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ABSTRACTS FOR ORAL PRESENTATIONS

Abstract ID: A-0038

Randomised Controlled Trial on Efficacy and Safety of Oral Paracetamol Versus Intravenous Paracetamol in Preterm Infants with Patent Ductus Arteriosus

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ABSTRACT

Background: Treatment of hemodynamically significant patent ductus arteriosus in preterm infants with paracetamol is considered safer than traditional non-steroidal anti-inflammatory agents. Despite widespread use, direct comparisons between oral and intravenous paracetamol remain limited.

Objectives: This study aimed to evaluate the efficacy and safety of oral versus intravenous paracetamol in the pharmacological closure of hemodynamically significant patent ductus arteriosus in preterm infants.

Methods: A single-center randomised controlled trial was conducted at the neonatal intensive care unit of Hospital Pakar Universiti Sains Malaysia from January 2023 to November 2024. Fifty-four preterm infants (26 to 33+6 weeks gestational age) diagnosed with hemodynamically significant patent ductus arteriosus were randomised to receive either oral or intravenous paracetamol (15 mg/kg every 6 hours for 3 days). A second course was administered when initial treatment failed. The primary outcome was complete ductal closure; secondary outcomes included renal and hepatic function, early complications, and late neonatal morbidities over a 30-day follow-up period.

Results: Baseline characteristics were comparable between groups. Ductal closure was significantly higher with intravenous paracetamol compared to oral paracetamol (92.6% vs 69.6%; p=0.035). The intravenous group also demonstrated greater reduction in ductal size (p=0.018). No significant differences were observed in early complications (oliguria, liver enzyme derangement, renal function impairment, intraventricular haemorrhage) or late complications (prolonged oxygen dependency, sepsis, mortality) between groups. Both administration routes showed favourable safety profiles without serious adverse effects.

Conclusion: Intravenous paracetamol demonstrated superior efficacy compared to oral administration in achieving ductal closure in preterm infants, particularly after a second treatment course, while maintaining a similar safety profile. These findings suggest intravenous paracetamol as a preferred option in the management of hemodynamically significant patent ductus arteriosus.

Keywords: Intravenous paracetamol; NICU; oral paracetamol; patent ductus arteriosus; prematurity

Abstract ID: A-0043

MDR *Acinetobacter baumannii* (MDR ACB) Outbreak in NICU Hospital Tuanku Ja'afar Seremban: A Hospital-based Retrospective Study

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ABSTRACT

Background: *Acinetobacter baumannii* (ACB), a gram-negative pleomorphic bacillus, is one of the most important hospital-acquired infection. It survives on dry or moist hospital surfaces causing outbreaks that are difficult to control, affecting vulnerable and critically ill patients. Neonates are at increased risk due to their immature immune systems and frequent need for invasive procedures.
Objectives: Our study aims to describe the hit-rate and outcomes of an outbreak of multidrug resistance (MDR) ACB infections as well as associated risk factors in a Neonatal Intensive Care Unit (NICU).
Methods: An outbreak was declared on 27 September 2024 after 8 patients were infected. Thus, universal screening was conducted. Data were collected retrospectively from medical records of all neonates admitted between 27 September 2024 and 22 October 2024 to determine patient's demographic and outcomes. Risk factors associated are identified using multiple logistic regression analysis.
Results: A total of 19 patients were infected or colonised with MDR ACB, a hit rate of 32.7%, with the median age at detection of 10 days. 24 positive cultures were identified, primarily from rectal swabs (78.9%), followed by tracheal aspirate (31.5%), blood (26.3%), and cerebrospinal fluid (5.3%). There were 3 deaths in this cohort, a mortality rate of 15.8%. The risk factors identified include prematurity with very low birth weight, mechanical ventilation, usage of long line, total parenteral nutrition as well as the administration of broad-spectrum antibiotics. Using multivariate analysis, the use of Cefotaxime has been identified as a significant risk factor (aOR: 13.8, 95% CI: 1.45-131.18, p= 0.02).
Conclusion: The findings of this study highlighted the importance of antibiotic stewardship in minimising antibiotic resistance in intensive care units alongside other outbreak control measures. However, further research is warranted with a bigger sample size.

Keywords: *Acinetobacter baumannii*; multidrug resistance

Abstract ID: A-0044

Impact of Delayed Cord Clamping on Neonatal Outcomes and Iron Status at 3 months of age in Term Infants: A Cohort Study at Hospital Tuanku Ja'afar Seremban.

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ABSTRACT

Background: Early cord clamping (ECC) has been the standard practice in all deliveries. Delayed cord clamping (DCC) allows continued blood flow from the placenta to the infant, supporting a smoother physiological transition and conferring significant benefits to the newborn. It increases haemoglobin levels (Hb) and iron reserves, which can lower the risk of iron deficiency anaemia (IDA) in early childhood which has detrimental effects on neurodevelopmental outcomes. With the growing evidence, Ministry of Health of Malaysia had implemented the use of DCC since January 2025 following the recommendation from American Academy of Pediatrics (AAP) 2021.

Objectives: To evaluate DCC's impact on neonatal haemoglobin, polycythaemia and jaundice at birth and IDA at 3 months old.

Methods: A prospective cohort study on term infants at Hospital Tuanku Ja'afar Seremban (February 2025 onward): ECC group (non-vigorous infants, cord was clamped immediately and requiring resuscitation) and DCC group (vigorous infants, cord was clamped at 60 seconds). Bloods taken to assess haemoglobin (Hb) and bilirubin level between 6–24 hours and iron status at three months old.

