9% figure provides the essential empirical input for a Post-Hoc Power Analysis, justifying the need for a statistically large-scale longitudinal trial (N>100) to confirm the oral bacteria composition effect and its role as a modifiable biomarker for MCI progression.

Keywords: 16S rRNA sequencing; geriatric; microbial diversity; mild cognitive impairment; oral bacteria

NC-O2

Knowledge, Attitude and Practice on the Impact of Microplastic Exposure to the Fertility among Clients Attending Obstetrics and Gynaecology Clinic at SASMEC @IIUM

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ABSTRACT

Introduction: This study examines the knowledge, attitudes, and practices (KAP) concerning microplastic exposure among women of reproductive age visiting the Obstetrics and Gynaecology Clinic at SASMEC @IIUM. Despite scientific concerns about microplastics' risks to fertility, public awareness remains limited, hindering effective health strategies. **Materials and methods:** A cross-sectional survey was conducted with 100 participants using a validated questionnaire to assess KAP levels and their association with sociodemographic factors. **Results:** Results showed that a large majority (52%) had inadequate knowledge about microplastics' impact on fertility, with only 10% demonstrating good practices in minimising exposure. Most respondents, primarily aged 31-40 and educated at the diploma or bachelor's level, had fair attitudes towards the issue (80%). Statistical analysis revealed a significant correlation between education level and knowledge (Pearson χ^2 = 21.37, df = 8, p = 0.006), indicating that increased education improved awareness. **Conclusion:** The findings suggest that merely raising awareness may not effectively change attitudes or behaviours, underscoring the necessity for more comprehensive interventions aimed at improving understanding and practices regarding microplastics and fertility.

Keywords: Environmental exposure; fertility; knowledge, attitude and practice (KAP); microplastics; reproductive health

NC-O4

Development and Evaluation of Low-Cost DIY Cervical Cerclage Training Models: Supporting Ethical and Equitable Skills Training

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ABSTRACT

Introduction: Cervical cerclage is an important procedure in preterm birth prevention, yet clinical training opportunities, particularly for Shirodkar and abdominal cerclage are limited. Simulation-based education improves accuracy, performance, and patient safety, and low-cost handmade models have demonstrated effectiveness in obstetric skills training. To address local training gaps, training do-it-yourself (DIY) cerclage models were developed. **Materials and methods:** Following the development of the low-cost, reproducible cervical cerclage simulators, their educational usefulness was evaluated through hands-on simulation sessions. Twenty-four clinicians participated and completed structured feedback forms after practice. Prior exposure to cerclage techniques and previous simulation experience were documented. Participants rated anatomical realism, surgical access, material quality, and educational value using a 5-point Likert scale. **Results:** Most respondents (19 of 24) had more than five years of Obstetrics and Gynaecology experience. McDonald cerclage was the most familiar technique (13 assisted and 8 performed), whereas exposure to abdominal and Shirodkar cerclage was very limited whereby 72% (n = 18) participants had never observed both procedures. All three models received high realism and usefulness ratings, with most responses in the "Agree/Strongly Agree" range. Participants also expressed strong willingness to reuse the models. **Conclusion:** These DIY models effectively address a major training gap, particularly for rarely encountered techniques such as Shirodkar and abdominal cerclage. High acceptance across all seniority levels supports their role in structured learning, standardisation, and safe skill development. Low-cost simulation remains essential in complementing, rather than replacing, AI-based simulators, to ensure ethical, equitable access to procedural training.

Keywords: Cervical cerclage; low-cost training model; simulation-based education

NC-O6

Dysregulation of Circulating microRNAs in Young Acute Myocardial Infarction Patients in Kuantan, Pahang

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ABSTRACT

Introduction: Acute myocardial infarction (AMI) among young adults (YAMI) is an emerging concern, often presenting with distinct clinical and molecular characteristics compared to mature AMI (MAMI) patients. Circulating microRNAs (miRNAs) have gained attention as minimally invasive cardiovascular biomarkers. However, data describing miRNA dysregulation among young AMI patients remain limited. This study aimed to identify and validate differentially expressed circulating miRNAs between YAMI and MAMI patients in Kuantan, Pahang. **Materials and methods:** A case–control study was conducted involving 20 YAMI and 20 MAMI patients presenting to Hospital Tengku Ampuan Afzan, Kuantan, and 20 healthy controls recruited from Klinik Kesihatan Bandar Kuantan. Initial miRNA profiling identified a set of dysregulated candidates. The top six miRNAs were subsequently validated using quantitative real-time PCR. Fold-change expression and statistical significance were analysed using the comparative Ct method. **Results:** Of the six miRNAs assessed, three showed significant differential expression between groups. miR-423-5p was upregulated in YAMI patients (2.08-fold, p = 0.040), whereas miR-431-5p and miR-378a-5p were markedly downregulated, by 33.90-fold (p = 0.034) and 34.61-fold (p = 0.040), respectively. These findings reflect a distinct circulating miRNA expression profile in younger individuals with AMI. **Conclusion:** The dysregulation of miR-423-5p, miR-431-5p, and miR-378a-5p highlights potential molecular differences underlying AMI in younger patients. These miRNAs represent promising candidates for biomarker development in early diagnosis and risk stratification. Further studies with larger cohorts and functional validation are warranted.

Keywords: Biomarker; cardiovascular disease; mature acute myocardial infarction (MAMI); microRNA (miRNA); young acute myocardial infarction (YAMI)

NC-O7

Effect of Green Honey on Caudal Fin Regeneration in Zebrafish Larvae Model

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ABSTRACT

Introduction: Honey is a recognised natural therapeutic agent, known for its antibacterial, anti-inflammatory, and antioxidant properties which promote wound healing and tissue repair. It was hypothesised that Green Honey (GH), characterised by a high content of bioactive compounds and chlorophyll, possesses enhanced regenerative potential that warrants investigation using the transparent, genetically tractable zebrafish larval model. **Materials and methods:** Lethal Concentration 50 (LC_{50}) of Green Honey (GH) in zebrafish embryos and larvae were established using established toxicity protocols (Organisation for Economic Co-operation and Development Test Guideline 236 & 210). Larvae were then subjected to standardised caudal fin amputation and topically treated with optimal, non-toxic GH concentrations, enabling real-time quantification of the tissue regeneration rate over 72 hours. **Results:** Toxicity testing on zebrafish larvae established the 96-hour LC_{50} of Green Honey (GH) at 27 831.38% (v/v), confirming the non-toxic dose range for subsequent assays. Treatment with concentration of GH at 25% (v/v) significantly promoted caudal fin regeneration, resulting in a 183.72 $\pm$ 246.33% increase in the regenerated area by 72 hours post-amputation relative to controls. This optimal concentration demonstrates the potential of GH as a natural pro-regenerative agent despite of exhibiting initial delayed growth at the 24- and 48-hours post-amputation. **Conclusion:** The calculated p-value (0.9194) exceeded 0.05, indicating that the observed differences were not statistically significant. Therefore, no clear evidence supports a distinct role of Green Honey (GH) in enhancing caudal fin regeneration across the tested concentrations.

Keywords: Caudal fin regeneration; green honey; zebrafish larvae

NC-O8

In Silico Characterisation of Tyrosyl-tRNA Synthetase Gene from strain AB and Tübingen *Danio rerio* spp. for Amber Suppression Applications

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ABSTRACT

Introduction: Amber suppression technology enables site-specific incorporation of non-canonical amino acids (ncAAs) into proteins by reassigning the UAG stop codon using engineered aminoacyl-tRNA synthetase (aaRS)/tRNA pairs. This system expands the genetic code and supports applications in protein engineering and therapeutic development. Tyrosyl-tRNA synthetase (TyrRS) is among the most commonly engineered aaRS families for amber suppression. While many systems rely on prokaryotic or yeast-derived enzymes, eukaryotic sources remain underexplored. Zebrafish (*Danio rerio*) represents a promising model organism with relevance to medical biotechnology research. **Materials and methods:** Genomic DNA was extracted from *Danio rerio* muscle tissue, followed by PCR amplification targeting the 9.9 kb tyrosyl-tRNA synthetase gene using DreamTaq Master Mix. PCR products were analysed by 1% agarose gel electrophoresis using a 1 kb DNA ladder. In silico analyses were conducted to compare zebrafish TyrRS with known orthologs through sequence alignment and phylogenetic comparison between AB and Tübingen TyrRS sequences to assess strain-level variation. **Results:** Electrophoresis revealed small amplicons (<250 bp), consistent with primer-dimer formation and the limited ability of standard polymerases to amplify long DNA targets. Sequence alignment and phylogenetic analysis showed high conservation of TyrRS between AB and Tübingen strains, with only minor nucleotide differences outside key catalytic motifs. **Conclusion:** Although full-length amplification was not achieved, sequence and phylogenetic analyses indicate that zebrafish TyrRS is highly conserved and retains essential functional domains. These findings support further optimisation of laboratory methods and highlight zebrafish TyrRS as a candidate for engineering in amber suppression applications.

Keywords: Amber suppression technology; tyrosyl-tRNA synthetase; zebrafish

NC-O9

Ultrastructural Alterations of Liver Sinusoidal Endothelial Cells Following Chronic Monosodium Methylarsonate Exposure in Rats

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ABSTRACT

Introduction: Monosodium methylarsonate (MSMA) is an organic arsenical herbicide still used in several developing regions despite limited toxicity data. While most arsenic research focuses on hepatocyte injury, the effects of MSMA on liver sinusoidal endothelial cells (LSEC), a specialised, fenestrated endothelium increasingly recognised for its involvement in early liver injury and toxicant-induced hepatic pathogenesis remain poorly understood. This study aimed to characterise ultrastructural changes in LSEC following chronic MSMA exposure. **Materials and method:** Twenty-eight male Sprague Dawley rats were assigned to either control or MSMA-treated groups (63.20 mg/kg/day) for 2 or 6 months (n = 7/group). Livers were perfusion-fixed and examined using scanning electron microscopy (SEM) and transmission electron microscopy (TEM). LSEC fenestrations, sinusoidal morphology, and space of Disse features were evaluated descriptively. **Results:** SEM of control animals showed preserved hepatocyte plates, intact sinusoids, and abundant LSEC fenestrae arranged in sieve plates. MSMA-exposed rats demonstrated reduced fenestral groups at 2 months and more pronounced defenestration with gap formation at 6 months. TEM findings supported these observations, showing fewer hepatocyte microvilli within the space of Disse, loss of the typical attenuated LSEC cytoplasm, chromatin condensation, and occasional caveolae formation. The space of Disse became indistinct in exposed groups, suggesting impaired hepatocyte–sinusoid exchange. **Conclusion:** Chronic MSMA exposure induces LSEC defenestration and ultrastructural changes consistent with early capillarisation, which may represent initial pathogenic events in MSMA-related liver toxicity. Further quantitative fenestration analyses and molecular studies are warranted to elucidate mechanisms of LSEC injury and explore their potential as therapeutic or preventive targets.

Keywords: Defenestration; electron microscopy; liver sinusoidal endothelial cells; monosodium methylarsonate; ultrastructure

POSTER (CLINICAL)

C-P1

When Epidurals Won't Come Out: A Simple Positioning Solves Complex Catheter Entrapment in Obese Parturients

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ABSTRACT

Introduction: Difficult epidural catheter removal (incidence 0.012–0.05%) is a rare but clinically significant complication in obstetric anaesthesia, with reported cases involving catheter entrapment, looping, knotting, or migration into anatomical structures particularly in obese patients with multiple insertion attempts. **Case presentation:** A 33-year old G2P1 parturient with Gestational Diabetes Mellitus with BMI 31 at 40 weeks gestation presented for epidural labour analgesia. Following a failed first insertion attempt, an 18G Tuohy needle was repositioned cephalad; the catheter was threaded to 12cm at L3–L4 with confirmed loss of resistance. Upon straightening her back, the catheter migrated to 13cm and became stuck during removal. A senior anaesthetist attempted withdrawal with initial failure; 15 ml normal saline flushed through epidural space allowed partial withdrawal to 12.5 cm before resistance recurred. The catheter was anchored, and labour analgesia maintained throughout delivery. Following spontaneous vaginal delivery, the patient was repositioned in left lateral decubitus with maximal lumbar spine flexion (knees to chest) and catheter was withdrawn easily without resistance. Inspection revealed sharp kinks at 8.5 cm and 9.5 cm. The patient achieved complete neurological recovery and discharged postoperative day 2. **Discussion:** The underlying mechanism was multi-point catheter kinking secondary to obesity-related spinal canal anatomy and position-dependent angulation. Maximal lumbar flexion overcomes natural lordosis, widens facet joints, and disengages kinked catheter segment, proving more effective than saline manipulation alone. This position should be taught as first-line intervention before surgical or interventional radiology approaches. Non-invasive positional strategies can prevent unnecessary invasive procedures and patient morbidity in difficult epidural removal cases.

Keywords: Catheter kinking; epidural catheter removal; labour analgesia; positional manoeuvre; obesity; pregnancy

C-P2

Rigidity on Emergence: Propofol-Induced Neuroexcitatory Syndrome Imitating Catastrophic Brain Injury

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ABSTRACT

Introduction: Propofol-induced neuroexcitatory events (PINE) are rare adverse reactions manifesting as dystonia, chorea, or opisthotonus. While typically benign, severe presentations mimicking decerebrate rigidity can occur. Pathophysiology remains incompletely understood, though patients with pre-existing basal ganglia dysfunction are at risk. **Case presentation**: A 32-year-old male with history of childhood torticollis, vasovagal syncope, and obstructive sleep apnoea underwent elective cardioneuroablation. General Anaesthesia was maintained with target-controlled infusion (TCI) of propofol and remifentanil. Immediately following extubation, he exhibited severe acute dystonia characterised by generalised muscle rigidity, bilateral upper and lower limb hyperextended, back and neck arched lasting approximately 20 minutes. ABG analysis demonstrated metabolic acidosis, and creatine kinase elevated (713 U/L). Pharmacologic rescue with propofol (80 mg), midazolam (3mg), and ketamine (30 mg) achieved complete symptom resolution with no neurological sequelae. **Discussion:** This case illustrates a "double hit" phenomenon where pharmacologic triggers unmask a vulnerability in the extrapyramidal system. The mechanism likely involves propofol's biphasic interaction with subcortical inhibitory pathways. Propofol normally potentiates GABA and glycine receptors; however, abrupt cessation can precipitate an acute "withdrawal state." This results in temporary refractoriness of inhibitory glycinergic signalling in spinal cord and brainstem, leading to unopposed alpha-motor neuron firing and extensor dominance ("strychnine-like" effect). Childhood torticollis suggests pre-existing fragility in the basal ganglia's indirect pathway and rapid clearance likely caused a transient dopaminergic-cholinergic imbalance, triggering dystonia. **Conclusion:** PINE should be considered in the differential diagnosis of postoperative rigidity, particularly in patients with movement disorders. Immediate re-sedation with benzodiazepines or propofol is establish effective treatment, likely by re-initiate GABAergic inhibition.

Keywords: Acute dystonia; adverse drug reaction; neuroexcitatory event; propofol

C-P3

Augmented Reality in Anaesthesiology: Innovative Setup using Non-Medical Devices

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ABSTRACT

Conventional ultrasound-assisted procedures have several limitations, including suboptimal ergonomics and the need for frequent switching gaze between the procedure insertion site and the image displaying monitor. To address these challenges, head-mounted device (HMD) incorporating augmented reality (AR) technology have been introduced to display ultrasound images directly within the operator's field of view during procedure. In this report, we present HMD AR-guided procedure using a non-medical device integrated to a standard ultrasound machine and video-laryngoscope. We detailed the instruments setup process using Accsoon CineView HE, smartphone and Rokid Max AR smart glasses, along with the system's benefits and limitations. Using the new system, we performed central venous catheterisation, regional nerve blocks, and peripheral venous catheterisation on different patients. Additionally, we conducted a mannequin-based difficult airway intubation simulation employing video laryngoscope, C-mac and fibreoptic combined with HMD AR technology. Early observation suggest that this system may improve procedural efficiency, reduce needle adjustments, enhance ergonomics and favourable users' experience. We believe this system holds promise for wider clinical applications and is well-suited for teaching purposes and sharing real-time video feeds.

Keywords: Augmented reality; head mounted device; ultrasound-guided procedure

C-P4

Community-Acquired Methicillin-Resistant *Staphylococcus aureus* (MRSA) Pneumonia in a Patient with Metastatic Hepatocellular Carcinoma

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ABSTRACT

Introduction: Community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA) pneumonia is uncommon but can be rapidly progressive, especially in patients with underlying malignancy. We report a case of CA-MRSA pneumonia in a previously healthy non-smoker who was simultaneously diagnosed with metastatic hepatocellular carcinoma (HCC), presenting with severe respiratory failure and multiorgan dysfunction. **Case presentation:** A 61-year-old man presented with one month of productive cough, intermittent fever, lethargy, weight loss, abdominal discomfort, and dyspnoea. Initial assessment revealed type 1 respiratory failure, transaminitis, thrombocytopenia, and reticulonodular lung changes. Sputum cultures on days 2 and 6 of admission confirmed CA-MRSA. Tuberculosis and viral panels were negative. Computed tomography imaging showed multiple liver lesions with cirrhotic background and bilateral lung nodules suggestive of metastatic HCC. **Discussion:** Despite escalation of antibiotics, the patient developed worsening sepsis, coagulopathy, portal vein thrombosis, acute liver failure, and progressive respiratory failure. He required intubation, vasopressor support, and continuous renal replacement therapy. The patient deteriorated despite maximal therapy and succumbed to asystole. Cause of death was MRSA pneumonia complicated by metastatic HCC. **Conclusion:** This case highlights the aggressive course of CA-MRSA pneumonia in the presence of advanced malignancy. Early diagnosis, aggressive antimicrobial therapy, and multidisciplinary management are essential, though prognosis remains poor when compounded by metastatic disease and multiorgan dysfunction.