Results: Ninety-two infants were included, consisting of 43 infants in the ECC group and 49 infants in the DCC group. We found that the mean Hb for the DCC group was higher than the ECC group (19.29 ± 2.53 g/dL vs. 18.88 ± 2.30 g/dL) though not statistically significant. Bilirubin levels (124.31 ± 38.13 µmol/L vs. 116.72 ± 38.85 µmol/L) and jaundice prevalence (26.5% vs. 14.0%) were marginally higher in the DCC group, but differences were not statistical significance. A follow-up study will be done to assess iron status at 3 months old.

Conclusion: DCC demonstrated improve haemoglobin levels at birth, potentially enhancing iron reserves in early childhood without increasing risks of polycythaemia or significant jaundice, however it was not statistically significant due to small sample size.

Keywords: Delayed cord clamping

Abstract ID: A-0048

Randomised Controlled Trial on Short Term Effect of High Versus Low Position of Umbilical Catheter in Neonates

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ABSTRACT

Background: Umbilical artery catheters (UAC) are essential and frequently used in neonatal intensive care units (NICU) for invasive blood pressure monitoring and blood sampling in critically ill neonates. The optimal position of the UAC whether a high position (T6-T9) or low position (L3-L4) constantly remains debatable.

Objective: Objective of this study is to determine the short-term complications of high position versus low position UAC in neonates.

Methods: This is a prospective study and randomised controlled trial conducted at Hospital Universiti Sains Malaysia since July 2024 until February 2025.168 neonates requiring UAC insertion were randomised to either high position UAC or low position UAC. The primary outcome was the frequency of complications related to the two UAC positions. Secondary outcomes included complications related to repositioning of UAC and the duration of UAC in-situ.

Results: This study showed a higher complications rate in high UAC in which 13 neonates (15.9%) had at least one complication, compared to 6 neonates (7.0%) in the low UAC (p=0.089). The complications between the high vs low position UAC: feeding intolerance 8.5% vs. 0%, p=0. 006, acute kidney injury 6.1% vs 1.2% p=0.11, NEC 2.4% vs 0%, p= 0.24, hypertension 1.2% vs. 0%, p=0.49. Both IVH and vascular compromise occurrence are comparable between both UAC group. No aortic thrombosis and haematuria were observed in either group. 52.6% neonates with complications have duration of catheter in situ for 7 days, p=0.034, 36.8 % of neonates with catheter readjustment developed complications, p= 0.292.

Conclusion: This study showed high UAC overall had higher complication as compared to low UAC. Longer duration of UAC in situ and catheter readjustment also related to higher rate of complications. Future randomised controlled trials with larger sample sizes are required to confirm the result in this study and support the potential changes in clinical practice.

Keywords: Complications; neonatal intensive care unit; umbilical artery catheter

Abstract ID: A-0053

Optimising Screening Strategies for Congenital Infections: Insights from a Decade of Neonatal Data

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ABSTRACT

Background: Congenital infections are significant contributors to neonatal morbidity and long-term neurodevelopmental impairment. Universal screening approaches, particularly for small for gestational age (SGA) infants, are widely practiced, but their diagnostic yield may be low. Refining screening strategies is important to improve diagnosis and cost effectiveness.

Objectives: To determine the incidence of congenital infections in a tertiary neonatal unit and to evaluate the yield of current screening practices with the aim of proposing a more targeted, risk-based screening approach.

Methods: A retrospective cohort study was conducted of all neonates admitted to the neonatal unit of Hospital Sultanah Bahiyah, Alor Setar, Kedah between January 2015 and March 2025 who underwent congenital infection screening. Data collected included demographics, clinical indications for screening, laboratory results, and final confirmed diagnoses. Descriptive analysis was performed to calculate screening yields and incidence rates.

Results: A total of 1,282 neonates underwent screening over the 10-year period. The overall incidence of congenital infections was 0.0935 per 1,000 live births (10 cases among 107,000 live births), corresponding to 0.78% among those screened. SGA accounted for the most indication for screening (46.9%), but the yield of congenital infections in this group was notably low at 0.17%. A higher yield was however observed in neonates screened due to clinical findings or abnormal maternal serology. Congenital cytomegalovirus (CMV) topped the list of confirmed infections, accounting for 6 out of the 10 cases identified. False-positive serology results related to post-vaccination hepatitis B exposure were identified in a subset of infants.

Conclusions: Universal screening of SGA neonates for congenital infections demonstrated a low diagnostic yield. These finding supports a more targeted screening strategy, prioritising clinical findings and maternal risk factors to enhance diagnostic accuracy.

Keywords: CMV; congenital infections; neonates; SGA; toxoplasmosis

Abstract ID: A-0098

The Association between Antenatal Care and Neonatal Outcomes of Infants Born to Single Unwed Mothers at a Tertiary Care Centre: a Six Year Review

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ABSTRACT

Background: Single unwed mothers are known to be disproportionately affected by adverse health, poverty, financial hardship, and social stigma. This may affect the quality of their antenatal care and hence the neonatal outcomes, highlighting a critical public health concern.

Objectives: This study aims to explore the characteristics of single unwed mothers and their infants who received antenatal care at UMMC, and to examine the relationship between the antenatal care received with neonatal outcomes.

Methods: A retrospective cohort study was conducted on single unwed mothers who gave birth at UMMC between 1st January 2017 and 31st December 2022. Information on maternal sociodemographic characteristics, medical conditions, and antenatal care was obtained from electronic medical records. The association between antenatal care and adverse neonatal outcomes was then analysed using binary logistic regression.

Results: This study involved 280 single unwed mothers aged 15–42, mostly Malay and first-time mothers. One-third had no antenatal care (ANC), and over half of those who did, had fewer than four visits. Only 30.7% met WHO's minimum for adequate ANC, i.e. a minimum of 4 antenatal visits and timely first visit at less than 16 weeks. Preterm birth rate was high at 26.3%, more than double the national average. Unsatisfactory ANC was significantly associated with low gestational age ($p = 0.003$), low birth weight ($p = 0.025$), neonatal sepsis ($p < 0.001$), and respiratory distress syndrome ($p = 0.045$). Single unwed mothers who received unsatisfactory ANC were more than twice likely to experience preterm birth or a low-birth-weight baby.

Conclusion: In our study, single unwed mothers received unsatisfactory antenatal care, which was strongly associated with neonatal complications, including low gestational age, low birth weight, sepsis, and prematurity-related conditions. Comprehensive antenatal care and improved maternal support are essential for better neonatal outcomes and long-term benefits for both mothers and infants.

Keywords: Antenatal care; neonatal; neonatal mortality; premarital pregnancy; prenatal care; unmarried mothers

OBSTETRIC ORAL PAPERS

Abstract ID: A-0019

Preventing Adolescent Pregnancy: An Imperative for Improving Perinatal Outcomes

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ABSTRACT

Background: Adolescent pregnancy is a critical yet under-addressed public health issue in Malaysia, with significant implications for perinatal outcomes. Early childbearing heightens the risk of obstetric complications, neonatal morbidity, and mortality, and entrenches intergenerational cycles of poor health and socioeconomic disadvantage. Despite Malaysia's commitments to the Sustainable Development Goals (SDGs), including targets related to maternal health (SDG 3), gender equality (SDG 5), and child well-being (SDG 16), legal and policy gaps continue to undermine effective prevention.

Objectives: This study evaluates Malaysia's legal and policy landscape in relation to adolescent pregnancy prevention. It aims to assess the alignment of existing frameworks with international human rights standards and SDG benchmarks and to identify systemic gaps that hinder progress toward improved perinatal health.

Methods: A qualitative desk review was conducted, examining national legislation, policy frameworks, and sexual and reproductive health (SRH) programs in Malaysia. Comparative analysis was performed using legal developments from regional counterparts (e.g., Thailand and the Philippines) and global guidelines from WHO and UNFPA to identify gaps and evidence-based strategies.

Results: Malaysia lacks a dedicated cohesive legal framework to prevent adolescent pregnancy. Current laws are fragmented and often restrictive: adolescents face legal and procedural barriers to accessing SRH services, including the need for parental consent. The legal age of sexual consent lacks close-in-age exemptions, and minimum marriage ages remain inconsistent across jurisdictions. Comprehensive sexuality education is not uniformly mandated nor sufficiently inclusive. These deficits collectively hinder Malaysia's ability to prevent adolescent pregnancies and improve perinatal health outcomes.

Conclusion: Preventing adolescent pregnancy is both a public health priority and an ethical imperative for protecting maternal and neonatal health. Legal and policy reforms focused on adolescent rights, healthcare access, and education are crucial to empower youth, reduce high-risk pregnancies, and advance Malaysia's progress toward the SDGs.

Keywords: Adolescent pregnancy; adolescent health; pregnancy prevention; sustainable development goals

Abstract ID: A-0026

Investigating the Role of ABCA9 in Placental Lipid Metabolism

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ABSTRAK

Background: Placental ATP binding cassette (ABC) transporters regulate transfer of substances such as nutrients (e.g. lipids) and steroid hormones between mother and child. Several ABC transporters show gestational-age dependent expression, suggesting they play a critical role in supporting a healthy pregnancy. A recent study implicated decreased placental ABCA9 expression and altered placental lipidome in pregnancies affected by high maternal mental stress, which associates with adverse offspring neurodevelopmental outcomes. We hypothesised that reduced placental ABCA9 expression contributes to dysregulated placental lipid metabolism.

Objectives: To determine ABCA9 localisation in the placenta and to investigate the role of ABCA9 in placental lipid metabolism.

Methods: Immunofluorescence of placental sections from n=3 healthy term elective caesarean sections were used to determine ABCA9 protein localisation. BeWo cells were utilised as a model of placental trophoblast cells and transfected with siRNA for 48 hours to knockdown ABCA9 expression (n=4). Following validation of gene knockdown by qPCR, placental lipid profiles were determined by liquid chromatography mass spectrometry (n=4). Student's t-test was used to determine differences. Significance was considered at $p<0.05$.

Results: ABAC9 primarily localised to trophoblast cells in the placenta. ABCA9 siRNA reduced placental ABCA9 mRNA expression by 81% relative to the negative control. There was no overall difference in the total abundance in each of the 22 detected lipid classes. However, at the individual lipid level, we observed specific decreases in three triacylglycerols [TG; TG 54:6-(20:5), TG 54:6-(22:6), TG 56:6-(20:4)], and one lysophosphatidylcholine (LPC; LPC 22:1), and an increased abundance of one sphingomyelin (SM; SM 40:0).

Conclusions: Reduced ABCA9 transporter expression alters placental lipids, particularly polyunsaturated fatty acid (PUFA)-containing TG and lipids involved in cell membrane function. Lower circulating levels of PUFA are known to associate with maternal mental stress, and reduced placental ABCA9 in this condition may further exacerbate foetal PUFA insufficiency with potential implications for neurodevelopment.