Keywords: CA-MRSA pneumonia; hepatocellular carcinoma; respiratory failure

C-P5

Invasive Thyroid Malignancy with Tracheal Involvement Requiring Extensive Airway and Neck Surgery: A Complex Perioperative Management Case

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ABSTRACT

Introduction: Advanced thyroid malignancy with extrathyroidal extension and tracheal invasion poses significant perioperative challenges, particularly in airway management and surgical planning. Such cases require meticulous coordination between surgical and anaesthetic teams to anticipate airway compromise, haemodynamic instability, and prolonged operative duration. **Case presentation:** A 59-year-old woman with metabolic comorbidities presented with progressive anterior neck swelling, dysphagia, and hoarseness. Imaging revealed large invasive thyroid masses (TIRADS 5) with cervical lymphadenopathy and tracheal involvement. A multidisciplinary approach was adopted, with extensive preoperative planning for airway securing, invasive monitoring, and potential tracheostomy during combined thyroid and neck surgery. **Discussion:** Intraoperatively, extensive invasion of the thyroid cartilage, cricoid cartilage, strap muscles, left internal jugular vein, and tracheal wall was identified, precluding complete tumour resection. Surgical management consisted of tumour debulking, bilateral neck dissections, and tracheostomy. The 11-hour procedure was completed without major anaesthetic complications. Postoperatively, the patient was managed in the intensive care unit with ventilatory support and was later transferred to the ward on a tracheostomy mask. **Conclusion:** This case highlights the importance of early airway assessment, flexible intraoperative decision-making, and close multidisciplinary collaboration in managing advanced thyroid malignancies with airway involvement. Comprehensive perioperative preparation is crucial to optimise patient safety and outcomes.

Keywords: Airway management; neck dissection; perioperative care; thyroid cancer; tracheal invasion

C-P6

Pseudo-Tamponade in a "Crowded Pericardium": A Case of LV Aneurysm with Small Effusion Mimicking Cardiac Tamponade

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ABSTRACT

Introduction: Cardiac tamponade clinically presents with obstructive shock and is supported by point-of-care ultrasound (POCUS) findings such as plethoric inferior vena cava (IVC), right ventricular (RV) diastolic and right atrial (RA) systolic collapse. However, these signs are less specific when structural abnormalities or competing intrathoracic pressures are present. We report a case of minimal pericardial effusion showing tamponade-like findings from cardiac ultrasound in the context of a left ventricular (LV) aneurysm and bilateral pleural effusion. **Case description:** A 74-year-old woman presented with a week of fever with progressive breathlessness and fatigue. She had recently been admitted for acute gastroenteritis with type 2 myocardial infarction. She appeared dehydrated. She was tachycardia and tachypnoea, but her blood pressure remains normal. The cardiac ultrasound revealed an LV aneurysm with a small pericardial effusion, along with RV diastolic and RA systolic collapse. The IVC was not plethoric, and lung ultrasound showed bilateral pleural effusions. **Discussion:** The findings are consistent with a "low-pressure tamponade" state, where structural distortion from an LV aneurysm and relative hypovolemia lower the threshold for RA/RV collapse. The combination of aneurysmal LV and pleural effusion likely created a "crowded pericardium" leading to reducing the intrapericardial space to induce RA/RV collapse even with a small pericardial effusion. **Conclusion**: Altered cardiac geometry and bilateral pleural effusion can make even small effusions appear tamponade-like, causing RA/RV collapse in ultrasound findings. Clinicians should interpret these findings cautiously, prioritise correcting underlying conditions and optimising preload, and reserve pericardial drainage for cases demonstrating true obstructive tamponade.

Keywords: Cardiac tamponade; crowded pericardium; POCUS; RV diastolic collapse

C-P7

Cerebral Kounis Syndrome: A Rare Case of Cerebral Vasospasm Following Anaphylaxis

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ABSTRACT

Introduction: Kounis syndrome (KS) describes anaphylaxis-induced coronary vasospasm, often misdiagnosed as acute coronary syndrome. It possibly causes similar phenomenon of cerebral vasospasm and manifest as neurological complication of transient ischemic attacks (TIA). It is rare but increasingly recognised as one of stroke mimics. We report a unique presentation of cerebral vasospasm following an anaphylaxis in a previously healthy gentleman. **Case description:** A 45-year-old gentleman developed sudden right-sided hemiparesis and dysarthria while working outdoors, accompanied by generalised pruritus, rash, presyncope, dyspnea, palpitation and abdominal pain. He received prompt intramuscular epinephrine resulting in rapid symptom resolution and complete recovery in the emergency department. The brain CT scan and ECG were unremarkable. This case underscores the rare neurological manifestations of anaphylaxis. **Discussion**: This case highlights the dilemma of diagnosis and management. It rarely occurs following anaphylaxis as the brain typically protected by blood brain barrier (BBB). However, the lipid soluble allergen can cross the BBB and cause the cerebral vasospasm and inflammatory-mediated vascular dysfunction. This presentation aligns with the expanded concept of KS involving cerebral vasculature. This case highlights the importance of considering anaphylaxis-related cerebral vasospasm in patients presenting with simultaneous allergic and neurological symptoms. **Conclusion:** Prompt recognition and early epinephrine administration remain essential while maintaining vigilance for true TIA.

Keywords: Anaphylaxis; cerebral vasospasm; kounis syndrome

C-P8

From Antibiotics to Anticoagulants: Delayed Diagnosis of DVT Presenting as Cellulitis - A Case and Patient Perspective

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ABSTRACT

Unilateral leg swelling accompanied by erythema and tenderness represents the most common clinical presentation of cellulitis. However, in the absence of a thorough clinical history and physical examination, the diagnosis of deep vein thrombosis (DVT) may be overlooked, leading to delays in appropriate investigation and management, and consequently increasing the risk of morbidity and mortality. We report a case of a 62-year-old man who presented with a six-week history of right leg swelling and erythema, initially managed as cellulitis with oral antibiotic without clinical improvement. He had no systemic symptoms or conventional risk factors for cellulitis. Further history reveals his two elder sisters had a history of venous thromboembolism. Physical examination revealed unilateral pitting oedema extending to the thigh, accompanied by erythema and tenderness. Referral was required due to limited primary care resources. Laboratory testing showed elevated D-dimer levels, and duplex ultrasonography confirmed extensive thrombosis involving the right common femoral, superficial femoral, popliteal, and distal external iliac veins. Anticoagulation with fondaparinux followed by rivaroxaban resulted in marked clinical improvement, and he was discharged after four days. The patient expressed relief upon receiving the correct diagnosis, noting his family history. This case highlights the importance of reassessing patients who fail to respond to antibiotics for presumed cellulitis. Incorporating comprehensive history and physical examination, D-dimer testing, and duplex ultrasonography facilitates timely diagnosis of DVT. Acknowledging the psychological impact of delayed recognition highlights the importance of vigilance in primary care to prevent avoidable complications.

Keywords: Cellulitis; deep vein thrombosis; misdiagnosis; primary care

C-P9

Drenched in Dehydration: The Bridge between Acute Kidney Injury and Acute Kidney Disease in Severe Hyperemesis Gravidarum

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ABSTRACT

Introduction: Hyperemesis gravidarum (HG) typically causes mild acute kidney injury (AKI) secondary to dehydration. However, progression to severe acute tubular necrosis (ATN) requiring renal replacement therapy is rare. We report a case of severe HG complicated by septic miscarriage that evolved into acute kidney disease (AKD). **Materials and methods:** A 34-year-old primigravida at 16 weeks gestation presented with severe vomiting and lethargy persisting for one month. She was hemodynamically stable but clinically dehydrated with severe AKI (serum creatinine 437 µmol/L) and high anion gap metabolic acidosis. Following admission, she underwent a spontaneous septic miscarriage. Despite aggressive fluid resuscitation and antibiotic therapy, she remained anuric with worsening renal parameters, necessitating the initiation of intermittent haemodialysis. **Results:** Given the persistent renal dysfunction, a kidney biopsy was performed, which revealed dilated tubules with regenerative changes consistent with ATN, while ruling out pregnancy-related thrombotic microangiopathy and glomerulonephritis. Post-discharge, the patient was readmitted with generalised tonic-clonic seizures, treated empirically for meningitis/uremic encephalopathy, though imaging was unremarkable. She subsequently demonstrated significant renal recovery, with creatinine levels normalising to 135 µmol/L, and did not require long-term dialysis. **Conclusion:** This case illustrates the potential for HG to progress to life-threatening AKD. It underscores the utility of kidney biopsy in distinguishing ATN from other pregnancy-related renal pathologies and highlights the importance of vigilance for post-recovery complications, including neurological sequelae.

Keywords: Acute kidney injury; acute tubular necrosis; haemodialysis; hyperemesis gravidarum; kidney biopsy

C-P10

Encapsulating Peritoneal Sclerosis: A Diagnostic Challenge in Peritoneal Dialysis Patients

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ABSTRACT

Introduction: Encapsulating peritoneal sclerosis (EPS) is a rare but devastating complication of long-term peritoneal dialysis (PD). It is characterised by progressive fibrosis and thickening of the peritoneum, which encases the small intestine in a "cocoon," leading to intestinal obstruction. This report illustrates a classic "two-hit" presentation of EPS to highlight the critical importance of early recognition. **Materials and methods:** A 35-year-old male with chronic Hepatitis B and End-Stage Kidney Disease (ESKD) presented with severe abdominal pain and gross distension. He had been on continuous ambulatory peritoneal dialysis (CAPD) for five years. Two months prior, he underwent Tenckhoff catheter removal due to refractory peritonitis and was converted to haemodialysis. On examination, he was cachectic with a distended, tender abdomen. Laboratory investigations revealed severe anaemia (Haemoglobin 5.5 g/dL) and hypoalbuminemia (28 g/L). **Results:** Ultrasound showed complex multiloculated ascites. Subsequent Contrast-Enhanced Computed Tomography (CECT) demonstrated extensive peritoneal thickening, enhancement, and loculated fluid collections. The bowel loops were tethered centrally, exhibiting the pathognomonic "cocooning" sign, without calcifications. A diagnosis of EPS was confirmed based on the clinical history of long-term PD, recent peritonitis (the "second hit"), and radiological evidence. The patient was managed with nutritional support, Tamoxifen (20 mg OD), and Prednisolone (30 mg OD) to inhibit further fibrosis. **Conclusion:** EPS causes significant morbidity and requires a high index of suspicion in PD patients presenting with persistent abdominal symptoms, particularly after peritonitis episodes. Early utilisation of CT imaging and prompt initiation of immunosuppressive and antifibrotic therapy are essential to improve patient outcomes.

Keywords: Bowel obstruction; encapsulating peritoneal sclerosis; peritoneal dialysis; peritoneal fibrosis; tamoxifen

C-P11

A Case Report: From Intramuscular Haematoma to Prostate Cancer - An Unexpected Diagnostic Journey

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ABSTRACT

Prostate cancer is the second most common malignancy in men worldwide and often remains clinically silent in its early stages. We report a case of a 76-year-old man with multiple comorbidities who initially presented with a spontaneous left lower abdominal intramuscular hematoma. Investigations revealed stable haemoglobin levels and no laboratory evidence of a bleeding disorder. Imaging performed during this admission incidentally revealed prostatomegaly. Despite initial conservative management, serial imaging demonstrated progressive enlargement of the hematoma, eventually necessitating drainage. Subsequent serial imaging showed further enlargement of hematoma despite the intervention, with progressive erosion of the adjacent iliac bone and additional suspicious lytic lesions at other skeletal sites, raising concern for tumour-associated haemorrhage or intramuscular malignant infiltration. A transrectal ultrasound-guided (TRUS) biopsy of the prostate was performed and ultimately confirmed acinar adenocarcinoma. This case highlights the diagnostic challenge of distinguishing chronic intramuscular hematomas from malignancy related soft-tissue involvement. Spontaneous intramuscular hematomas are uncommon in the absence of trauma or coagulopathy and may mimic other soft-tissue pathologies when their progression is atypical. Persistent hematoma enlargement, particularly when associated with bone destruction and multiple other bone lesions, should raise suspicion for metastatic disease and prompt timely evaluation and further investigation.

Keywords: Bone erosion; intramuscular hematoma; metastasis; prostate cancer; soft-tissue involvement

C-P12

Case Report: Innovative Approach of Percutaneous Brush Cytology and Bilioplasty in a Case of Suspected Cholangiocarcinoma

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ABSTRACT

Cholangiocarcinoma is an aggressive malignancy of the biliary epithelium that may arise anywhere in the biliary tract. The clinical presentation of cholangiocarcinoma will depend on the location and size of the tumour, but more commonly presenting with biliary duct stricture with resulting jaundice. This neoplasm can be difficult to diagnose owing to occasionally indecisive imaging findings. Obtaining tissue sample is not always possible; particularly for periductal-infiltrating or intraductal-growing tumoural morphologies. This case report highlights the use of an innovative approach of using percutaneous brush cytology as a minimally invasive method to obtain tissue samples for histological evaluation. We also highlight the role of bilioplasty (balloon dilatation of a biliary stricture) in optimising biliary drainage in conjunction with stent placement. Both procedures were performed in a single session under fluoroscopy guidance. The outcome of this case underscores the importance of a multimodal approach in managing complex biliary pathology.

Keywords: Balloon dilatation; bilioplasty; biliary stricture; cholangiocarcinoma; percutaneous brush cytology

C-P13

Case Report: Cardiac Valvular Lesion Causing Dialysis Catheter Dysfunction

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ABSTRACT

Catheter-related complications are common in long-term haemodialysis patients, yet intracardiac calcified lesions masquerading as routine catheter dysfunction remain exceptionally rare. We report the case of a 40-year-old woman on regular haemodialysis via right internal jugular (IJ) tunnelled dialysis catheter for two years. She developed catheter flow disturbance accompanied by fever, and a provisional diagnosis of catheter-related bloodstream infection (CRBSI) was made. Her right-sided catheter was exchanged for a new catheter positioned at a similar depth within the right atrium. However, recurrent dysfunction occurred within one month. Suspecting a chronic fibrin sheath, a left-sided catheter was subsequently inserted, requiring unusually deep advancement into the right atrium to achieve adequate flow. One month later, purulent discharge emerged from the left-sided catheter exit site, and the patient continued to have low-grade fever. Transthoracic echocardiography revealed a large tricuspid-valve vegetation containing calcified components. Retrospective review of prior chest radiographs and fluoroscopic images obtained during the earlier right-sided catheter exchange demonstrated a previously unrecognised calcified mass in the region of the tricuspid valve. Following removal of the left-sided catheter, a right IJ venogram showed disruption and bifurcation of contrast flow by the calcified lesion, confirming its intracardiac location. A right-sided temporary catheter was then placed with its tip positioned in the superior vena cava. This case highlights two key lessons: (i) routine review of prior imaging is essential, as calcified lesions-although typically extracardiac-may occur within the heart; and (ii) venography can provide crucial diagnostic information when interpreted with an open and inquisitive mindset.

Keywords: Cardiology; infective endocarditis; interventional radiology; nephrology; permanent catheter

C-P14

A Hairy Cause of Small Bowel Obstruction

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ABSTRACT

Abstract: Small bowel obstruction (SBO) in adolescents may present with non-specific abdominal symptoms. Bezoar formation is a recognised intraluminal cause of obstruction, particularly in the presence of prior abdominal surgery and behavioural risk factors. We report the case of a 17-year-old female who presented with a one-week history of lower abdominal dull-aching pain radiating to the back, associated with nausea, vomiting, reduced oral intake, dysuria, absence of bowel opening and reduced passage of flatus. She had a surgical history of childhood midline laparotomy with bowel resection and anastomosis for bowel perforation, as well as a history of hair-eating behaviour. On examination, she appeared dehydrated, with a well-healed upper midline abdominal scar and no evidence of incisional or inguinal hernia. Abdominal examination revealed lower abdominal fullness and tenderness with resonant percussion. Laboratory investigations demonstrated ketonemia with compensated metabolic acidosis. Abdominal radiograph showed a sentinel loop sign in the left lower abdomen. Contrast-enhanced computer tomography (CT) of the abdomen and pelvis revealed dilatation of the jejunum extending to the mid-ileum with intraluminal fecalised material, distal bowel collapse without a clear transition point, and gastric dilatation containing a well-encapsulated fat density mass. The patient underwent a laparotomy, adhesiolysis, enterotomy and gastrotomy for removal of the bezoar.