Keywords: Lipid metabolism; maternal mental health; placenta

Abstract ID: A-0027

Greater Adherence to a Vege-Fruit-Nut Dietary Pattern and Higher Pregnancy Plasma Vitamins B2 and B6 Associate with Reduced Risk of Preterm Delivery

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ABSTRACT

Background: Epidemiological studies associate maternal diets rich in vegetables and fruits with lower spontaneous-onset of preterm birth (sPTB) risk. The NiPPeR trial previously reported that a preconception-pregnancy intervention supplement containing myo-inositol, probiotics, and micronutrients reduced sPTB as a prespecified secondary outcome, compared with a standard micronutrient supplement (control).

Objectives: To identify the key components of a healthy diet and the NiPPeR intervention that influence sPTB risk.

Methods: The multi-centred (UK, Singapore, NZ) NiPPeR double-blind RCT had data from 585 singleton pregnancies for this sub-study. Our combined outcome of interest was preterm prelabour rupture of membranes (PPROM) and sPTB. Concentrations of myo-inositol and vitamins (B2, B6, B12, D) were batch-quantified in plasma collected at preconception (before and after supplementation), in early (~7-weeks) and late pregnancy (~28-weeks). We used preconception food-frequency questionnaires to derive dietary pattern adherence scores. Associations between plasma nutrients, dietary patterns and PPROM/sPTB were determined with adjustment for covariates using regression.

Results: Greater adherence to a vegetable-fruit-nut dietary pattern associated with higher plasma concentrations of vitamin B2 (VB2), vitamin B6 (VB6) and myo-inositol. Increased vegetable-fruit-nut diet adherence preconception associated with lower PPROM/sPTB risk (adjusted odds ratio [aOR] 0.39 [95%CI 0.17,0.89] per SD diet-score, p=0.026), independently of intervention. As a combined-control-intervention-group, higher VB2 in early pregnancy (aOR 0.60 [0.39,0.92] per SD nutrient; p=0.018) and late pregnancy (0.55 [0.34,0.90]; p=0.018), and higher early pregnancy VB6 (0.50 [0.30,0.82]; p=0·006) associated with reduced PPROM/sPTB risk. VB2 and VB6 showed largely independent effects (interaction-p=0.225). Achievement of newly-discovered VB2 and VB6 thresholds ~4-fold higher than historical non-pregnant deficiency thresholds could minimise PPROM/sPTB risk, but are difficult to achieve through diet alone.
Conclusion: VB2 and VB6 obtained through diet and supplementation may contribute to reducing PPROM/sPTB risk. RCTs are needed to evaluate the clinical efficacy of increased VB2 and VB6 supplementation in reducing sPTB.

Keywords: Micronutrients; preconception-pregnancy supplementation; preterm birth; randomised controlled trial

NEONATAL ORAL PAPERS

Abstract ID: A-0032

Home Visits and Home Visiting Programmes for Preterm, Small for Gestational Age and Low Birth Weight Infants after Hospital Discharge - A Scoping Review

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ABSTRACT

Introduction: Preterm, low birthweight, and small for gestational age (collectively referred to as PLS) infants are at risk even after discharge from hospital. Parents face guilt and fear in caring for these vulnerable infants. While Malaysia provides home visits for all newborns, the specific needs of PLS infants and their parents may not be fully addressed. Although post-discharge interventions improve outcomes, there is limited guidance on their implementation. Our aim was to identify and map existing interventions from the literature that have been implemented to improve post-discharge care for PLS infants.

Objective: To identify the preventive, promotive, diagnostic, and treatment components of home visits and home visiting programmes for PLS infants.

Methods: We searched CINAHL, Cochrane Library, EMBASE, Medline, and PsycINFO to identify studies involving interventions delivered at home within the first five years of life for PLS infants. Eligible studies included any intervention aimed at improving infant and parent health and wellbeing after the initial or acute illness.

Results: We found 19 studies focusing on home visiting interventions. Most were multicomponent, addressing feeding and growth support, parental support and education, developmental screening referrals, and access to community services. Additional elements included immunisation education, home immunisation, telephone support, and home-based monitoring. While many interventions were delivered by trained professionals, others involved paraprofessionals. Some home visiting programmes facilitated earlier discharge, thereby reducing hospitalisation and the associated risks and costs.

Conclusion: We found a variety of additional interventions that could be offered to PLS infants, some of which are included in the Malaysian home-visiting programme but are currently not tailored towards the specific needs of PLS infants and parents. By training nurses, it might be feasible to adapt our current programme to meet the needs of PLS infants beyond hospital. This may improve long-term outcomes for these vulnerable infants.

Keywords: Growth; home visits; home visiting programmes; immunisation; infant well-being monitoring; low birth weight infants; preterm babies; post-discharge support; screening; small for gestational age infants

Abstract ID: A-0035

Factors Affecting Survival and Length of Hospital Stay among Infants with Down Syndrome

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ABSTRACT

Background: Down Syndrome (DS) is the most common birth defect resulting in an estimated prevalence of 14 in 10,000 live births. Despite improvement of survival of infants with DS, it is associated with multiple comorbidities which can complicate and prolong their hospital stay.

Objectives: The primary objectives of this study are to investigate the initial length of hospitalisation, outcomes and survival rate among infants with DS at 1-year, 2-years, and 5-years. Additionally, we aimed to identify the medical conditions observed in Down Syndrome and examine the factors influencing survival rate and length of hospitalisation.

Methods: This is a retrospective cohort study using pre-existing data from two tertiary institutions, Universiti Malaya Medical Centre (UMMC), Kuala Lumpur and Hospital Sultanah Bahiyah, Alor Setar, Kedah. The subjects for this study were all newborns with an ICD-10/11 code diagnosis of Down Syndrome delivered between the 1st January 2018 to 31st December 2022 at these 2 tertiary centres.