Keywords: Adhesions; adolescent; bezoar; small bowel obstruction

C-P15

Out of Place, Out of Breath: Lingual Thyroid Unmasked with Airway Challenges: A Case Report

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ABSTRACT

Introduction: "Lingual thyroid" refers to an abnormal mass of thyroid tissue located at the base of the tongue, stemming from developmental issues during embryonic thyroid gland formation. Ectopic thyroid tissue may also appear in midline neck areas. Typically, lingual thyroid glands contain normal tissue, but there are rare reports of carcinoma development. Symptoms, like dysphagia and dyspnoea, may emerge in adolescence or adulthood. Management is controversial; asymptomatic, euthyroid cases may require no treatment, with monitoring for potential complications. **Case presentation:** A 56-year-old woman with 30 years history of intraoral swelling presented with dysphagia and dyspnoea. Computed tomography neck done and diagnosed as ectopic thyroid gland. **Intervention:** An intraoral excision of ectopic thyroid gland was performed. Post operatively, patient was put on nasogastric tube feeding and completed IV Augmentin 1.2 g tds for five days. **Outcome:** Following the operation, patient stayed in ward for five days and upon discharge, dyspnoea resolved and patient was able to tolerate orally well. **Conclusion:** Lingual thyroid is usually diagnosed late due to complications presenting later in life. Complication due to enlarging thyroid tissue can pose danger to patient as it can obstruct airway and cause difficulty during intubation.

Keywords: Airway obstruction; dyspnoea; ectopic thyroid gland

C-P16

Persistent Left Superior Vena Cava Mimicking Arterial Placement of a Central Venous Catheter: A Diagnostic Pitfall in Critical Care

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ABSTRACT

Introduction: Persistent left superior vena cava (PLSVC) is the most common congenital thoracic venous anomaly and is usually asymptomatic. However, its presence may cause diagnostic confusion during central venous catheter (CVC) insertion when the catheter follows an atypical mediastinal trajectory or generates an arterial-like waveform. Misinterpretation can lead to unnecessary catheter removal, repeated cannulation attempts, or inappropriate vascular intervention. This case highlights a clinically significant pitfall relevant to critical care practice. **Case report:** A 77-year-old man with sepsis, pneumonia, and metabolic acidosis required emergency intubation and CVC insertion. A left internal jugular CVC was placed under ultrasound guidance. Post-procedure chest radiograph revealed an unusual vertical left-sided course, and transduced pressure showed an arterial-like waveform. Computed tomography (CT) angiography and contrast venography were performed to determine the catheter position. **Results:** CT angiography demonstrated a double superior vena cava (SVC) with a persistent left SVC draining into a dilated coronary sinus. The CVC was correctly positioned within this anomalous vein. A central venogram confirmed uninterrupted venous drainage without arterial opacification. Recognition of this variant prevented unnecessary catheter removal and avoided vascular injury in a haemodynamically unstable patient. **Conclusion:** PLSVC should be considered when a left-sided CVC exhibits an abnormal mediastinal course or arterial-like waveform. CT angiography and venography provide definitive confirmation and help prevent misdiagnosis of arterial cannulation. Awareness of venous anomalies is essential to avoid procedural complications and inappropriate interventions in critically ill patients.

Keywords: Arterial waveform mimicry; central venous catheter; ICU; persistent left superior vena cava; venography

C-P17

Rapid 48-Hour Epidural Blood Patch Strategy Augmented by Topical Sphenopalatine Ganglion Block Conquers Severe PDPH

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ABSTRACT

Introduction: Post-dural puncture headache (PDPH) is a recognised complication of neuraxial anaesthesia, particularly in obstetric patients. It is caused by cerebrospinal fluid (CSF) leakage through a dural defect, resulting in traction on pain-sensitive structures. Conservative therapy may provide partial relief, but an epidural blood patch (EBP) remains the definitive treatment for moderate to severe PDPH. Adjunctive techniques such as sphenopalatine ganglion block (SPGB) gained interest as minimally invasive treatment. **Case report:** A 28-year-old gravida 2 para 1 woman at 34 weeks' gestation with monochorionic diamniotic twin pregnancy and previous caesarean section underwent emergency caesarean section for preterm labour. Inadvertent dural puncture (IDP) occurred during neuraxial anaesthesia. Within 48 hours postoperatively, the patient developed severe, disabling postural fronto-occipital headache, classical features of PDPH that significantly restricted functional activity. Conservative management, comprising bed rest, aggressive hydration, simple analgesia, and caffeine supplementation, provided only partial and temporary symptomatic relief. Following failure of conservative therapy, an ultrasound-guided epidural blood patch with 20 mL autologous blood was performed at 48 hours post-puncture. The patient experienced immediate complete headache resolution. Headache recurred after 24 hours, prompting adjunctive topical sphenopalatine ganglion block using local anaesthetic. This combined approach achieved rapid and sustained symptom relief with no further recurrence. **Discussion and conclusion:** This case demonstrates multimodal approach to PDPH management-comprising failed conservative management, timely EBP despite logistical constraints, and adjunctive SPGB produces superior outcomes compared to single-modality interventions. This combined approach facilitates rapid recovery, limits functional impairment, and reduces postpartum morbidity.

Keywords: Epidural blood patch; obstetric anaesthesia; post-dural puncture headache; sphenopalatine ganglion block

C-P18

Purple Urine Bag Syndrome: A Rare but Striking Presentation of UTI

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ABSTRACT

Introduction: Purple urine bag syndrome (PUBS) is an uncommon but striking phenomenon characterised by purple discolouration of the urine drainage bag, typically occurring in patients with long-term indwelling urinary catheters. It is frequently associated with catheter-associated urinary tract infection (CAUTI) caused by indoxyl-sulfatase–producing bacteria. Patients with neurogenic bladder and prolonged catheterisation are particularly vulnerable. **Materials and methods:** We report a 62-year-old semi-dependent male with neurogenic bladder and multiple comorbidities, including heart failure with preserved ejection fraction, hypertension, and previous cerebrovascular accident. He had previously declined suprapubic catheterisation and continued on long-term urethral catheterisation. The use of a non-silicone Foley catheter and frequent delays in catheter changes further increased his risk of infection. He presented to primary care for a routine but overdue catheter change, during which the urine bag was noted to be purple. Clinical assessment, urinalysis, urine culture, and treatment response were documented. **Results:** The patient was afebrile and haemodynamically stable. Urinalysis showed leukocyte 1+, blood 1+, protein 2+, and a positive nitrite test. Catheter replacement resulted in clearer urine. Empirical oral amoxicillin-clavulanate (Augmentin) was prescribed for 14 days. Urine culture subsequently grew Proteus mirabilis (>100,000 CFU/mL), confirming CAUTI. Symptoms improved on follow-up without complications, and the purple discolouration resolved after catheter replacement. **Conclusion:** This case highlights PUBS as a valuable visual indicator of CAUTI in patients with neurogenic bladder and delayed catheter changes. Early recognition, timely catheter replacement, and targeted antibiotic therapy are essential to prevent complications in high-risk primary care patients.

Keywords: Neurogenic bladder; PUBS; UTI

C-P19

Acute Localised Exanthematous Pustulosis Induced by Ceftriaxone: A Case Report on Diagnostic Challenges and Treatment Pitfalls

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ABSTRACT

Acute localised exanthematous pustulosis (ALEP) is a rare variant of acute generalised exanthematous pustulosis (AGEP), characterised by the eruption of non-follicular, sterile pustules on an erythematous base following drug exposure. It is a benign drug reaction that manifests shortly after drug initiation and typically resolves within five to seven days after withdrawal of the offending agent. ALEP is frequently under recognised and may be mistaken for infectious pustular dermatoses. We report a case of a 20-year-old woman who developed multiple pruritic, painless pustular lesions over the chin and upper chest three days after starting intravenous ceftriaxone, which had been administered intraoperatively for a left hemilaminotomy and partial discectomy at L4/L5 and L5/S1. The lesions appeared on postoperative day two, without associated fever, and laboratory investigations revealed leukocytosis. A pustule swab grew *Staphylococcus epidermidis*, likely representing skin flora. She was initially diagnosed with folliculitis and treated with fucidic acid cream and oral Augmentin for five days, with apparent improvement at follow-up. A subsequent dermatology review noted complete resolution after ceftriaxone cessation. The absence of follicular involvement and rapid self-limited course, supported a diagnosis of ceftriaxone-induced ALEP despite the absence of histopathological confirmation. This case highlights the diagnostic challenges of distinguishing ALEP from postoperative infectious pustular eruptions, which may lead to unnecessary antibiotic use. Although rare, ceftriaxone-associated ALEP should be considered when acute pustular rashes occur shortly after drug initiation. Increased awareness among primary care and surgical clinicians is essential for appropriate recognition and management.

Keywords: Adverse drug reaction; ceftriaxone; drug eruption; pustulosis

C-P20

Clot Without Clues: *JAK2*-Positive Thrombosis with Normal Counts

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ABSTRACT

Introduction: Thrombosis is a hallmark of *JAK2*-positive myeloproliferative neoplasms (MPNs), yet events may occur before overt blood count abnormalities appear. We report three cases which highlight the diverse thrombotic manifestations of *JAK2*-positive MPNs with normal hematologic profiles. **Case reports:** Case 1: A 72-year-old man with end-stage renal failure on dialysis developed recurrent acute myocardial infarctions with temporal angiographic evidence of progressive multivessel disease within 1 year. Haemoglobin was inappropriately normal despite no erythropoiesis-stimulating therapy. *JAK2V617F* mutation was detected, suggestive of polycythaemia vera pending bone marrow examination. He was treated with antiplatelet, direct oral anticoagulant (DOAC) and ruxolitinib due to hydroxyurea intolerance. Case 2: A 59-year-old man without cardiovascular risk, presented with sudden onset of left-sided body weakness due to right internal carotid artery thrombosis with concurrent pulmonary embolism causing respiratory failure. *JAK2V617F* mutation and bone marrow findings confirmed essential thrombocythemia. Follow-up blood counts showed subsequent thrombocytosis within 1.5 years. He received DOAC and hydroxyurea. Case 3: A 32-year-old man, without cardiovascular burden developed progressive left facial asymmetry and weakness for 3 days, with a past history of cerebral venous sinus thrombosis. Neuroimaging showed subacute lacunar infarcts, blood counts were normal, autoimmune screen was negative and *JAK2V617F* mutation was detected. He was treated with DOAC and monitored for progression to MPN. All patients remained free from recurrent thrombotic events on follow-ups. **Conclusion:** Unexplained or recurrent arterial and venous thromboses should prompt *JAK2* mutation testing regardless of blood counts. Early identification of MPN-related thrombosis beyond counts enables proper antithrombotic strategy to prevent recurrence.

Keywords: Essential thrombocythemia; Janus kinase 2; myeloproliferative disorders; polycythaemia vera; thrombosis

C-P21

Anti-nucleosome Antibodies in Systemic Lupus Erythematosus: The Forgotten Key

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ABSTRACT

Anti-nucleosome antibodies (AnuA) have been reported to have higher sensitivity than anti–double-stranded DNA (dsDNA) antibodies for diagnosing systemic lupus erythematosus (SLE). We report a 67-year-old woman with chronic, bilateral, symmetrical polyarthralgia affecting both large and small joints, accompanied by significant morning stiffness and intermittent oral ulcers. Examination revealed episcleritis and tenderness over proximal and distal interphalangeal joints without sonographic synovitis. Laboratory studies showed elevated inflammatory markers, with negative anti-citrullinated peptide antibodies (ACPA) and rheumatoid factor (RF). She was initially managed as infection-related polyarthralgia due to PTB smear-negative tuberculosis, based on lung changes seen on imaging; however, her symptoms persisted beyond three months despite anti-tuberculosis therapy. Subsequent autoimmune testing revealed positive ANA and AnuA, with negative anti-dsDNA and anti-Smith antibodies. Considering her clinical presentation and positive AnuA, a diagnosis of SLE was established. This case underscores the diagnostic value of anti-nucleosome antibodies, particularly in patients with negative conventional serologies.

Keywords: Anti-nucleosome antibodies; autoantibodies; systemic lupus erythematosus

C-P22

The Popliteal Imposter: MRI Diagnosis of Rheumatoid Nodules Imitating a Baker's Cyst

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ABSTRACT

Background: Rheumatoid arthritis (RA) is a chronic autoimmune inflammatory condition characterised by progressive joint involvement and range of extra-articular manifestations. Rheumatoid nodules typically arise at pressure points; however, occurrence within the popliteal fossa is extremely rare. Conversely, popliteal swellings are usually Baker's cysts arising from gastrocnemius–semimembranosus bursa and often accompany inflammatory or degenerative knee disorders. Because solid lesions such as rheumatoid nodules mimic the clinical and ultrasonographic appearance of cystic masses, accurate differentiation is essential for timely management. We report an unusual case of posterior knee rheumatoid nodules mimicking a Baker's cyst, diagnosed definitively by magnetic resonance imaging (MRI). **Case report:** A 47-year-old woman presented with four months of active seropositive RA. Despite optimised methotrexate, severe left knee pain persisted, prompting intra-articular hyaluronic acid injection. Three days later, acute calf swelling and paraesthesia developed. Ultrasound revealed a heterogeneous avascular popliteal collection, raising suspicion for Baker's cyst or abscess. MRI, however, demonstrated well-defined ovoid lesions posterior to the knee, isointense to muscle on T1 and hyperintense on T2, with heterogeneous gadolinium enhancement. These findings confirmed solid rheumatoid nodules rather than fluid-filled cysts. The patient was managed conservatively with continuation of RA therapy and close follow-up. **Conclusion:** Rheumatoid nodules should be considered in RA patients with posterior knee masses, even if mimicking Baker's cysts. While ultrasound is inconclusive, MRI offers superior characterisation-distinguishing solid nodules from cysts via signal intensity and enhancement patterns. Accurate diagnosis prevents unnecessary intervention and supports timely RA management optimisation.

Keywords: Abscess; Baker's cysts; MRI; rheumatoid nodules

C-P23

A Case Report on Extensive Portal and Mesenteric Vein Thrombosis as First Presentation in Late-onset Systemic Lupus Erythematosus

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ABSTRACT

Introduction Portal and mesenteric vein thrombosis (PMVT) is an uncommon initial manifestation of systemic lupus erythematosus (SLE), mimicking malignancy especially in older adults. We report an elderly woman presenting with constitutional symptoms and extensive PMVT, in whom multiple autoantibody positivity poses extreme diagnostic uncertainty. A 66-year-old lady with well controlled hypertension, hyperlipidaemia and diabetes mellitus presented with six months history of progressive epigastric pain, diarrhoea and constitutional symptoms. Clinical examination was unremarkable apart from ascites. Imaging revealed long-segment thrombosis of the portal vein, portoconfluence and superior mesenteric vein with features of portal hypertension. Oesophagogastroduodenoscopy (OGDS) showed oesophageal varices and haemorrhagic gastritis. Colonoscopy demonstrated caecal colitis, but biopsies were normal. Right pleural biopsies were negative for malignancy and infection. PET-CT demonstrated increased metabolic uptake at the caecum, which was biopsied prior. Tumour markers were normal. Full blood count showed anaemia, thrombocytopenia with persistent lymphopenia. Albumin was 31 g/L but other liver and renal function tests were normal. Autoimmune testing showed positive ANA and dsDNA with negative antiphospholipid antibodies. Putting all the clinical, biochemical and radiological evidence, supported by ACR-EULAR criteria, a final diagnosis of SLE was concluded. Her gastrointestinal manifestation was attributed to ischemic colitis precipitated by extensive PMVT. **Conclusion** This case highlights the importance of maintaining high index of suspicion for late-onset SLE in atypical thrombotic presentation. Extensive paraneoplastic evaluation and judicious interpretation of autoantibody profiles are crucial in guiding the best management in this isolated case.

Keywords: Acquired thrombophilia; ischemic colitis; late-onset SLE; systemic lupus erythematosus; thrombosis

C-P24

Isolated Unilateral Pitting Hand Oedema as the Initial Manifestation of Seropositive Rheumatoid Arthritis: Expanding the Spectrum of Early Vascular-Inflammatory Disease

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ABSTRACT

Introduction: Rheumatoid arthritis (RA) classically presents with symmetrical small joint synovitis, and limb oedema as an initial manifestation is exceptionally rare. Unilateral pitting oedema is particularly uncommon and distinct from the chronic non-pitting swelling seen in rheumatoid lymphedema. Very few RA-associated limb oedema cases exist in the literature, with no prior reports from Malaysia. **Case Presentation:** A 72-year-old Malay woman with hypertension and dyslipidaemia presented with a year of progressive, painless swelling of the right upper limb. Examination revealed unilateral pitting oedema to the mid-forearm, preserved pulses, absent trophic changes, and limited wrist motion. Laboratory evaluation showed elevated inflammatory markers, positive anti-CCP antibodies, and negative rheumatoid factor, with unremarkable renal, hepatic, cardiac, and infective tests. Hand X-rays demonstrated marginal erosions and carpal ankylosis, while CT angiography showed diffuse subcutaneous oedema without venous obstruction. Seropositive RA with atypical unilateral vascular inflammatory oedema was diagnosed. Significant improvement after three months of methotrexate supported an inflammatory rather than obstructive aetiology. **Discussion:** Findings suggest cytokine-mediated endothelial dysfunction which is potentially VEGF - driven microvascular hyperpermeability as the underlying mechanism, producing pitting oedema and reversible interstitial fluid accumulation. The seropositive profile, unilateral involvement, erosive disease and disease-modifying anti-rheumatic drugs (DMARD) responsiveness distinguish this presentation from RS3PE and classical rheumatoid lymphedema, the latter characterised by non-pitting chronic swelling due to lymphatic failure. **Conclusion:** Unilateral pitting hand oedema may represent an early vascular inflammatory manifestation of seropositive RA. Awareness of this phenotype is essential for accurate diagnosis, timely treatment, and improved representation in RA registries.

Keywords: Pitting oedema; rheumatoid arthritis; seropositive RA; vascular inflammatory phenotype;

tenosynovitis

C-P25

Not All Anaemia is from Cancer: Unmasking Carboplatin-Induced Haemolysis

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ABSTRACT

Introduction: Carboplatin is an alkylating anti-neoplastic agent commonly used in ovarian cancer. Its main toxicity is myelosuppression, while immune-mediated haemolysis is rare. The true incidence of carboplatin-induced haemolytic anaemia is unknown, but drug induced immune-mediated haemolytic anaemia (DIIHA) is estimated to occur in approximately 1 in 1,000,000 patients. Cases may be overlooked because anaemia is common during treatment. Here we report a case of cervical cancer treated with Carboplatin and developed carboplatin-induced haemolytic anaemia. **Case summary:** A 74-year-old woman with cervical cancer underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy in 2008. Her disease recurred with paravertebral mass in 2021. She had radiotherapy followed by six cycles of carboplatin and paclitaxel. Her disease remained stable until June 2024, when she developed a left supraclavicular lymph node enlargement. FNAC confirmed metastatic squamous cell carcinoma, and she was started on carboplatin and gemcitabine. During cycle 3, she developed severe anaemia (haemoglobin 5.3 g/dL) with no evidence of bleeding. Her blood film suggested haemolysis, with elevated reticulocytes (9.6%) and a positive direct Coombs test (anti-IgG 2+, anti-C3D 3+). Haematology concluded warm autoimmune haemolytic anaemia, likely triggered by carboplatin. She was treated with oral prednisolone (1 mg/kg) and four cycles of intravenous rituximab. Chemotherapy was later resumed with gemcitabine and cisplatin after completing rituximab without complications. **Discussion:** Carboplatin-induced immune haemolytic anaemia is exceptionally rare but potentially severe. This case highlights the importance of considering DIIHA in patients who develop acute, unexplained anaemia during carboplatin therapy. Prompt recognition, drug withdrawal and immunosuppression is crucial.

Keywords: Autoimmune haemolysis; carboplatin; cervical cancer

C-P26

The Perfect Storm: Statin Exposure and Chronic Hepatitis Leading to Immune Myositis

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ABSTRACT

Background: Immune-mediated necrotising myositis (IMNM) is a severe inflammatory myopathy characterised by prominent myofibre necrosis and markedly elevated muscle enzymes. The disease is strongly associated with anti–signal recognition particle (SRP) and anti–3-hydroxy-3-methylglutaryl–coenzyme A reductase (anti-HMGCR) antibodies. Anti-HMGCR–positive IMNM is classically linked to statin exposure, although additional immune triggers may contribute to disease onset and severity. Chronic viral infections, including hepatitis B virus (HBV), may act as immune adjuvants in genetically or pharmacologically primed individuals. **Case Presentation:** A 68-year-old man of Chinese descent with diabetes mellitus, hypertension, and hyperlipidaemia presented with a three-month history of rapidly progressive proximal muscle weakness, recurrent falls, and dysphagia, leading to functional dependence. Neurological examination demonstrated symmetric proximal muscle weakness with preserved distal strength and no cutaneous features of dermatomyositis. Laboratory evaluation revealed severe myonecrosis with creatine kinase of 14,710 U/L and transaminitis. Myositis-specific antibody testing was strongly positive for anti-HMGCR antibodies. Viral serology confirmed chronic hepatitis B infection (HBsAg and anti-HBc positive) with undetectable HBV DNA, consistent with inactive carrier state. The patient was treated with high-dose intravenous methylprednisolone followed by rituximab for refractory immune-mediated myopathy, in conjunction with antiviral prophylaxis using tenofovir. He demonstrated substantial biochemical and functional improvement, regaining independent ambulation. **Conclusion:** This case highlights a potentially under-recognised interaction between statin exposure and chronic hepatitis B infection in triggering anti-HMGCR–positive IMNM. Recognition of concurrent immune and infectious contributors is critical, as combined immunosuppressive and antiviral therapy may result in meaningful functional recovery in this otherwise debilitating condition.

Keywords: Hepatitis; HMGCR; necrotising myositis

C-P27

When Gout Breaks the Surface: A Rare Case of Disseminated Cutaneous Tophus Ulceration

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ABSTRACT

Introduction: Disseminated Cutaneous Gout (DCG) is a rare manifestation of severe, poorly controlled gout characterised by widespread intradermal monosodium urate deposition. It presents as nodules and chronic, non-healing ulcers, often leading to misdiagnosis as infectious or vascular aetiologies. **Case presentation:** A 51-year-old male with a 10-year history of poorly controlled gout presented with multiple non-healing ulcers releasing chalky white discharge over the limbs and gluteal region. Physical examination revealed widespread tophi and multiple "punched-out" ulcers with chalky bases and surrounding hyperpigmentation. Laboratory investigations demonstrated severe hyperuricemia (670.4 µmol/L), elevated inflammatory markers, mild renal impairment, and newly diagnosed diabetes mellitus. Imaging confirmed deep soft-tissue tophaceous deposits and joint erosions. Management focused on rigorous wound care and optimisation of allopurinol to achieve a serum uric acid target <300 µmol/L. This regimen resulted in significant ulcer healing and a reduction in cutaneous tophaceous burden. **Conclusion:** This case highlights the need to consider DCG in the differential diagnosis of chronic ulcers, especially in patients with visible tophi. Early recognition and aggressive urate-lowering therapy are critical to facilitate wound healing and prevent severe tissue loss.

Keywords: Chronic ulcers; cutaneous gout; hyperuricemia; tophi

C-P28

A Rare Complication of CNS Depressants in Paediatric Neurodegenerative Disease: Case Report of Juvenile-Onset Huntington Disease

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ABSTRACT

Huntington disease (HD) is a progressive autosomal dominant neurodegenerative disorder caused by CAG repeat expansion in the Huntingtin (HTT) gene. While most cases present in adulthood, 4%–10% are juvenile-onset (JHD), characterised by rapid functional decline, early behavioural disturbances, developmental regression, dystonia, and increased seizure frequency. Treatment often needs multiple antiseizure drugs, which may cause side effects. Phenobarbital and diazepam can rarely cause bradycardia, hypotension, or hypothermia, particularly in children with neurodegenerative disorders, necessitating close monitoring. A 6-year-old boy with juvenile-onset Huntington disease (JHD) presented with worsening myoclonic seizures with poor oral intake and a 2 kg weight loss over two weeks. Despite oral therapy, he required intravenous phenobarbital and diazepam for breakthrough seizures. Shortly after, he developed hypothermia (35.7°C), sinus bradycardia (46–50 bpm), bradypnea (14-20/min), and mild hypotension. Laboratory tests, including renal and liver profiles, electrolytes, ECG, and blood gases, were unremarkable. EEG showed near-continuous epileptiform discharges without an acute seizure focus. With therapy adjustment, hydration, and monitoring, he stabilised and was discharged on an optimised oral regimen. This case highlights CNS-depressant–induced autonomic suppression as a diagnosis of exclusion. Metabolic, infectious, and structural causes must be ruled out. EEG helps differentiate ongoing seizure activity from drug-related CNS depression. Conservative management is usually adequate; atropine may be required in severe cases. Children with underlying neurological disorders are particularly susceptible. Although rare, medication-induced cardiorespiratory and thermoregulatory depression is an important consideration in paediatric seizure management. Early recognition, close monitoring, and supportive care are essential to ensure safety.

Keywords: Autonomic nervous system; huntington disease

C-P29

When Anxiety isn't Anxiety: Atypical Anxiety Symptoms Revealing a Calcified Meningioma

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ABSTRACT

Introduction: Anxiety disorders are commonly seen in psychiatric practice. However, presentations that resemble anxiety but lack core psychological features may be secondary to underlying organic pathology. Recognising atypical phenomenology is important to avoid diagnostic delay and inappropriate treatment. **Case Presentation:** A 54-year-old Malay woman with diabetes mellitus and hypertension presented with a one-year history of brief, intrusive "preoccupied thoughts," worsening over three to four months. Episodes occurred several times daily, lasted a few seconds, and resolved spontaneously. She was unable to recall the content afterward. Episodes were accompanied by palpitations and tremors but without chest tightness. She denied fear, anticipatory anxiety, derealisation, depersonalisation, avoidance behaviour, or panic cognitions. Although her concentration was affected, her presentation did not meet criteria for panic disorder or other anxiety disorders, and she was initially treated as having unspecified anxiety disorder. Neuroimaging revealed a frontal calcified meningioma causing mass effect, accounting for her neuropsychiatric presentation. **Discussion:** Anxiety is defined not only by autonomic arousal but also by subjective fear, threat perception, anticipatory worry, and maladaptive cognitive appraisal. The absence of these components, combined with brief, stereotyped episodes and impaired recall, suggested a non-primary anxiety aetiology. Frontal lesions can produce subtle cognitive and behavioural disturbances that may precede overt neurological signs, often mimicking anxiety and challenging psychiatric diagnosis. **Conclusion:** This case demonstrates that intracranial pathology can masquerade as atypical anxiety. Careful phenomenological assessment and a low threshold for neuroimaging are essential when presentations do not fit recognised anxiety disorders.

Keywords: Anxiety symptoms; diagnostic challenge; meningioma; psychiatric presentation

C-P32

Anatomical Rarity: Case Report of Dural Arteriovenous Fistula Involving the Artery of Bernasconi and Cassinari

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ABSTRACT

Dural arteriovenous fistula (dAVF) is an intracranial vascular malformation characterised by abnormal arteriovenous shunting within the dural leaflets, bypassing the normal capillary bed. Although categorised as a *simple vascular malformation* under the International Society for the Study of Vascular Anomalies (ISSVA) classification, dAVFs may behave aggressively, leading to a wide spectrum of neurological manifestations and potentially severe morbidity if diagnosis and treatment are delayed. The artery of Bernasconi and Cassinari-also referred to as the medial or marginal tentorial artery-originates from the cavernous segment of the internal carotid artery and courses along the tentorium. These arteries are typically inconspicuous on angiography unless recruited by intracranial pathology that increases regional blood flow. Their dilation in the context of high-flow shunting, such as in dAVF, confers an elevated risk of intracranial haemorrhage and other neurological complications. Early detection and definitive treatment are therefore crucial. However, the complex angioarchitecture of dAVFs, particularly those supplied by rare arterial feeders like the Bernasconi and Cassinari arteries, poses significant challenges in treatment planning. We report the case of a 16-year-old boy with a longstanding right periorbital and frontal swelling initially diagnosed as a frontal haemangioma during infancy. The lesion gradually enlarged, accompanied by intermittent epistaxis and episodic right orbital redness beginning at age 10. Following comprehensive imaging, a cerebral angiogram performed in February 2025 demonstrated a persistent dAVF involving the posterior aspect of the superior sagittal sinus, with arterial supply from the rare bilateral arteries of Bernasconi and Cassinari in addition to multiple other feeders.

Keywords: Bernasconi and Cassinari artery; dural arteriovenous fistula; intracranial vascular malformation; tentorial artery

C-P33

Optic Nerve Schwannoma: An Important Rare Cause of Optic Nerve Mass

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ABSTRACT

Introduction: Schwannomas are benign nerve sheath tumours that may arise along the peripheral nervous system that originate from Schwann cells. Because optic nerve is myelinated by oligodendrocytes rather than Schwann cells, thus the diagnosis of optic nerve schwannoma is often almost non-exist theoretically. Hence, we herein report a rare case of this optic nerve schwannoma. **Case report:** A 40-year-old female with history of hyperthyroidism was presented with right eye proptosis for two weeks that preceded by blurring of vision for three months. Physical examination revealed right eye proptosis with neck swelling. Contrast enhanced CT brain/orbit and subsequently MRI orbit were performed and showed an exophytic heterogenous solid cystic enhancing mass at the right lateral corner space. It has poor plane with the right optic nerve which appears compressed and displaced superomedially. Patient was initially not keen for surgical excision. On follow-up MRI showed enlarging mass thus patient was agreeable for surgery. Due to compression to the optic nerve, initial diagnosis of optic nerve meningioma was made although the solid cystic appearance is not a typical feature. Histopathology however came back, and the lesion was confirmed to be a schwannoma. **Conclusion:** Although rare and almost not possible, the diagnosis of optic nerve schwannoma should not be totally excluded or neglected when the appearance is radiologically suggestive, as there is a rare possibility that it may arises from the sympathetic fibres around the optic nerve.

Keywords: Optic nerve mass; Schwannoma; Schwann cells

C-P35

Challenges and Gaps in Diabetic Foot Care: A Qualitative Study of Primary Care Providers in Kuantan

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ABSTRACT

Introduction: Diabetic foot problem (DFP) represents a major burden in Malaysia, contributing to morbidity, hospital admissions, and lower limb amputations. Primary care providers are often the first point of contact, yet their role in managing DFPs is underexplored. In Malaysia, we are in progress of setting up foot care protection service in primary care. This study investigates the experiences of healthcare providers in Kuantan's primary health clinics, focusing on clinical challenges, systemic barriers, and continuity of care to fil up the gap in providing the best foot care service in Malaysia. **Materials and methods:** A qualitative study was conducted using semi-structured focus group discussions with 12 primary care providers (medical officers, diabetic nurses, and Family Medicine Specialist) from four health clinics in Kuantan. Participants were recruited through purposive sampling. All discussions were audio-recorded, transcribed verbatim, and analysed using reflexive thematic analysis. Ethical approval was obtained prior to data collection. **Results:** Providers reported difficulties in wound care management, limited resources, and delayed referrals. Systemic barriers included staff shortage, high patient load, inadequate screening tools and educational material, and fragmented referral pathways. Communication gaps between primary and tertiary care disrupted continuity and follow-up. **Conclusion:** Addressing resource constraints, improving referral systems, and enhancing inter-provider communication are critical to strengthening DFU care in Malaysian primary care clinics.

Keywords: Diabetic foot care; foot protection care services; Malaysia; primary care clinics; provider perspectives

C-P36

Qualitative Study of The Perceived Barriers to Home-Based Rehabilitation Adherence Among Patients with Knee Osteoarthritis at SASMEC @IIUM

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ABSTRACT

Introduction: Many knee osteoarthritis (OA) patients perceive physiotherapy as a formal hospital-based session rather than a self-managed home routine. Poor adherence to provided home-based rehabilitation materials (pamphlets/videos) hinders OA management effectiveness. This underutilisation of a key intervention prevents slowing disease progression and improving function. This qualitative study aims to explore those perceived barriers to home-based rehabilitation adherence among knee OA patients at SASMEC @IIUM. **Materials and methods:** A qualitative study was conducted using purposive sampling involving 10 patients with knee osteoarthritis attending the orthopaedic clinic at SASMEC @IIUM.A qualitative study used purposive sampling of 10 knee osteoarthritis patients (aged 40-70, Kellgren-Lawrence grade ≥2, prescribed home exercises) from the orthopaedic clinic at SASMEC @IIUM. Data were gathered through semi-structured interviews in Malay by two IIUM Kuantan medical students, supervised by a sports medicine specialist, focusing on exercise adherence barriers and potential supportive interventions. All interviews were audio-recorded, transcribed verbatim, and analysed thematically using NVIVO Software. **Results:** The most frequently mentioned barriers were in the themes of the social and environmental and psychological barriers, namely, patients' time constraint and lack of motivation, followed by physical barriers, which are pain and discomfort. The patient also provided their opinions and recommendations on future digital applications for home-based rehabilitation. **Conclusions:** Patients indicate that both personal factors and factors related to healthcare professionals play an important role in non-adherence to home-based exercise. Understanding patients' challenges in adhering to rehabilitation is essential for developing targeted interventions that enhance outcomes and care quality.

Keywords: Exercise adherence; home-based rehabilitation; knee osteoarthritis; perceived barriers

C-P37

Sports-Related Eye Trauma from Badminton: Case Series and Long-Term Risks

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ABSTRACT

Introduction: Badminton is one of the most widely played sports in Malaysia and is generally perceived as safe. However, ocular trauma from shuttlecock impact can result in significant visual morbidity. This case series highlights the clinical presentation, management, and potential long-term consequences of shuttlecock-related eye injuries. **Case reports:** Case 1: A 12-year-old boy presented with left-eye pain and redness following shuttlecock impact. He was diagnosed with traumatic uveitis, which responded well to topical therapy. Case 2: A 23-year-old woman sustained a shuttlecock strike to the right eye, resulting in a lower-lid periorbital haematoma. Conservative treatment with warm compresses led to complete resolution without ocular sequelae. Case 3: A 15-year-old boy developed deep traumatic hyphaema, traumatic uveitis, and mydriasis with anisocoria after right-eye injury. Commotio retinae was noted on fundus examination The intraocular pressure elevated to 44 mmHg. Following prompt medical therapy, his visual acuity recovered to 6/6. Nonetheless, he later developed angle recession and a traumatic cataract, requiring ongoing monitoring. **Conclusion**: Although shuttlecock-related ocular injuries may initially present with reversible visual loss, they can lead to delayed and sight-threatening complications. Early assessment, appropriate intervention, and long-term follow-up are crucial to prevent secondary glaucoma and other late sequelae. Public awareness and protective eyewear should be encouraged to reduce the risk of badminton-related eye trauma.