Results: A total of 266 data of babies with DS were analysed, with more male infants (n = 148, 55%), a higher proportion of Malay ethnicity (86%), and deliveries occurring at term or near term (n=189,71%) with mean (± SD) gestational age (GA) of 36 (± 0.03) weeks. The Kaplan-Meier overall cumulative survival rate probability curves were estimated at 96.6% for 1-year, 96.6% by 2-years and at 95.1% for 5-year survival rates. The mean (± SD) initial length of hospital stay at the neonatal unit or paediatric wards among DS infants is 25 (± 28.6) days. The 13 recorded deaths in this study were majority due to sepsis. The presence of any congenital heart disease and gastrointestinal disorders, were identified as influential factors affecting survival rates and the length of initial hospital stay.

Conclusion: The overall survival rate of DS is high in Malaysia. The significant factors affecting survival rate and hospital stay among DS are the presence of congenital heart defects and gastrointestinal disease.

Keywords: Down syndrome; morbidity; mortality; neonatal outcomes

Acknowledgement: Dr. Thiyagar Nadarajaw, Head, Department of Paediatrics, Hospital Sultanah Bahiyah, Alor Setar, Kedah; Dr. Eric Ang, Consultant Neonatologist, Hospital Sultanah Bahiyah, Alor Setar, Kedah

Abstract ID: A-0060

A Three-Year Retrospective Review of Persistent Pulmonary Hypertension of the Newborn (PPHN) treated with Inhaled Nitric Oxid in a District Specialist Hospital in Perak

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ABSTRACT

Background: Inhaled nitric oxide (INO) is a well-established and widely used therapy in the management of persistent pulmonary hypertension of the newborn (PPHN). While its role in improving oxygenation is well established, there is limited research on the clinical characteristics, outcomes, and associated factors in response to INO in this region.
Objectives: This study aims to describe the clinical characteristics and outcomes of neonates with PPHN treated with INO, and to identify factors associated with successful INO therapy in a district specialist hospital in Perak.
Methods: This retrospective cross-sectional study collected data from newborns with PPHN who received INO treatment in a tertiary hospital in Perak from 1st January 2022 to 31st December 2024. Chi square or Fisher exact test and independent t-test were used to analyse the factors associated with the outcome of INO therapy with statistical significance $p<0.05$.
Results: Forty-two newborns with PPHN received INO therapy during the study period. The survival rate among those treated with INO was 69.0%. However, the high mortality rate observed was not attributed to treatment failure, but rather to other factors such as septicaemia and congenital structural anomalies. Key factors associated with a positive response to treatment included the use of adjuvant therapy, a longer duration of inotropic support, early initiation of INO therapy, and the type of ventilation used. In contrast, the presence of congenital heart disease and early initiation of high-frequency oscillatory ventilation (HFOV) due to ventilation difficulties were associated with higher mortality.
Conclusion: INO therapy was effective in improving outcomes for neonates with PPHN, particularly when initiated early and supported with adjuvant therapies and appropriate ventilation. These findings underscore the importance of individualised treatment strategies and timely interventions in optimising the management of PPHN.

Keywords: Inhaled nitric oxide; neonate; persistent pulmonary hypertension of the newborn

ABSTRACTS FOR POSTER PRESENTATIONS

Abstract ID: A-0003

Factors Influencing Successful Breastfeeding among the Moderate and Late Preterms

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ABSTRACT

Introduction: Optimal breastfeeding in newborns, particularly in preterm infants, reduces morbidity and mortality, and provides benefit both in the short and long-term prospect. Successful breastfeeding among mothers of preterm infants remains a challenge and requires a high-level of self-efficacy. This study aimed to determine factors associated with breastfeeding self-efficacy among mothers of moderate or late preterm infants, and the relationship between breastfeeding self-efficacy and successful breastfeeding at 3 months post hospital discharge.

Methodology: A prospective observational study was conducted between 2022 and 2024, involving mothers who delivered a liveborn moderate or late preterm infant at Hospital Canselor Tuanku Muhriz, Kuala Lumpur. Breastfeeding Self-Efficacy Scale Short-Form (BSES-SF) and Breastfeeding Knowledge Questionnaire (BKQ) were used to determine the level of breastfeeding self-efficacy and knowledge of these mothers. Type of feeding at discharge and at 3 months post hospital discharge was collected to determine the rate of successful breastfeeding.

Results: A total of 177 mother-infant dyads were enrolled. Majority (80.5%) had good knowledge regarding breastfeeding, but only 49.1% had high self-efficacy at hospital discharge. Factors that showed significant association with breastfeeding self-efficacy includes Malay ethnicity (OR 2.17, 95% CI 1.05 - 4.47, $p = 0.04$), parity (OR 3.28, 95% CI 1.74 - 6.16, $p < 0.001$) and previous breastfeeding experience (OR 3.11, 95% CI 1.66 - 5.85, $p < 0.001$). There was no significant association between level of breastfeeding knowledge and breastfeeding self-efficacy. A high level of breastfeeding self-efficacy was significantly associated with successful breastfeeding at 3 months post hospital discharge (OR 2.73, 95% CI 1.44 - 5.19, $p = 0.002$).

Conclusion: High breastfeeding self-efficacy is significantly associated with exclusive breastfeeding at 3 months post discharge. Malay ethnicity, multiparity and previous breastfeeding experiences were significant factors contributing towards high self-efficacy. High level of breastfeeding knowledge is not a determinant of self-efficacy.

Keywords: Exclusive breastfeeding; knowledge; preterm birth; preterm infant; self-efficacy

Abstract ID: A-0004

Povidone-Iodine Pleurodesis in Congenital Chylothorax: A Case Series

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ABSTRACT

Background: Congenital chylothorax is a rare cause of neonatal respiratory distress, often requiring prolonged pleural drainage and nutritional management. Conservative approaches, including dietary modifications and somatostatin analogues, are first-line treatments. However, refractory cases may require invasive interventions. Povidone-iodine pleurodesis has emerged as a potential option in persistent chylothorax, but data on its efficacy and safety in neonates are limited.
Case Report: We reviewed three cases of congenital chylothorax successfully managed with povidone-iodine pleurodesis at Hospital Umum Sarawak from 2022 to 2025. All patients were diagnosed postnatally and initially received conservative treatment, including medium-chain triglycerides (MCT) based feeding, total parenteral nutrition (TPN), and octreotide therapy. Due to persistent high-output chylous effusions, intrapleural povidone-iodine pleurodesis was performed. Patient 1 was a 34-week non-syndromic preterm neonate with persistent bilateral chylothorax who underwent povidone-iodine pleurodesis on day 32 of life, achieving immediate resolution without recurrence or adverse effects. Patient 2 was a 36-week preterm neonate with Down syndrome and persistent right-sided chylothorax who underwent povidone-iodine pleurodesis on day 24 of life, resulting in resolution within 48 hours without complications resulting from the procedure. Patient 3 was a 34-week preterm neonate with Down syndrome and persistent bilateral chylothorax. Povidone-iodine pleurodesis was performed on day 19 of life. She required a second pleurodesis on the right-side due to suboptimal drain positioning during the first attempt after which full resolution was achieved. Thyroid function, which was mildly deranged prior to pleurodesis, showed significant worsening following the procedure, necessitating treatment for hypothyroidism. This remained the only notable complication observed.
Discussion: Povidone-iodine pleurodesis appears to be a viable adjunct for refractory congenital chylothorax, offering a minimally-invasive alternative to surgery. While generally well tolerated, monitoring for hypothyroidism is essential. Further studies are needed to establish standardised protocols and assess long-term safety.

Keywords: Congenital chylothorax; iodine pleurodesis; neonatal respiratory distress; perinatal management

Abstract ID: A-0006

The Belly Button Clue: When the Umbilicus Speaks of the Gut

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ABSTRACT

Introduction: The vitellointestinal duct (VID), also known as the omphalomesenteric duct, is an important embryologic structure that connects the developing midgut to the yolk sac during early foetal life. Typically, the VID undergoes complete involution by the 7th week of gestation. However, failure of this duct to regress can result in a patent vitellointestinal duct (PVID), which may lead to a range of gastrointestinal anomalies. We report a case of a newborn who presented with meconium discharge from the umbilical stump shortly after birth. Intraoperative findings confirmed a PVID with Meckel's diverticulum attached to the umbilicus.

Case description: A male baby was delivered at 36 weeks of gestation via spontaneous vaginal delivery, with good Apgar scores and a birth weight of 2.64 kg. Shortly after birth, the baby experienced transient respiratory distress, requiring CPAP but later stabilised and weaned to room air within 12 hours. Upon admission, meconium discharge from the umbilical stump was seen. Examination revealed a thickened umbilical cord with a wide base and pinkish mucosa at the base of the umbilical stump. The baby had not passed any meconium per rectum, though the anus was patent. He underwent surgical exploration, during which Meckel's diverticulum was found to be attached to the umbilical region. The patent vitellointestinal duct was excised, and primary bowel anastomosis was performed. Postoperatively, he recovered well and was discharged on day 9 of life.

Discussion: Incomplete closure of the VID can lead to a variety of clinical presentations. Faecal discharge or bowel prolapse through the umbilicus is often pathognomonic for PVID. Surgical intervention is the definitive treatment, and early diagnosis is essential to avoid complications such as bowel obstruction. Although rare, umbilical abnormalities in neonates warrant thorough evaluation to ensure timely and effective management.

Keywords: Faecal discharge; meckel diverticulum; omphomesenteric duct; patent vitellointestinal duct; umbilical anomalies

Abstract ID: A-0007

My Dancing Queen: Neonatal Intractable Myoclonus Associated KIF5A Gene Mutation

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ABSTRACT

Introduction: The KIF5A gene encodes a neuron-specific kinesin heavy chain, essential for intracellular transport of mitochondria, proteins, and mRNA. Pathogenic mutations in KIF5A have been implicated in severe neonatal-onset intractable myoclonus (NEIMY), a rare disorder characterised by refractory myoclonus, hypotonia, respiratory failure, and neurodevelopmental impairment with universally poor outcomes.

Case description: We present a novel KIF5A mutation in a neonate, expanding the clinical and genetic understanding of NEIMY. A term female infant, delivered via emergency caesarean section for foetal distress (Apgar scores 9/9), exhibited persistent myoclonic jerks and respiratory distress requiring nasal oxygen. From birth, she had persistent myoclonic jerks and was intubated at 17 hours of life for cerebral protection due to recurrent tonic-clonic seizures refractory to phenobarbitone and levetiracetam. EEG revealed stimulus-sensitive myoclonus without electrographic seizures. MRI showed diffuse leptomeningeal enhancement, however CSF analysis was normal. She was encephalopathic with bilateral ptosis, absent gag/rooting reflexes, hypotonia, and central hypoventilation, necessitating prolonged ventilation and nasogastric feeding. Whole-exome sequencing identified a novel heterozygous KIF5A frameshift mutation (c.2859del), predicted to cause nonsense-mediated decay or a truncated protein.