Keywords: Angle recession; badminton; hyphaema; ocular trauma; shuttlecock injury

C-P38

Sociodemographic and Operative Characteristics of Hysterectomy Surgical Approaches: An Eight-Year Study at a University Hospital

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ABSTRACT

Introduction: Hysterectomy surgical approach selection significantly influences perioperative outcomes and complication rates. This study aimed to characterise sociodemographic profiles, operative parameters, and complications across different hysterectomy techniques to guide evidence-based surgical decision-making. **Materials and methods:** A retrospective descriptive analysis of 379 hysterectomy cases performed over eight years at a University Hospital was conducted. Cases were stratified by surgical approach: abdominal (n = 229), vaginal (n = 89), and laparoscopic (n = 61). Variables analysed included patient demographics, indications, operative characteristics, and complications. Statistical comparisons employed Kruskal-Wallis H test for continuous variables and chi-square or Fisher's exact tests for categorical data. **Results:** Significant differences emerged across approaches. Vaginal hysterectomy patients were older (median 68 years) with higher parity (median 5), while laparoscopic patients were youngest (median 48 years). Abdominal approach demonstrated highest blood loss (median 700 ml, $p < 0.001$) and longest hospital stay (median 4 days, $p < 0.001$), with 34.5% requiring transfusion versus 3.4% vaginal and 1.6% laparoscopic ($p < 0.001$). Vaginal hysterectomy exhibited significantly higher acute urinary retention rates (23.6%, $p < 0.001$). Fibroids predominated as indication for abdominal (38%) and laparoscopic (52.5%) approaches. **Conclusion:** Abdominal hysterectomy, despite higher morbidity and resource utilisation, remains necessary for complex pathology. Vaginal and laparoscopic approaches demonstrate superior perioperative outcomes with reduced blood loss and hospital stay, supporting their preference when clinically appropriate. Approach selection should balance pathology complexity, surgeon expertise, and patient factors.

Keywords: Complications; hysterectomy; patient demographics; perioperative outcomes; surgical approaches

C-P39

Bilateral BRVO Masquerading as Diabetic Changes in a High-Risk Patient

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ABSTRACT

Introduction: Branch retinal vein occlusion (BRVO) is a common retinal vascular disorder, but bilateral involvement is rare and often associated with visual morbidity. Early identification of sectoral involvement and associated macular oedema is crucial to prevent progression to ischemia and neovascular complications. We report a case of bilateral non-ischemic inferonasal BRVO with centrally involved macular oedema in a patient who remained asymptomatic with preserved vision. **Results:** A 51-year-old Malay woman with diabetes mellitus, hypertension, dyslipidaemia, and nephrotic syndrome presented for diabetic eye screening with no visual complaints and good visual acuity bilaterally. Anterior segment examination was normal. Fundus examination revealed dense macular hard exudates along the papillomacular bundle and sectoral preretinal haemorrhage, neovascularisation, and subretinal exudates confined to the inferonasal quadrant in both eyes. Optical coherence tomography showed preserved foveal contour with intraretinal fluid, IS/OS disruption nasal to fovea, and nasal vitreomacular traction. Fundus fluorescein angiography demonstrated disc neovascularisation with pinpoint leakage and limited capillary non-perfusion less than 5 disc diameter, confirming bilateral non-ischemic inferonasal BRVO with centrally involved macular oedema. She received sectoral panretinal photocoagulation to both eyes and topical nonsteroidal anti-inflammatory drugs (NSAIDs). Serial follow-up demonstrated stable retinal findings and preserved vision. **Conclusion:** Bilateral non-ischemic BRVO may be asymptomatic yet exhibit early neovascular changes. Early recognition and targeted sectoral laser treatment prevented progression to ischemia and maintained good visual outcomes. Clinicians should remain vigilant for atypical bilateral BRVO presentations in patients with multiple systemic risk factors.

Keywords: Branch retinal vein occlusion; macula oedema

C-P40

The Silent Shift: Unilateral Peripheral Ulcerative Keratitis Following Bilateral Marginal Keratitis.

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ABSTRACT

Introduction: Peripheral ulcerative keratitis (PUK) is a rare, sight-threatening corneal inflammation often associated with autoimmune disease. Marginal keratitis, often associated with staphylococcal blepharitis, is usually benign but can rarely progress to PUK. We report a rare case of unilateral PUK following bilateral marginal keratitis in a healthy lady with no known medical illness, highlighting the importance of early recognition, clinical progression and timely management to prevent serious corneal complications. **Results:** A 38-years-old Melanau lady with no known medical illness presented with right eye redness and blurred vision. She had been treated elsewhere for bilateral marginal keratitis with topical antibiotics and corticosteroids. The left eye resolved completely, but the right eye worsened. Upon first presentation, right eye visual acuity (VA) was 6/18 (pinhole 6/12), no RAPD and intraocular pressure was 10 mmHg. Slit lamp examination revealed injected conjunctiva and crescent shaped peripheral corneal thinning at 4 until 6 o'clock with overlying epithelial defect. Otherwise, anterior chamber was deep, quiet, no hypopyon. Left eye examination was unremarkable with VA 6/6. Systemic investigations, including autoimmune and infectious screening, were unremarkable except for raised erythrocyte sedimentation rate (ESR). The patient responded well to a combination of topical steroids, antibiotics, and systemic immunosuppressive therapy after excluding active infection. The left eye remained quiescent with no recurrence. **Conclusion:** PUK can rarely evolve from marginal keratitis even in immunocompetent individuals without systemic disease. Vigilant follow-up and early multidisciplinary management are crucial to preserve vision and prevent complications.

Keywords: Marginal keratitis; peripheral ulcerative keratitis

C-P41

Central Retinal Vein Occlusion in the Young: Unmasking Systemic Thrombophilia Through a Sentinel Case of Protein S Deficiency

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ABSTRACT

Introduction: Central retinal vein occlusion (CRVO) is a condition predominantly affecting older adults with established vascular risk factors. Its presentation in a young, systemically well patient is a diagnostic sentinel, mandating an extended etiological investigation for occult systemic pathologies such as hereditary thrombophilia. This report delineates the diagnostic pathway of a non-ischaemic CRVO in a young adult, illustrating how ophthalmic signs can serve as the primary indicator for identifying a life-altering coagulopathy. **Materials and method:** Case report. **Results:** 23-year-old male who presented with acute-onset visual distortion in the right eye, with a best-corrected acuity of 6/18 and no relative afferent pupillary defect. Fundus examination revealed classic signs of non-ischaemic CRVO, including optic disc swelling, dilated tortuous vessels, and extensive intraretinal haemorrhages, with optical coherence tomography confirming significant macular oedema. While an initial systemic workup for metabolic, inflammatory, and infectious causes was unremarkable, a compelling family history of unprovoked pulmonary embolism in a sibling prompted an extended thrombophilia screen. This investigation definitively unmasked an underlying protein S deficiency. The patient was promptly referred for haematological co-management and commenced on systemic anticoagulation with rivaroxaban. **Conclusion:** This case establishes that CRVO in young adults without traditional risk factors must prompt a high index of suspicion for underlying thrombophilia, such as protein S deficiency. It highlights the pivotal role of the ophthalmologist as a systemic diagnostician, whose findings can precipitate life-saving interventions. A comprehensive, tiered systemic evaluation is imperative to identify treatable conditions, prevent recurrent thromboembolic events, and optimise long-term patient outcomes.

Keywords: Central retinal vein occlusion; macular oedema; protein S deficiency; thrombophilia; young adult

C-P42

When Metastasis Strikes the Eyes: Sudden Visual Field Loss from Choroidal Malignant Tumour

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ABSTRACT

Introduction: Choroidal metastasis is rare but remains the most common intraocular malignancy. Early recognition is essential, particularly when ocular findings precede systemic manifestations. This case report highlights the diagnostic challenges and the importance of a coordinated ocular–systemic evaluation in such presentations. **Case report:** A 50-year-old woman, a non-smoker with no known comorbidities presented with right eye sudden onset of nasal visual field defect for 1 week. She had intermittent cough for three months without constitutional symptoms. The vision was 6/18 in the right eye and 6/12 in the left eye. Ocular examination of the right eye revealed a large, elevated pale yellow lesion temporal to the fovea, exceeding 10 disc diameters, associated with inferior exudative retinal detachment. The asymptomatic left eye showed a similar but smaller lesion measuring 4 x 5 disc diameters, located superior to the optic disc, with an attached retina. B-scan ultrasonography confirmed bilateral choroidal masses with right-sided retinal detachment. Systemic examination and chest radiography were unremarkable. Subsequent computed tomography of the thorax, abdomen, and pelvis identified a left pulmonary mass, mediastinal lymphadenopathy, hepatic and bone metastases. Thoracoscopic biopsy of the pleura confirmed adenocarcinoma. Despite referral and systemic management, the patient deteriorated due to massive pleural and pericardial effusions and lower limb deep vein thrombosis. She eventually succumbed to the disease. **Conclusion:** This case emphasises that ocular symptoms may be the initial manifestation of a widespread malignancy. Prompt recognition of choroidal metastasis and timely systemic imaging are crucial for referral and optimising oncologic management.

Keywords: Choroidal malignant tumour; choroidal metastasis

C-P43

Integrated Surgical and Radiotherapeutic Management of Bilateral Compressive Optic Neuropathy in Thyroid Eye Disease

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ABSTRACT

Introduction: Thyroid eye disease (TED) is the most common cause of orbital inflammation. It may progress to compressive optic neuropathy (CON) from apical crowding due to enlarged extraocular muscles. Although TED is often asymmetric, bilateral CON may occur and poses significant diagnostic and therapeutic challenges. **Case report:** A 53-year-old man with uncontrolled hyperthyroidism presented with sudden onset dim vision in the left eye for one day. Over one month, the visual acuity deteriorated from 6/9 to 6/36 in the right eye and from 6/12 to 6/36 in the left eye. He showed bilateral colour vision impairment despite absent relative afferent pupillary defect, normal red desaturation and colour brightness. Both eyes showed proptosis. Ocular motility showed marked limitation in elevation, adduction and abduction. Visual field revealed worsening inferior scotomas bilaterally. Fundus examination showed tilted discs with otherwise normal maculae and retinae. Computed tomography (CT) orbit showed bilateral apical crowding with optic nerve compression and enlarged extraocular muscles. High-dose IV methylprednisolone followed by three pulsed cycles were given but vision declined to 6/60 bilaterally, requiring urgent orbital decompression. Despite surgery, right eye worsened to counting finger and repeat CT demonstrated persistent apical crowding with greater right-sided proptosis. Bilateral orbital radiotherapy was then performed. After a cumulative 11.5 g of IV methylprednisolone, the disease stabilised with final vision of 6/60 in the right eye and 6/9 in the left eye. **Conclusion:** Bilateral CON in TED requires rapid diagnosis and combined medical, surgical and radiotherapeutic approaches to optimise visual outcomes.

Keywords: Compressive optic neuropathy; orbital decompression; orbital radiotherapy; thyroid eye disease

C-P44

Short-Term Real-World Outcomes of Intravitreal Dexamethasone Implant (Ozurdex®) in Macular Oedema: A Case Series

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ABSTRACT

Introduction: To evaluate the short-term outcomes of intravitreal dexamethasone implant (Ozurdex®) in patients with diabetic macular oedema (DME) and pseudophakic cystoid macular oedema (CMO), focusing on visual acuity (VA), intraocular pressure (IOP), and macular thickness (OCT) pre- and post-injection. **Materials and methods:** A retrospective case series of twelve patients who received Ozurdex for refractory DME (n = 6) and pseudophakic CMO (n = 6) was conducted. One patient defaulted follow-up, leaving eleven cases with complete data. Best corrected visual acuity (BCVA), IOP (Goldmann) and OCT macular thickness were recorded at baseline and 1-month post-injection. **Results:** Nine out of eleven patients demonstrated improvement in visual acuity, with the most significant gains observed in pseudophakic CMO cases, where visual acuity improved from 6/60 to 6/12. OCT macular thickness showed a reduction in all cases, with a decrease from 609 µm to 271 µm in pseudophakic CMO and 402 µm to 340 µm in DME. No severe complications were reported. **Conclusion:** Ozurdex® demonstrated short-term efficacy in reducing macular oedema and improving VA in refractory DME and pseudophakic CMO**,** providing a steroid-based alternative where anti-VEGF therapy is insufficient**.** Larger studies with extended follow-up are needed to validate these findings

Keywords: Diabetic macular oedema; intravitreal dexamethasone implant; IOP; OCT; Ozurdex; pseudophakic CMO

C-P45

Advanced Unilateral Iridocorneal Endothelial Syndrome with Pseudopolycoria and Severe Glaucomatous Damage in a Middle-Aged Malay Male

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ABSTRACT

Introduction: Iridocorneal endothelial (ICE) syndrome is a rare, progressive disorder in which abnormal corneal endothelial proliferation leads to iris atrophy, corectopia, peripheral anterior synechiae (PAS), and secondary glaucoma. Although more frequently reported in females, affected males may experience rapid disease progression and severe glaucomatous damage if diagnosis is delayed. **Materials and methods:** We report a 51-year-old Malay male with bronchial asthma who presented with six months of left-eye blurred vision and intermittent discomfort. He also described longstanding pupillary displacement without prior ophthalmic assessment. Comprehensive evaluation included slit-lamp biomicroscopy, Goldmann applanation tonometry, gonioscopy, dilated fundus examination, and Humphrey visual field (HVF) testing. A diagnosis of ICE syndrome was established based on characteristic anterior segment findings. Topical latanoprost was initiated. **Results:** Best-corrected visual acuity was 6/6 in the right eye and 6/12 in the left. A relative afferent pupillary defect was detected. Intraocular pressure measured 16 mmHg (right) and 60 mmHg (left). Slit-lamp examination demonstrated pseudopolycoria, progressive iris atrophy, inferior corectopia, broad PAS, and endothelial membrane proliferation. Fundus examination showed cup-to-disc ratios of 0.8 (right) and 0.9 (left). HVF testing revealed advanced glaucomatous loss in the left eye (visual field index 28%). **Conclusion:** This case underscores an atypical presentation of ICE syndrome in a male patient with severe unilateral glaucoma and significant structural and functional impairment. Early recognition and prompt intraocular pressure control are critical to prevent irreversible optic nerve damage, with surgical intervention considered when medical therapy is inadequate.

Keywords: Corectopia; iridocorneal endothelial syndrome; pseudopolycoria; progressive iris atrophy; secondary glaucoma; unilateral glaucoma; visual field loss

C-P46

Papilloedema with a Twist: IIH Masquerading as Optic Neuritis in Pregnancy with IgA Nephropathy

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ABSTRACT

Introduction: Optic disc swelling in pregnancy presents a significant diagnostic challenge, particularly when visual symptoms overlap with optic neuritis and idiopathic intracranial hypertension (IIH). Accurate differentiation between these two entities is crucial, as their treatment strategies diverge substantially. **Materials and methods:** We report a pregnant lady with newly diagnosed IgA nephropathy who developed optic disc swelling and visual disturbances, initially raising suspicion for optic neuritis but ultimately diagnosed with IIH following targeted ophthalmic and neurological investigations. **Results:** A 29-year-old G2P1 at 14 weeks gestation presented with progressive visual disturbance, headache and bilateral optic disc swelling. Visual field assessment revealed bilateral central scotoma and other clinical features suggestive of optic neuritis. However, magnetic resonance imaging (MRI) brain and orbit revealed no demyelinating or inflammatory optic nerve changes. Lumbar puncture demonstrated markedly elevated opening pressure (58 cmH_2O) with normal cerebrospinal fluid biochemistry, confirming IIH. Concurrent renal assessment identified advanced IgA nephropathy, which may have contributed to altered fluid dynamics during pregnancy. The patient was managed conservatively under multidisciplinary surveillance. Papilloedema resolved fully, and visual acuity improved to 6/6 bilaterally with resolved central scotoma. Pregnancy continued without hypertensive complications, and foetal growth remained appropriate for gestational age.

Keywords: Idiopathic intracranial hypertension; IgA nephropathy; optic neuritis; papilloedema; pregnant

C-P47

Vision on a Fragile Lifeline: Cilioretinal Artery Occlusion

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ABSTRACT

Purpose: Cilioretinal Artery arises from the short posterior ciliary vessels rather than the central retinal artery. These vessels are present in approximately 18-32% of eyes, usually contribute to some portion of macular circulation. Most commonly cilioretinal artery occlusion occurs (CLRAO) in patient with a central retinal vein occlusion (CRVO). However, if occurs in isolation, giant cell arteritis (GCA) should be considered. This report illustrates how an ophthalmic diagnosis of CLRAO warrants important comprehensive systemic evaluation. **Setting:** Ophthalmology Clinic, Hospital Shah Alam Selangor. **Materials and methods:** Case report of a 52-year-old male smoker who presented with acute-onset visual disturbance. A comprehensive ophthalmic and systemic evaluation was conducted to ascertain the underlying aetiology. **Results:** The patient presented with visual distortion in the left eye for 2 days, with visual acuity of hand movement. The optic nerve function test was positive over the left eye. Fundus examination of the left eye revealed classic signs of cilioretinal artery occlusion, including retinal whitening extending from the superotemporal optic nerve through the macula superior to the fovea. Optical coherence tomography confirming significant retinal layer thickening and oedema. Systemic workup for metabolic and thromboembolic causes was done. Investigation revealed normal computed tomography brain but deranged cholesterol level with presence of electrocardiogram changes. The patient was promptly referred for medical co-management and commenced on systemic anticoagulation with atorvastatin. **Conclusion:** This case highlights the importance of considering CLRAO in patients presenting with acute painless visual loss. Early identification and prompt systemic workup is crucial in preventing further ocular or vascular systemic events. **Financial Disclosure:** No financial or proprietary interest in the materials or methods mentioned.