Conclusion: This case aligns with prior report of KIF5A-related NEIMY phenotypes, including stimulus-sensitive myoclonus, severe hypotonia, and ventilator dependence. Prior cases similarly described profound neurologic impairment and early mortality. This fourth global case of KIF5A-related NEIMY reinforces the gene's pathogenicity and the clinical uniformity of this lethal disorder. Early genetic testing is critical for neonates with refractory myoclonus. Given the absence of effective treatments, further research is needed to explore potential therapeutic targets.

Keywords: KIF5A

Abstract ID: A-0008

Non-Ketotic Hyperglycinemia in Penan Neonates: A Case Series from Miri General Hospital

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ABSTRACT

Introduction: Non-ketotic Hyperglycinaemia (NKH) is a rare autosomal recessive metabolic disorder caused by defects in the glycine cleavage system, leading to glycine accumulation in body tissues. Its global incidence ranges from 1:60000 to 1:100000 live births. In Malaysia, the reported prevalence is lower at 1:187500, although underdiagnosis particularly in rural populations is likely. The Penans, a semi-nomadic indigenous group in Borneo may have a higher incidence due to consanguinity and genetic isolation. This case series highlights three NKH neonates from the Penan community treated at Miri General Hospital.

Case description: Case 1 is a term female (birth weight 3 kg), born to consanguineous parents (cousins twice removed). She developed encephalopathy and apnoea on day two of life with hypotonia and absent reflexes. CSF/plasma glycine ratio of 0.12 confirmed NKH. Despite supportive care, she succumbed to haemodynamic instability on day five; genetic testing was pending. Case 2 is now a 1-year-7-month-old female (birth weight 3.81 kg), presented at birth with respiratory distress, dysmorphism (narrow bifrontal diameter, talipes equinovarus) and seizures. Imaging showed intraventricular haemorrhage and hydrocephalus-findings atypical in NKH. Genetic testing confirmed a homozygous GLDC mutation (c.1952A>G). Sodium benzoate improved her respiratory status but she remains severely developmental delayed. Family history included unexplained infant deaths. Case 3 is a 3-month-old male (birth weight 3.1 kg) with cleft palate, hypotonia and apnea. MRI revealed corpus callosum dysgenesis and EEG showed burst suppression. His CSF/plasma glycine ratio was 0.13, plasma glycine was 1067 umol/L. He was stabilised on dextromethorphan and sodium benzoate. Genetic analysis is ongoing.

Conclusion: All three cases showed classical features of neonatal NKH. This cluster suggests a higher local incidence among Penan's, underscoring need to consider NKH in neonates with unexplained neurological symptoms, especially in the consanguineous population.

Keywords: NKH; Penan neonates

Abstract ID: A-0009

Variation in Adoption of Infection Prevention and Control - Best Practices in Asian NICUs

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ABSTRACT

Introduction: Healthcare-associated infections (HCAIs) account for a significant proportion of neonates who develop infections and sepsis. Reducing the incidence of HCAIs among neonates is a key step to reducing mortality and long-term morbidities, including the attendant long-term costs incurred to patients, families and society.

Case report: Here we report the results of a survey on the adoption of infection prevention and control (IPC) best practices in neonatal ICUs (NICUs) across Asia. The survey was developed through consensus discussion with working neonatologists and was targeted at neonatologists and paediatricians practising in Levels III and IV neonatal units. It covered a broad range of topics, namely: (i) neonate-specific care practices; (ii) visitors and staff; (iii) unit environment; (iv) central line practices; and (vi) audit and outbreak management. Across the 76 survey responses, there was generally high endorsement of most IPC practices. The greatest variation was among neonate-specific care practices, where country income group was positively associated with adoption of several items including use of fungal prophylaxis and probiotics. In addition, country income level was negatively associated with adoption of certain central line-related practices.

Discussion: Our results suggest that resource availability and local practice and perceptions may affect adoption of IPC best practices. Further study is needed to understand specific barriers to adoption as well as central line-related variation in practice, and to define specific quality improvement initiatives to tackle these areas.

Keywords: Infection control; neonatal; NICU; survey

Abstract ID: A-0010

When Parasites Cross the Placenta: A Case Series on Congenital Toxoplasmosis

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ABSTRACT

Background: Congenital toxoplasmosis is a preventable congenital infection with significant neurological and ophthalmologic sequalae. Although rare, previous study has reported a seropositivity rate of 0.4% of congenital toxoplasmosis among Malaysian infants with congenital abnormalities. Hydrocephalus, intracranial calcifications, and chorioretinitis are the common clinical manifestations. Early recognition and prompt diagnosis with appropriate treatment affects prognosis.
Case report: We present three newborns diagnosed with congenital toxoplasmosis at a tertiary center in northern Malaysia.
Case 1 involves a 34-week gestation premature infant with severe hydrocephalus and a positive cerebrospinal fluid PCR for T*oxoplasmosis gondii*. Despite early treatment, the infant succumbed at 3 months of age due to multiple complications such as refractory seizures and diabetes insipidus.
Case 2, a term infant with antenatal detection of ventriculomegaly. Serology was positive for Toxoplasmosis IgM. Prompt treatment initiated with multidisciplinary team follow-up.
Case 3, also a term infant, with antenatal detection of maternal antibodies to Toxoplasmosis, developed obstructive hydrocephalus with intracranial calcifications, requiring both surgical intervention and anti-parasitic treatment. Both living cases had global developmental delay as a sequelae of congenital toxoplasmosis, reflecting the long-term neurodevelopmental impact of the infection.
Conclusion: This case series highlights the heterogenicity in the manifestations and outcomes of congenital toxoplasmosis. All three infants had both ocular and intracranial involvement, reinforcing the importance of early neuroimaging and ophthalmologic evaluation. Treatment with pyrimethamine, sulfadiazine, and folinic acid was initiated in all cases. The observed outcomes underscore the need for routine antenatal screening, timely intervention, and multidisciplinary follow-up to improve long-term quality of life and thus reducing complications in affected infants