Keywords: Central retinal vein occlusion; cilioretinal artery occlusion; computed tomography brain; giant cell arteritis; retinal layer thickening

C-P48

Subarachnoid Haemorrhage Beyond Aneurysms: Cerebral Venous Sinus Thrombosis as a Rare Culprit

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ABSTRACT

Introduction: Non-accidental subarachnoid haemorrhage (SAH) is most commonly due to ruptured cerebral aneurysm; rarer causes include other vascular lesions. Cerebral venous sinus thrombosis (CVST) is an uncommon cerebrovascular disorder with diverse presentations and can be difficult to diagnose, particularly when the initial presentation is acute SAH. We report two cases of dural venous sinus thrombosis presenting with SAH, both initially evaluated to exclude aneurysmal rupture. **Case reports:** Case 1: A 55-year-old woman with FIGO stage III ovarian cancer presented with sudden left hemiplegia (power 0/5). Non-contrast computed tomography (CT) showed acute SAH in the right hemispheric sulci and Sylvian fissure with adjacent white matter hypodensity; the anterior to distal third of the superior sagittal sinus (SSS) appeared hyperdense. CT angiography (CTA) excluded aneurysm, and CT venography (CTV) confirmed SSS thrombosis. Case 2: A 44-year-old woman presented with multiple seizures over one week; neurological examination was unremarkable. CT showed acute SAH in bilateral high parietal and left frontal lobes with punctate left frontal intraparenchymal haemorrhage. CTA showed no aneurysm; SSS thrombosis on CTV was initially missed and identified after neuroradiology review. Both patients improved with anticoagulation. **Conclusion:** Although CVST rarely presents as acute SAH, it should be suspected when CTA reveals no aneurysm, particularly when SAH is convexity-predominant with sparing of the basal cisterns or when a hyperdense venous sinus is seen on non-contrast CT. Accurate diagnosis is critical; aneurysms usually require surgical or endovascular treatment, whereas CVST is treated with anticoagulation. Misdiagnosis may lead to harmful management and poor outcomes.

Keywords: Cerebral venous thrombosis; convexity; subarachnoid haemorrhage

C-P49

Xanthogranulomatous Orchitis - A Rare Mimicker of Testicular Malignancy

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ABSTRACT

Xanthogranulomatous orchitis is an uncommon, benign inflammatory condition of the testis characterised by the accumulation of lipid-laden macrophages, which can clinically and radiologically mimic testicular malignancy. Due to its rarity and overlapping presentation with testicular cancer, diagnosis is often challenging and typically confirmed only after histopathological examination following orchiectomy. We present a case of xanthogranulomatous orchitis that was initially suspected to be a testicular tumour based on clinical and imaging findings. This report highlights the importance of considering xanthogranulomatous orchitis in the differential diagnosis of testicular masses to avoid unnecessary aggressive treatment and emphasises the role of histopathology in definitive diagnosis.

Keywords: Histopathology; orchiectomy; testicular mass; testicular neoplasms; xanthogranulomatous orchitis

C-P50

From Pancreas to Skin: Necrotising Pancreatitis with Retroperitoneal Spread Causing Cutaneous Necrotising Fasciitis: A Case Report

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ABSTRACT

Introduction: Necrotising pancreatitis is a severe form of acute pancreatitis characterised by pancreatic and peripancreatic tissue necrosis. Retroperitoneal extension of pancreatic necrosis leading to cutaneous necrotising fasciitis is an extremely rare and life-threatening complication. Early recognition and prompt surgical intervention are crucial for survival. We have an interesting case report of a 39 years old gentleman who came with abdominal pain and jaundice. He was diagnosed to have ascending cholangitis with concomitant necrotising pancreatitis based on clinical, biochemical and CT findings. He underwent endoscopic retrograde cholangiogram (ERCP), biliary stenting done and he was discharged well. Eventually one month after discharge, he came in with septic shock with necrotising fasciitis of the left lumbar with CT findings of retroperitoneal collection. Prompt wound debridement and retroperitoneal lavage performed immediately. Post operatively, he required regular dressing and long duration of antibiotics. Clinically and biochemically the sepsis resolved and he did survive. **Conclusion:** In this particular case, cutaneous necrotising fasciitis secondary to retroperitoneal spread of pancreatic necrosis is exceedingly uncommon, with few cases reported in the literature. Awareness of this potential progression is vital for timely diagnosis and management to improve patient outcomes. Decision for wound debridement is justified but the act of retroperitoneal lavage should be debated and discussed as it may improve the patient or may exacerbated the condition. The other option of minimally invasive percutaneous drainage also should be considered.

Keywords: Necrotising fasciitis; necrotising pancreatitis; retroperitoneal abscess

C-P54

When XGP Meets Melioidosis: A Deadly Overlap of Two Rare Entities - A Case Report

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ABSTRACT

We report the first documented case of xanthogranulomatous pyelonephritis (XGP) concurrent with melioidosis. A 58-year-old woman presented with progressive abdominal distension, weight loss, and a large right renal mass. Imaging showed Stage III XGP with extensive retroperitoneal involvement and inferior vena cava compression. Despite drainage and antibiotics, she developed worsening sepsis and eventually progressed to septic shock. Emergency subtotal nephrectomy was performed, revealing dense adhesions and purulent destruction. Cultures later confirmed *B. pseudomallei*. Despite maximal postoperative support, she succumbed to refractory septic shock. This case highlights the diagnostic challenges, surgical complexity, and high mortality associated with overlapping renal infections and underscores the importance of considering melioidosis in severe renal sepsis in endemic regions.

Keywords: Melioidosis; pyelonephritis; xanthogranulomatous; XGP

C-P55

A Rare Course: Peripheral Ulcerative Keratitis Emerging in a Patient with Viral Keratoconjunctivitis

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ABSTRACT

Introduction: Peripheral ulcerative keratitis (PUK) is typically associated with autoimmune disease and is rarely linked to viral keratoconjunctivitis. It is a sight-threatening inflammatory condition involving progressive peripheral corneal thinning, typically requiring urgent immunosuppressive therapy to prevent perforation. **Materials and methods:** A 49-year-old woman with no prior autoimmune history presented with a 7-week course of right-eye redness, pain, photophobia, and glare after initial treatment for conjunctivitis after multiple visits to general practitioners. **Results:** On presentation, the right eye demonstrated a crescent-shaped peripheral corneal ulcer from 7-10 o'clock with stromal thinning, accompanied by 2+ anterior chamber cells and temporal conjunctival injection. Investigations revealed markedly elevated ESR (120 mm/hr) and neutrophil-predominant leukocytosis, with negative autoimmune markers (ANA, ANCA, RF). The patient was diagnosed with PUK secondary to viral keratoconjunctivitis and commenced on doxycycline, high-dose topical steroids, antibiotics, vitamin C, and subsequently IV methylprednisolone 250 mg QID when symptoms of glare and discomfort persisted. Serial examinations showed gradual reduction in conjunctival injection and rounding of the ulcer edge, indicating stabilisation. **Conclusion:** This case illustrates that severe ocular surface inflammation from viral keratoconjunctivitis may precipitate or unmask PUK, even in the absence of systemic autoimmune disease. Early recognition and aggressive immunosuppression were essential in preventing progression and preserving vision.

Keywords: Methylprednisolone; peripheral ulcerative keratitis; viral keratoconjuctivitis

C-P56

When Scleritis isn't Scleritis: Unmasking Conjunctival Reactive Lymphoid Hyperplasia in a Bilateral Ocular Lesion

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ABSTRACT

Nodular scleritis is an uncommon, localised form of anterior scleritis that may mimic other ocular surface lesions. Conjunctival Reactive Lymphoid Hyperplasia (RLH) is a benign lymphoproliferative condition that can present similarly with painless, salmon-coloured or gelatinous lesions. Distinguishing between these entities is essential, as management and prognosis differ significantly. A 42-year-old woman with Diabetes Mellitus and a previous history of bilateral episcleritis presented in 2024 with bilateral eye redness, discomfort, and photophobia. She denied visual loss or ocular pain. Examination revealed bilateral conjunctival injection with nodular lesions at the nasal limbus, while the remainder of the ocular assessment was unremarkable. She was treated empirically for bilateral nodular scleritis with topical prednisolone acetate 1% and oral ibuprofen. Uveitis and autoimmune screening were negative except for mildly elevated ESR and CRP. Due to poor clinical response, she underwent right nasal conjunctival biopsy and left nasal wide excision with cryotherapy. Intraoperatively, the right eye demonstrated a 5 x 5 mm firm nodule adherent to sclera with surrounding vascularity, whereas the left eye showed a 5 x 4 mm gelatinous lesion. Histopathology revealed granulomatous inflammation consistent with nodular scleritis in the right eye. In contrast, the left eye lesion was reported as conjunctival lymphoid hyperplasia, a benign reactive lymphoid process. This case highlights the diagnostic challenge when bilateral ocular nodules exhibit discordant pathology. Clinicians should consider conjunctival RLH as a differential diagnosis in atypical or refractory nodular lesions. Early biopsy is crucial to guide appropriate management and prevent unnecessary prolonged immunosuppression.

Keywords: Bilateral ocular nodules; conjunctival reactive lymphoid hyperplasia; nodular scleritis; ocular surface lesions

C-P57

Ischemic Retinal Vasculitis in a Young Male Leading to Vitreous Haemorrhage: A Case of Eales Disease

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ABSTRACT

Eales disease is an idiopathic occlusive vasculopathy primarily affecting healthy young males. It remains a diagnosis of exclusion and has been linked with hypersensitivity to tuberculoprotein post *Mycobacterium tuberculosis* exposure. We report a case of unilateral vitreous haemorrhage with contralateral retinal vasculitis in a young male, managed successfully with combined medical and surgical treatment. An 18-year-old healthy male presented with sudden right eye visual blurring preceded by increasing floaters. Comprehensive ophthalmic evaluation, fundus imaging, B-scan ultrasonography, fluorescein angiography (FFA), indocyanine green angiography (ICG), and systemic investigations were performed. Surgical intervention with trans-pars plana vitrectomy (TPPV) and laser photocoagulation was undertaken for the right eye, while panretinal photocoagulation (PRP) was performed for the left eye. The right eye demonstrated dense vitreous and subhyaloid haemorrhage, while the left eye revealed segmental periphlebitis, vasculitis, terminal vessel sclerosis, and dot-blot haemorrhages. FFA of the right eye showed vasculitis, leakage, masking, and areas of non-perfusion; ICG was unremarkable. Laboratory evaluation was negative except for a positive Tuberculosis (TB)-Quantiferon test. The patient was diagnosed with right eye vitreous haemorrhage and left eye ischemic branch retinal vein occlusion (BRVO) secondary to vasculitis, in keeping with Eales disease. He was referred to pulmonary physician for anti-tubercular therapy initiation. Post treatment, the patient achieved complete visual recovery to 6/6 bilaterally, with stable fundus findings and absence of recurrent haemorrhage at four-month follow-up. This case highlights the importance of considering Eales disease in young males presenting with retinal vasculitis and unexplained vitreous haemorrhage. Early recognition combined with appropriate therapy, can lead to excellent visual outcomes.

Keywords: Branch retinal vein occlusion; eales disease; retinal vasculitis; vitreous haemorrhage; tuberculosis

C-P60

Transoral Robotic Surgery in the Management of Base of Tongue Mucocele

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ABSTRACT

Mucoceles of the base of tongue are rare benign cystic lesions arising from obstruction or rupture of minor salivary gland ducts. Their deep location may cause dysphagia, airway obstruction, or voice changes, and complete surgical excision remains the definitive treatment. We report a 17-year-old female who presented with intermittent dyspnoea, particularly when lying supine. Flexible nasopharyngolaryngoscopy revealed a cystic mass arising from the base of the tongue. Computed tomography demonstrated a well-defined hypodense lesion measuring 2.0 x 2.1 x 1.9 cm at the midline, consistent with a base of tongue mucocele. The patient underwent successful excision via transoral robotic surgery (TORS) using the da Vinci system. The procedure provided excellent visualisation and access, allowing precise and complete removal of the lesion without complications. Postoperative recovery was uneventful, and there was no recurrence on follow-up. This case highlights the safety and efficacy of TORS as a minimally invasive alternative to conventional open surgery for managing tongue base lesions, offering reduced morbidity and faster recovery.

Keywords: Airway management; minimally invasive; mucocele; tongue base; transoral robotic surgery

C-P61

Different Approach in Managing Advanced Inverted Papilloma with Intracranial Involvement

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ABSTRACT

Inverted papilloma (IP) is a benign yet locally aggressive sinonasal tumour with a tendency for recurrence and potential malignant transformation. Although rare, intracranial extension can occur and poses significant surgical challenges. We present three cases of advanced IP with variable patterns of disease involvement and management approaches. The first case involved a 42-year-old male with right nasal blockage and epistaxis, found to have frontal sinus erosion with intracranial extension; endoscopic resection and Draf IIB procedure were performed, preserving dura integrity. The second case, a 48-year-old male, presented with chronic unilateral nasal obstruction and frontal headache; imaging showed limited disease without bone erosion, managed endoscopically with complete clearance. The third case, a 75-year-old male with a history of prior maxillectomy, developed recurrence with orbital and cutaneous extension and histological transformation to squamous cell carcinoma, subsequently treated with surgical debulking and adjuvant radiotherapy. These cases highlight the diverse presentation and progression of inverted papilloma, emphasising the need for individualised surgical planning. Early recognition, adequate resection margins, and long-term surveillance are critical in reducing recurrence and preventing malignant transformation.

Keywords: Endoscopic surgery; inverted papilloma; intracranial extension; malignant transformation; sinonasal tumour

C-P62

Papillary Thyroid Carcinoma in a Thyroglossal Duct Cyst

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ABSTRACT

Introduction: Thyroglossal duct cyst (TGDC) are common congenital neck anomalies that may persist throughout an adult in 7% of the general population. Thyroglossal duct cysts arise from persistent embryologic remnants of the thyroglossal duct. They occur along the normal descent path of the thyroid gland, from the foramen cecum to the upper trachea. Thyroglossal duct cyst (TGDC) carcinoma is a rare malignancy, approximately 1%.The commonest type of TGDC carcinoma is papillary thyroid carcinoma (PTC). Given its rarity, it is important to be familiar with its clinical features, surgical management, and prognosis. **Case presentation:** A 39-year-old woman presented with a year-long, painless anterior neck swelling. Imaging showed a large solid–cystic midline mass with internal calcifications and a normal thyroid gland. She underwent a Sistrunk procedure, which revealed PTC arising within a thyroglossal duct cyst. A subsequent total thyroidectomy demonstrated no thyroid malignancy. She remains well on thyroxine replacement with no recurrence. **Conclusion:** This case reinforces that malignant transformation within a thyroglossal duct cyst, though rare, should be considered when imaging shows solid components or calcifications. Early recognition and tailored surgical intervention contribute to favourable outcomes.

Keywords: Papillary thyroid carcinoma; Sistrunk procedure; thyroidectomy; thyroglossal duct cyst

C-P63

Aerosolised Corticosteroid and Gentamicin Therapy for Montgomery T-Tube–Related Granulation Tissue: Clinical Outcomes from Case Series

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ABSTRACT

Introduction: Laryngotracheal stenosis and intraluminal granulation tissue are significant complications of long-term artificial airways, including tracheostomy and Montgomery T-tube placement. These conditions frequently recur despite repeated endoscopic or surgical interventions, leading to increased morbidity and reduced quality of life. Non-surgical therapeutic options remain limited. **Materials and methods:** We report a case series of three patients with recurrent laryngotracheal granulation tissue associated with Montgomery T-tube placement. All patients had a history of prolonged ventilation and multiple prior airway interventions. Flexible laryngoscopy confirmed significant intraluminal obstruction ranging from 40% to 80%. Given the extensive surgical history and clinical stability, a non-operative regimen was initiated. Patients received a one-week course of nebulised corticosteroid alternating with nebulised gentamicin, administered every 12 hours, with each session lasting 20–30 minutes. Adjunctive systemic antibiotics were prescribed based on clinical judgement and microbiological findings where available. **Results:** All three patients demonstrated marked endoscopic improvement following one week of nebulised therapy, with significant reduction in granulation tissue and improvement in airway patency. None required urgent surgical intervention. Subsequent airway management, including T-tube change or decannulation, was successfully achieved without recurrence of intraluminal granulation tissue on follow-up. **Conclusion:** Aerosolised corticosteroid and gentamicin therapy appears to be a safe and effective non-surgical option for managing Montgomery T-tube–related granulation tissue. This approach may reduce the need for repeated surgical interventions, particularly in patients with recurrent disease and extensive operative histories.

Keywords: Artificial airway; corticosteroid nebulisation; granulation tissue; laryngotracheal stenosis; medical therapy

C-P64

Trigeminal Trophic Syndrome Presenting as Nasal Alar Ulcer with Facial Swelling: A Diagnostic Challenge

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ABSTRACT

Introduction: Trigeminal trophic syndrome is a rare condition characterised by painless ulceration within the trigeminal dermatome. It commonly follows injury to the trigeminal nerve, resulting in paraesthesia and repetitive self-manipulation of the affected area. Its variable clinical appearance often leads to misdiagnosis, particularly when facial swelling and secondary infection are present. **Case:** A 52-year-old gentleman with hypertension and chronic kidney disease presented with a four day history of painless right nasal alar ulceration followed by progressive facial swelling. Clinical examination showed an indurated nasal alar ulcer with purulent discharge and paraesthesia over the V2 distribution. Computed tomography demonstrated right facial soft tissue inflammation without cavernous sinus involvement. Tissue biopsy and culture were performed to exclude malignancy and granulomatous disease. Histopathological examination showed no malignancy while culture grew Staphylococcus aureus sensitive to the prescribed antibiotics. Serology for syphilis and stains for fungal and mycobacterial infections were negative. The patient showed marked improvement with intravenous and oral antibiotics, topical therapy, regular dressing, and counselling to avoid trauma. Follow up revealed complete healing with residual hyperpigmented scarring. **Conclusion:** This case highlights trigeminal trophic syndrome as an important differential diagnosis in unilateral painless nasal alar ulceration with facial paraesthesia. Early recognition, exclusion of mimicking conditions through biopsy, and behavioural modification are essential to prevent disease progression and optimise healing.

Keywords: Case report; facial paraesthesia; nasal alar ulcer; neurotrophic ulcer; trigeminal trophic syndrome

C-P65

Isolated Orbital Manifestations of Extranodal Nature Killer / T-Cell Lymphoma Without Sinonasal Symptoms: A Case Series Emphasising Diagnostic Complexity and Surgical Intervention

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ABSTRACT

Introduction: Non-Hodgkin lymphoma is the most common primary malignant orbital tumour in adults accounting for 70-90% of adult orbital lymphoproliferative malignancies. However, orbital involvement by extranodal natural killer T-cell lymphoma, nasal type (NKTCL), is exceptionally rare and poses significant diagnostic challenges. **Case Summary:** We present three cases of NKTCL presenting with isolated orbital swelling in the absence of sinonasal symptoms. All patients demonstrated proptosis and restricted ocular motility, with optic nerve involvement identified in two cases. Radiological assessment guided individualised surgical biopsy approaches done to assist in diagnosis. Histopathological and immunophenotypic analyses confirmed the diagnosis, demonstrating characteristic morphology with expression of CD2, CD56, and cytoplasmic CD3, and absence of surface CD3. Epstein–Barr virus association was identified in all cases. Patients were managed with concurrent chemoradiotherapy. **Conclusion:** NKTCL may masquerade as inflammatory orbital disease when sinonasal symptoms are absent. Early consideration of this rare entity, coupled with prompt histopathological confirmation, is essential to facilitate timely treatment and optimise visual and oncologic outcomes.

Keywords: Extranodal natural killer T-cell lymphoma; orbital involvement; sinonasal symptoms

C-P66

Facial Nerve Palsy as an Unusual Manifestation of the Eagle Syndrome

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ABSTRACT

Background: Eagle syndrome (ES) is characterised by an elongated styloid process or calcified stylohyoid ligament, which is associated with various types and patterns of pain in the head and neck region. Aside from that, these symptoms are frequently confused with those attributed to different types of facial neuralgia involvement. **Case presentation**: A 36-year-old man complained of persistent pain at the left temporomandibular joint that was worsened by neck rotation, swallowing, and chewing. He had a history of multiple syncopal attacks over the past 15 years. He also developed spontaneous facial nerve palsy and received steroid therapy but proved unsuccessful after one year. Radiological workups confirmed the clinical diagnosis of ES. The styloid process was partially resected via an extraoral approach. Regular post operative follow-up showed improvement of facial nerve palsy. **Conclusion:** ES presents with varied symptoms and is often misdiagnosed, requiring thorough clinical evaluation and imaging for confirmation. Surgical resection of the elongated styloid process is the preferred treatment and can relieve pain, syncopal episodes, and facial nerve palsy.

Keywords: Eagle syndrome; facial nerve palsy; facial paralysis; pseudoarthrosis; styloid process

C-P67

An Ancient Eye Disease in a Modern Child: Conjunctival Xerosis from Vitamin A Deficiency

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ABSTRACT

An 11-year-old boy with asthma and mild autism presented with several weeks of bilateral blurred vision and persistent grittiness that had failed to respond to multiple courses of topical antibiotic, antihistamine, steroid and lubricants. What initially seemed to be another routine case of paediatric dry eye became more alarming when examination revealed marked conjunctival xerosis and a compromised ocular surface, raising suspicion of vision-threatening xerophthalmia. The diagnostic turning point came not from additional investigations, but from a careful dietary history: for about two years, he had eaten an extremely restricted "beige" diet consisting mainly of potatoes and bread, with almost no vegetables, fruit or other sources of vitamin A. The clinical findings together with this history strongly suggested conjunctival xerosis secondary to vitamin A deficiency in a special-care child with selective eating behaviour. He was admitted for multidisciplinary care, including intensive preservative-free lubrication, systemic multivitamin and ascorbic acid supplementation, and dietetic optimisation while serum vitamin A level was arranged. Progressive improvement of the ocular surface was observed with treatment. This case illustrates how a seemingly common paediatric presentation can conceal a preventable nutritional emergency. It underscores the importance of actively seeking dietary red flags in children with neurodevelopmental conditions and refractory dry eye symptoms, in order to interrupt the xerophthalmia spectrum before irreversible corneal damage and permanent visual loss occur.

Keywords: Child; conjunctival xerosis; dry eye syndromes; vitamin A deficiency; xerophthalmia

C-P68

Role of Optometrists in Preventing Blindness: A Case Report of Late-Presenting Advanced Glaucoma in Young Woman

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ABSTRACT

Introduction: Glaucoma is leading cause of irreversible blindness and is often asymptomatic until advanced stages. Optometrists play a crucial frontline role through routine screening, optic nerve evaluation, and timely referral. This case highlights the importance of optometrists as frontliner in detecting ocular disease early. In this patient, advanced glaucoma was identified in a young woman. **Case report:** A 38-year-old married Malay woman, with no children and diagnosed with polycystic ovary syndrome (PCOS), was referred from a district hospital with nine months of visual disturbance and headaches. She had a history of consuming traditional medications and long-term oral contraceptive pills for PCOS in an effort to conceive. Clinical examination revealed steroid-related obesity. Visual acuity was 6/6 bilaterally. Ocular assessment showed pale optic discs, a cup–disc ratio of 0.95 bilaterally, and elevated intraocular pressure of 60 mmHg in both eyes, prompting urgent referral. Findings confirmed severe glaucomatous optic neuropathy in both eyes, with the right eye more severely affected, evidenced by positive relative afferent pupillary defect. Generalised retinal nerve fibre layer thinning and tunnel type vision were present bilaterally. She was treated with anti-glaucoma medications and subsequently underwent left eye trabeculectomy and right eye transscleral photocoagulation to achieve target intraocular pressure control. **Conclusion:** This case reinforces the essential role of optometrists in detecting early structural abnormalities despite normal visual acuity. Strengthening optometrist role in eye screening is vital for early glaucoma detection, especially in high-risk or asymptomatic individuals.

Keywords: Blindness prevention; glaucoma; intraocular pressure; optometrists

C-P69

Challenges and Gaps in Diabetic Foot Care: A Qualitative Study of Primary Care Providers in Kuantan

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ABSTRACT

Introduction: Diabetic foot problem (DFP) represents a major burden in Malaysia, contributing to morbidity, hospital admissions, and lower limb amputations. Primary care providers are often the first point of contact, yet their role in managing DFPs is underexplored. In Malaysia, we are in progress of setting up foot care protection service in primary care. This study investigates the experiences of healthcare providers in Kuantan's primary health clinics, focusing on clinical challenges, systemic barriers, and continuity of care to fil up the gap in providing the best foot care service in Malaysia. **Materials and methods:** A qualitative study was conducted using semi-structured focus group discussions with 12 primary care providers (medical officers, diabetic nurses, and Family Medicine Specialist) from four health clinics in Kuantan. Participants were recruited through purposive sampling. All discussions were audio-recorded, transcribed verbatim, and analysed using reflexive thematic analysis. Ethical approval was obtained prior to data collection. **Results:** Providers reported difficulties in wound care management, limited resources, and delayed referrals. Systemic barriers included staff shortage, high patient load, inadequate screening tools and educational material, and fragmented referral pathways. Communication gaps between primary and tertiary care disrupted continuity and follow-up. **Conclusion:** Addressing resource constraints, improving referral systems, and enhancing inter-provider communication are critical to strengthening DFU care in Malaysian primary care clinics.

Keywords: Diabetic foot care; foot protection care services; Malaysia; primary care clinics; provider perspectives

POSTER (NON-CLINICAL)

NC-P1

Elucidating Cellular Mechanisms of Tissue Regeneration: Insight from Zebrafish Larvae model and Hypertonic Dextrose Prolotherapy

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ABSTRACT

Introduction: Dextrose prolotherapy is a regenerative intervention widely practiced in musculoskeletal conditions such as knee osteoarthritis, tendinopathies, ligament injuries, and muscle injuries. It involves the injection of hypertonic dextrose to stimulate tissue healing. This study aimed to investigate the effects of different dextrose concentrations and double exposure on regeneration of the amputated zebrafish (Danio rerio) tail, with the objective of informing clinical practice. **Materials and method:** Zebrafish larvae tail was amputated and was exposed to different concentration of dextrose (3.125%, 6.25%, 12.5%, 25%) for 5 minutes. The tail regeneration was evaluated at 24, 48 and 72 hours post amputation by using calibrated ImageJ software. The second experiment explored the effect of regeneration after exposed the zebrafish larvae twice in dextrose (6.125%, 12.5%) at a 10 minute interval. Data were analysed using one-way ANOVA to determine significant difference between groups. **Results:** In the first experiment, 12.5% dextrose consistently showed highest regeneration at 24 and 48 hours post amputation. In the second experiment 6.25% dextrose demonstrated the highest regeneration suggesting efficacy with double exposure. However for 12.5% dextrose with double exposure, the regeneration is slower. It could be due to concentration dependent toxicity. **Conclusion:** Dextrose Prolotherapy treatment can stimulate and enhance tissue regeneration in injured tissue with moderate concentration and multiple exposure. These finding provide an insight on the biological effects of dextrose prolotherapy treatment, support its potential clinically and guide in optimising the treatment protocol.

Keywords: Dextrose prolotherapy

NC-P2

Acute Oral Toxicity Evaluation of *Leucaena leucocephala* in Female Sprague Dawley Rats Based on the Organisation for Economic Cooperation and Development Guideline 420

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ABSTRACT

Introduction: *Leucaena leucocephala* (River tamarind) is a fast-growing legume valued as a nutritious ruminant feed. However, it contains mimosine, an antinutritional compound that may be harmful when consumed in excessive amounts. Therefore, this study aimed to determine the acute oral toxicity of *L. leucocephala* leaf extract in female Sprague Dawley (SD) rats. **Materials and methods:** *L. leucocephala* leaves were extracted using the maceration method and the mimosine content were quantified using High-Performance Liquid Chromatography (HPLC). The acute oral toxicity evaluation was performed by following the OECD Guideline 420, which consists of a sighting study and main study. In the sighting study, *L. leucocephala* extract was administered orally in sequential doses of 5, 50, 300 and 2000 mg kg^{-1} body weight (BW) with one rat used for each dosage. Each rat was monitored for 14 days for clinical signs of toxicity and mortality. BW, relative organ weight (ROW), liver function tests (LFT), kidney function tests (KFT), and gross pathological assessments were recorded. The main study was conducted using 2000 mg kg^{-1} BW, the highest non-toxic dose. Over 14 days, clinical observations, BW, ROW, LFT, KFT, gross pathology, and histological examinations were performed. **Results:** No signs of toxicity or mortality were recorded. Gross pathology, BW, ROW, LFT and KFT showed no significant differences and histology performed showed no signs of organ abnormalities. **Conclusion:** *L. leucocephala* leaf extract demonstrated no acute toxicity and can be categorised as unclassified under the Globally Harmonised Classification System (GHS).

Keywords: Acute oral toxicity; *Leucaena leucocephala*; mimosine; OECD 420; Sprague Dawley rats

NC-P3

Design and Development of an Ethical AI Checklist for Nursing Researchers using 4D Instructional Design: A Concept Paper

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ABSTRACT

Introduction: The rapid integration of artificial intelligence (AI) in modern healthcare and academic environments presents notable, yet frequently underestimated, threats to academic integrity for nursing researchers. As AI tools become increasingly prevalent in conducting literature reviews, analysing data, and drafting manuscripts, the likelihood of accidental plagiarism, citation errors, and data mismanagement rises, particularly in the postgraduate fields. Although ethical guidelines for nursing research exist, there is a clear lack of practical, context-specific, and culturally sensitive tools to guide nursing researchers in AI applications. This concept paper outlines the development of an Ethical AI Checklist for nurse researchers. **Materials and methods:** The methodology uses the 4D Instructional Design model, which includes four sequential phases. The Define phase involved document analysis of international AI ethics frameworks and academic integrity policies, supplemented by focus group discussions (FGDs) with postgraduate students and supervisors to identify ethical challenges in AI use. The Design & Develop phase translated these findings into a structured checklist with four key domains: research planning, writing and authorship, data analysis, and mentorship. The checklist was iteratively refined through pilot testing for usability within postgraduate thesis workshops and institutional ethics seminars to ensure its practicality and cultural relevance. **Results:** The Ethical AI Checklist was the study output. This final checklist was disseminated into postgraduate supervision workflows and mandatory research ethics curriculum modules. **Conclusion:** This study presents an essential, evidence-based, and culturally informed approach to support ethical academic practices, protect academic integrity, and encourage the responsible application of AI in nursing studies.

Keywords: Academic integrity; artificial intelligence; checklist; nursing research; research ethics

NC-P4

Oral Health-related Quality of Life of Preschool Children based on their Caries Status and Severity

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ABSTRACT

Introduction: Oral health-related quality of life (OHRQOL) in early childhood is an important health indicator, but data on its association with dental caries among Malaysian preschool children, especially in Kuantan, Pahang, are limited. This study presents one of the first detailed assessments of OHRQOL in relation to caries status and severity among preschoolers in Malaysia, providing baseline insights for national and regional oral health policy. This study aimed to assess OHRQOL in relation to dental caries status and severity among preschool children in Kuantan. **Materials and methods**: Using a cross-sectional design, 55 children aged three to six years were recruited from two purposively selected kindergartens. OHRQOL was measured through caregiver responses to the Malay-ECOHIS, capturing child and family impacts, while caries status was clinically assessed with dmft scores. Caries status was categorised as absent (dmft = 0) or present (dmft ≥ 1), while severity as no (0), moderate (1-2), or high (≥3). Data were analysed using Mann-Whitney U, Kruskal-Wallis, Pearson Chi-square, and Spearman correlation tests. **Results**: Caries prevalence was 89.1%, and children had a median ECOHIS score of 15.8 (IQR: 13.2-17.2), indicating substantial OHRQOL impairment. OHRQOL was poorer among children than families. The lowest scores were observed among those with high caries severity and low household income, i.e., <RM 4,850/month; p = 0.02. **Conclusion**: Caries status and severity are important determinants of OHRQOL among Malaysian preschoolers. Nonetheless, the small sample size, non-random selection, and reliance on proxy reporting limit generalisability, underscoring the need for larger studies to guide public health interventions nationwide.

Keywords: Cross-sectional studies; dental caries; Malaysia; oral health; quality of life

NC-P5

Development of a Standardised Biobanking Workflow for Molecular Samples

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ABSTRACT

Introduction: Biospecimen integrity and traceability are fundamental for reproducible molecular research. This study reports on the initial phase of developing a biobanking workflow to ensure consistent specimen integrity, proper traceability, readiness for long-term storage, and systematic quality verification. **Materials and methods:** Phase I involved three completed components: (i) preliminary verification by cross-referencing sample identifiers against approved transfer documentation and consent records; (ii) visual inspection assessing tube integrity and label legibility; and (iii) sample processing involving quality assessment and aliquoting biospecimen samples (580-600 µL) into 5–6 cryogenic tubes per specimen with standardised labelling. Phase II (planned) includes assigning samples to a −80°C freezer in Biobank Unit, Department of Pathology and Laboratory Medicine, SASMEC @IIUM, entering data into the Laboratory Information System, and implementing supervisory verification protocols. **Results:** The implementation of Phase I was completed successfully without major issues. The initial documentation review showed consistency between biospecimen identifiers and the accompanying records. Visual inspection confirmed that all tubes were intact, with no seal compromise; labels were legible, and samples were suitable for aliquoting. Aliquot preparation produced a uniform stock, which was stored temporarily in cold storage pending Phase II biobank allocation. **Conclusion:** The findings from Phase I demonstrate the feasibility of establishing standardised biospecimen processing and quality verification within an institutional biobanking framework. This documented workflow provides a foundation that, upon integration of Phase II, will enable systematic, long-term biospecimen storage, traceability, and governance to support future research needs.

Keywords: Biobanking; biospecimen processing; quality assurance; standard operating procedure

NC-P6

Biofilm Formation and Antibiotic Susceptibility of Vaginal Group B *Streptococcus* Isolates from Symptomatic Pregnancy

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ABSTRACT

Introduction: Group B *Streptococcus* (GBS) is an important pathogen that colonises the vaginal tracts of pregnant women, increasing the risk of ascending intrauterine infection, preterm birth, and neonatal early- and late-onset disease. In Malaysia, routine antenatal screening for GBS is not practised whereby microbiological investigation is generally limited to symptomatic women, usually at the tertiary stage of pregnancy. Consequently, local data on GBS virulence characteristics and antimicrobial susceptibility remain limited. This study evaluated biofilm-forming capacity and antibiotic susceptibility patterns of GBS isolates from symptomatic pregnant women with term and preterm deliveries. **Materials and methods:** GBS isolates were recovered from high vaginal swabs collected from symptomatic pregnant women attending selected hospitals in Pahang, Malaysia. Biofilm production was qualitatively assessed using the Congo Red agar method. Antimicrobial susceptibility testing was performed using the Kirby–Bauer disc diffusion method against penicillin, vancomycin, erythromycin, and clindamycin. Comparisons between isolates from term and preterm deliveries were analysed using Fisher's exact test. **Results:** Biofilm formation was detected in 22.5% of GBS isolates, with no significant association with pregnancy outcome (p = 0.476). Antibiotic susceptibility rates were 77.5% for penicillin, 90% for erythromycin, 85% for vancomycin, and 82.5% for clindamycin. No significant differences in susceptibility patterns were observed between term and preterm deliveries (all $p > 0.05$). **Conclusion:** Among GBS isolates from symptomatic pregnant women, biofilm formation and antibiotic susceptibility were not associated with pregnancy outcome. These findings suggest that GBS infections are multifactorial and highlight the need for broader surveillance and molecular characterisation in Malaysia.

Keywords: Antibiotic susceptibility**;** biofilm; Group B *Streptococcus*; pregnancy; symptomatic

NC-P7

Enhancing Haematoxylin and Eosin Staining Consistency for Reproducible Histopathology: A Study on pH and Section Thickness

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ABSTRACT

Introduction: Haematoxylin and eosin (H&E) staining remains fundamental to diagnostic histopathology, medical teaching, and tissue-based research. With increasing reliance on digital pathology and AI-assisted interpretation, maintaining consistent, high-quality staining is critical, as automated systems cannot compensate for poor stain variation. Standardised manual protocols are therefore essential across laboratories. This study investigates how haematoxylin pH and tissue section thickness influence staining quality in loose and compact tissues to support more reproducible H&E workflows. **Materials and methods:** Duodenum and heart tissues from male Sprague–Dawley rats were fixed in neutral-buffered formalin, processed into paraffin blocks, and sectioned at 3 µm, 5 µm, and 7 µm. Sections were stained using haematoxylin adjusted to pH 2.3, 2.6, or 2.9. Nuclear staining intensity was quantified using ImageJ. Two-way ANOVA with Tukey's post-hoc test assessed the effects of pH and thickness. **Results:** Both pH and thickness significantly affected nuclear staining intensity in duodenum (pH: $p = 0.008$; thickness: $p < 0.001$) and heart (pH: $p = 0.015$; thickness: $p = 0.001$), with no significant interaction. Haematoxylin at pH 2.3 produced weaker nuclear staining, while pH 2.6 and 2.9 improved colour intensity and definition. Thicker sections (7 µm) consistently showed reduced staining quality. **Conclusion:** Optimal staining was achieved at pH 2.6 for duodenum and pH 2.9 for heart, with 3–5 µm sections recommended for reliable outcomes. These findings highlight that consistent manual staining remains fundamental, reinforcing the importance of robust, standardised H&E workflows for reproducible and clinically meaningful histological evaluation.

Keywords: H&E; pH; reproducible staining; section thickness

NC-P8

In-Silico Design of Multiplex PCR Primers for Nanopore-Based Detection of Thalassaemia Mutations in Malaysian Population

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ABSTRACT

Introduction: Thalassaemia is a common hereditary disorder in Malaysia, with a carrier rate of 6.8%. Thalassaemia has significant genetic heterogeneity in both alpha and beta forms, and between different race groups. Standard molecular testing often targets only common mutations, hence missing rare variants. A multiplex PCR approach integrated with long-read sequencing offers a promising solution. This study aimed to design primer sets capable of amplifying all regions of the *HBA1/A2, HBB, HBD* and *HBG1/G2* regions for comprehensive thalassaemia detection. **Materials and methods:** A literature review of published studies on the molecular epidemiology of thalassemia in Southeast Asia was conducted to identify prevalent and clinically significant mutations. Primer sets were designed using Primer3 and IDT PrimerQuest, targeting regions within HBA1/A2, HBB, HBD and HBG1/G2 genes. Amplicons were optimised for size (5000 to 10000 bp) to ensure compatibility with Nanopore sequencing. **Results:** Seven primer pairs were designed to cover both deletional and non-deletional variants, including common mutations such as Hb Constant Spring, CD26 (HbE), IVS1-5, and CD41/42 and also common deletions such as--SEA, $-\alpha^{3.7}$ and Filipino β^0 deletion. Additionally, primer pairs that flank rare deletions, including alpha Zero (α^0) deletion (--GB) were designed. All primer sets were evaluated in silico for melting temperature, specificity, GC content, and amplicon overlap. **Conclusion:** This study presents a mutation-informed primer design strategy for a multiplex PCR assay tailored to the genetic landscape of thalassemia in Malaysia. By incorporating both common and rare mutations, the primer panel offers a foundation for long-read sequencing of the haemoglobin genes.

Keywords: Multiplex PCR; nanopore sequencing; primer design; thalassaemia

NC-P9

Identification of tRNA Gene Sequence from *Spirodela polyrhiza* as Scaffold for Amber Suppressor Development

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ABSTRACT

Introduction: Amber suppression technology enables site-specific incorporation of non-canonical amino acids (ncAA) into proteins, supporting applications in genetic code expansion, protein engineering and gene therapy. However, it suffers from limitations including low suppression efficiency, competition with host release factors and reduced aminoacylation fidelity that can be attributed to the performance of its components, one of which is the engineered suppressor tRNAs commonly derived from bacterial sources like *Bacillus stearothermophilus* (*Bst*). To explore alternative scaffolds, this study investigated native tRNA gene from *Spirodela polyrhiza* (duckweed), a fast-growing aquatic plant with a compact genome. **Materials and Methods:** Bioinformatic tools including tRNAscan-SE and NCBI BLASTn were used to identify candidate tRNA genes and primers were designed accordingly within the *Spirodela polyrhiza* genome that have potential for CUA anticodon editing. Total genomic DNA was extracted using CTAB method. PCR amplification was attempted to isolate the target sequence. **Results:** One candidate gene, encoding tryptophan tRNA (trnW) with a single nucleotide mismatch in its anticodon was identified as a potential precursor for amber suppression technology. While DNA extraction produced good quality total genomic DNA, amplification of the target gene requires further optimisation. **Conclusion:** This study establishes an initial groundwork for exploring aquatic plant-derived precursors in suppressor tRNAs engineering. *Spirodela polyrhiza* was identified as a potential alternative source of tRNA scaffolds towards improving amber suppression technology. Although future studies, including in-vivo functional validation is required, this study provides a starting point for developing enhanced components that could strengthen suppression efficiency and broaden future application of the technology.

Keywords: Amber suppression technology; suppressor tRNA; *Spirodela polyrhiza*; total genomic DNA; tRNA gene

NC-P10

Pilot Study on Surgical Tissue Collection for Development of Functional Hospital-based Biobank Model

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ABSTRACT

Introduction: Hospital-based biobanks play a critical role in translational cancer research by providing high-quality human biospecimens linked with clinical data. The Biobank Unit under the Department of Pathology and Laboratory Medicine, SASMEC @IIUM is in the early stages of establishment and refining its operational processes. A three-month pilot project was conducted in collaboration with the breast and endocrine surgical team to develop a functional repository model and establish a practical workflow for biobank tissue collection. **Materials and Methods:** Eligible patients were identified through operating theatre lists and surgical clinic referrals. Information sheets and written biobank consent forms were provided during routine pre-operative counselling. Surgical specimens from consented patients were transported to the laboratory, where surplus tissue was harvested, processed, and stored as formalin-fixed paraffin-embedded blocks in the designated biobank facility. A secure log documenting sample identifiers, diagnoses, and limited clinical information was maintained. **Results:** A total of 28 patients were approached and all provided consent (100% consent rate). Three cases were suitable for banking. Specimens were handled and processed promptly to preserve sample integrity. Early feedback highlighted improved communication and clearer role delineation among teams. Operational gaps were identified, prompting targeted refinements to streamline the workflow. **Conclusion:** This pilot study provided a functional institutional repository model for prospective surgical tissue collection. The model can be expanded to other clinical units at SASMEC @IIUM for future collaborative research.

Keywords: Biobank; repository model; surgical tissue

NC-P12

Transforming Pharmacology Learning in Medical Students with Technology-Enhanced Active Learning

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ABSTRACT

Introduction: Pharmacology is a content-dense discipline that often challenges pre-clinical medical students due to extensive memorisation and complex mechanisms. Traditional lecture formats remain the dominant approach but often limit student engagement and meaningful integration of concepts. This work reports the implementation of a structured teaching approach that integrates technology-supported activities and visual learning strategies to support conceptual understanding and recall during pharmacology lectures. **Materials and methods:** Several pharmacology lectures in Year 1 and Year 2 were redesigned using TEAL components. These included interactive platforms (iTA'LeEm (IIUM Learning Management System), Mentimeter, Padlet, Quizziz), visual mnemonics (Chemoman, Anti-TB Man) and two educational e-books: *Aethra Pharmacology Mnemonics,* incorporating AI-generated illustrations, and *Diuretics Field Trip,* which mapped diuretic drug classes to nephron sites using landmark attractions in Pahang. Some sessions incorporated short activities focused on concept application, visual understanding, and active recall. The approach was refined through teaching reflections and observation of student engagement with the activities. **Results:** The TEAL approach enabled pharmacological concepts to be delivered more clearly. Visual mnemonics and illustrations supported the explanation of drug mechanisms, while interactive elements created a more dynamic learning atmosphere. The variety of tools also helped accommodate different learning preferences and reduced reliance on passive listening. **Conclusion:** This TEAL-based model offers a feasible and adaptable strategy for modernising pharmacology teaching. By combining technology, structured visual aids, and brief active-learning tasks, the model supports more engaging, concept-driven delivery of content-heavy subjects and can be readily adapted by educators seeking practical enhancements to traditional lecture formats.

Keywords: Active learning; medical education; pharmacology; teaching strategy; technology-enhanced active learning

NC-P13

Diabetes is Rising, Vision is Falling: Global Evidence from Literature Review, A Public Health Call to Action

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ABSTRACT

Introduction: A global landscape of public health is challenged by the rising prevalence of diabetes mellitus and diabetic retinopathy (DR), a preventable blindness worldwide. The International Diabetes Federation projects that the global burden of diabetes will increase from 463 million in 2019 to nearly 700 million by 2045, with the greatest impact in low and middle-income countries. The largely asymptomatic progression of DR until advanced stages highlights the urgent need for early detection strategies to mitigate vision loss. **Objectives**: This review aims to examine the global prevalence of diabetes and diabetic retinopathy, identify key risk factors, and effective public health strategies for prevention and control. **Materials and methods**: A narrative literature review was conducted using PubMed, Scopus AI, and Google Scholar between 2016 and 2025 and addressing global prevalence, risk, and public health interventions related to diabetic retinopathy were included. **Results**: Diabetic retinopathy remains a major global health concern with an estimated 160.50 million individuals affected. Duration of diabetes is a strong predictor, with each additional year significantly increasing DR risk. Poor glycemic control and hypertension are consistently identified as modifiable risk factors. Evidence supports the effectiveness of systematic screening, early diagnosis, patient education, and integrated care between diabetes and eye health services was highlighted. **Conclusion**: The rise of diabetes and diabetic retinopathy represents a public health challenge. Strengthening evidence-based policies, implementing cost-effective screening programmes, and empowering technologies such as portable fundus cameras and artificial intelligence-assisted diagnostics are essential for early screening and diagnosis.

Keywords: Diabetes mellitus; diabetic retinopathy; risk factor; screening

NC-P14

Effect of Three-Dimensional (3D) Model-Assisted Teaching on Inguinal Canal Anatomy Comprehension Among Undergraduate Medical Students: A Randomised Controlled Trial

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ABSTRACT

Introduction: Effective anatomy education requires teaching approaches that support students' understanding of complex spatial relationships while maintaining sound pedagogical principles. Physical three-dimensional (3D) models are increasingly used as supplementary tools to enhance visualisation and active learning. The inguinal canal is a clinically important but conceptually challenging anatomical structure for undergraduate medical students to comprehend through lectures alone. This study aimed to evaluate the effectiveness of 3D physical model-assisted teaching in improving undergraduate medical students' understanding of inguinal canal anatomy compared with traditional lecture-based teaching. **Materials and Methods:** A randomised controlled trial was conducted involving 140 Year One medical students at the International Islamic University Malaysia. Participants were randomly assigned to either a lecture-only group or a lecture combined with 3D physical model-assisted teaching group. Knowledge acquisition was assessed using pre-test and post-test evaluations administered one week apart. Student performance in applied anatomy was further evaluated using structured practical assessment. **Results:** 107 students completed both assessments, giving a response rate of 76.4%. Both groups demonstrated significant improvement between pre-test and post-test scores (lecture-only: $p = 0.010$; lecture + 3D model: $p < 0.001$). Domain-specific analyses revealed that 3D models particularly enhanced performance in applied anatomy tasks assessed through the Objective Structured Practical Examination (OSPE). **Conclusion:** 3D physical model-assisted teaching enhanced students' understanding of inguinal canal anatomy beyond conventional lectures alone. Incorporating ethically appropriate, non-digital educational innovations as complementary tools may strengthen spatial learning and support effective anatomy education in undergraduate medical training.

Keywords: Anatomy education; inguinal canal; medical education; three-dimensional models; undergraduate medical students

NC-P15

Pilus Island and BspC Gene Distribution in Group B Streptococcus (GBS) Isolates from Pregnant Women with Term and Preterm Deliveries in Pahang

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ABSTRACT

Introduction: Maternal vaginal Group B Streptococcus (GBS) colonisation is considered a risk factor for preterm delivery and, consequently, neonatal infections. Among the key virulence factors of GBS are pili, encoded by pilus islands (PI) including PI-1, PI-2a, and PI-2b as well as bacterial surface protein C (bspC). These virulence factors played a crucial role in mediating vaginal and cervical colonisation, intrauterine ascending infection and immune evasion triggering inflammation that causes preterm delivery. However, the distribution of these genes among Malaysian pregnant women remains poorly characterised. **Materials and method:** High vaginal swabs were collected from 40 symptomatic pregnant women (<37 weeks gestation). GBS isolates were confirmed, pilus island genes were detected by polymerase chain reaction (PCR), and results were analysed against delivery outcome. **Results:** Of the 40 GBS-positive women, 22 (55%) delivered preterm and 18 (45%) delivered at term. Overall, *PI-1* and *bspC* were each detected in 87.5% and 75% of isolates respectively. Among preterm deliveries, 95.5% of isolates carried *PI-1,* and 60.0% carried *bspC.* In contrast, term deliveries showed lower frequencies of 77.8% for *PI-1,* and 40.0% for *bspC.* However, no statistically significant association was found between the presence of any of these virulence genes and preterm delivery. **Conclusion:** These findings provide baseline molecular insights into GBS virulence in Malaysia, suggesting that isolates from Pahang share broad epidemiological features with global strains while also exhibiting distinct regional characteristics. Larger molecular characterisation and multicentre studies are warranted to further clarify the potential association between pilus island genes and preterm delivery.

Keywords: Group B Streptococcus; Malaysia; preterm delivery; virulence factors

NC-P16

Academic Integrity and the Nursing Researcher: A Narrative Review with Case Studies in the AI Era

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ABSTRACT

Introduction: Artificial intelligence (AI) is rapidly transforming nursing research by enhancing the efficiency of data analysis, literature reviews, and manuscript preparation. In Malaysia, nursing researchers are increasingly using AI tools to meet their academic demands. Despite the growing global discourse on AI ethics, research on the emergence of dilemmas related to academic integrity within Malaysian nursing education is limited. Current guidelines provide minimal direction on AI governance, and restorative strategies tailored to nursing contexts, such as mentorship, culturally grounded ethics, and postgraduate supervision, remain underdeveloped in this area. This review examines ethical dilemmas and restorative strategies at the micro, meso, and macro levels, utilising theoretical frameworks and relevant case studies to inform the responsible application of AI in Malaysian nursing research. **Materials and methods:** A narrative review was conducted using the PubMed, Scopus, and Google Scholar databases. The review focused on literature from 2020 to 2025 and employed Boolean combinations of keywords, including "academic integrity," "AI in nursing," "ethical scholarship," and "Malaysian research ethics." Deontological ethics guided the thematic synthesis, Goffman's stigma theory, and Allport's contact theory. **Results:** Micro-level dilemmas included citation misuse and overreliance on AI. Mezzo-level challenges involve institutional gaps in AI governance and mentorship programs. Macro-level concerns highlight disparities in AI access and the need for culturally sensitive policy reforms. Case examples illustrate issues such as ghost authorship and omission of consent. **Conclusion:** Upholding academic integrity in the era of AI demands reflective scholarship, transparent governance, and a renewed commitment to dignity and justice.

Keywords: Academic integrity; artificial intelligence; ethical scholarship; Malaysian education; nursing research