Keywords: Congenital toxoplasmosis; neurodevelopment; newborns

Abstract ID: A-0011

Neonatal Recessive Dystrophic Epidermolysis Bullosa with Cutis Aplasia Congenita: Identification of Two Novel COL7A1 Mutations

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ABSTRACT

Background: Epidermolysis Bullosa (EB) encompasses a rare spectrum of genetically inherited connective tissue disorders characterised by extreme cutaneous fragility and blistering following minimal mechanical stress. Dystrophic EB (DEB), a major subtype, arises from mutations in the COL7A1 gene, which encodes type VII collagen, a key component of anchoring fibrils that mediate dermal-epidermal cohesion. The recessive form, Recessive DEB (RDEB), is among one of the most severe phenotypes, often associated with life-threatening complications and profound morbidity.

Case report: We present a full-term female neonate (birth weight: 2.43 kg) who was admitted to the NICU within the first hour of life due to congenital absence of skin over the left lower extremity. Additional bullous and erosive lesions were identified on the left fifth digit, dorsum of right foot, abdomen, bilateral gluteal region and back. The infant was born to non-consanguineous parents, with no reported familial history of genetic or dermatologic disorders. During the initial postnatal period, new lesions, including oral mucosa blistering, developed. Supportive care involved emollients, non-adhesive dressings, and careful handling to minimise further trauma. Molecular analysis identified two novel heterozygous pathogenic variants in the COL7A1 gene (c.2858_2859del and c.4943del), both predicted to result in frameshift mutations and truncated type VII collagen. These findings confirmed a diagnosis of RDEB and expand the mutational spectrum of COL7A1.

Conclusion: This case underscores the phenotypic and genotypic heterogeneity of COL7A1-related EB and emphasises diagnostic value of early genetic testing. The co-occurrence of cutis aplasia congenita is indicative of a severe phenotype. Given the high risk of complications – including squamous cell carcinoma, contractures, mucosal strictures, impaired growth, and ocular involvement – timely molecular confirmation and coordinated multidisciplinary management are essential to optimising long-term outcomes and quality of life.

Keywords: COL7A1 gene; recessive dystrophic EB

Abstract ID: A-0012

Brittle Start: A Case Report of Type VIII Osteogenesis Imperfecta Neonate with Novel P3H1 Mutation

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ABSTRACT

Introduction: Type VIII Osteogenesis imperfecta (OI) is a rare autosomal recessive skeletal dysplasia with heterogenous phenotypes, ranging from white sclerae and bone fragility to perinatal lethality. It is most commonly associated with mutations in the P3H1 gene, which encodes a component of the prolyl-3-hydroxylation complex essential for collagen folding and stability via hydroxylation of proline residues in type I collagen.
Case report: We report the case of a term neonate with type VIII OI, initially admitted to the neonatal intensive care unit (NICU) for non-invasive ventilatory support for congenital pneumonia. She was born to non-consanguineous parents, and antenatal imaging revealed features including a cloverleaf skull, frontal bossing, and shortened long bones. Postnatally, she appeared dysmorphic with limb deformities and sustained multiple fractures of varying ages involving the skull, vertebrae, ribs and long bones. Laboratory investigations revealed severe Vitamin D deficiency (8 nmol/L), and she was commenced on alfacalcidol (titrated up to 0.3 mcg/kg/dose) and calcium carbonate (40 mg/kg/day). Genetic testing confirmed a diagnosis of type VIII OI, revealing compound heterozygous mutations in P3H1: c.1170+5G>C (intronic) and a novel variant, c.916del (p.Tyr306Ilefs*31), which has not been previously reported in population databases. Genetic counselling was provided to the family regarding the nature, inheritance and prognosis of the condition. The infant was discharged on day 23 of life after her parents were trained in appropriate home-based care. This case highlights the clinical and genetic heterogeneity of type VIII OI and highlights the importance of multidisciplinary management. Further studies are warranted to expand the P3H1 mutation spectrum and its correlation with disease severity and outcomes.

Keywords: Genetic testing; osteogenesis imperfecta; pathological fracture; P3H1 mutation; recessive genetic conditions

Abstract ID: A-0013

Developmental Lactase Deficiency: A Forgotten Culprit Behind Preterm Infants with Feeding Intolerance

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ABSTRACT

Background: Lactose is a major carbohydrate and energy source in mammalian milk, requiring lactase for absorption. Lactase activity is depending on intestinal maturity and is often reduced in preterm infants less than 34 weeks gestation, which may cause lactose intolerance. Relative lactase deficiency observed in preterm infants is known as developmental lactase deficiency.

Case report: We report three cases of preterm infants with feeding intolerance who developed vomiting, increased gastric aspirates, and abdominal distension in the early days of life following the introduction of lactose-containing milk. Septic work-up for all three infants were negative. Symptoms persisted despite changing to slow, intermittent bolus feeds. However, all infants showed clinical improvement after switching to a lactose-free formula. As there is no definitive diagnostic test for developmental lactase deficiency, the condition is often overlooked in preterm infants presenting with feeding intolerance. This can lead to unnecessary fasting, antibiotic use, prolonged total parenteral nutrition, and delays in achieving full enteral feeds. Additionally, empiric antibiotic coverage for presumed sepsis may disrupt the developing gut microbiota, with potential long-term consequences. Delayed diagnosis may also result in repeated abdominal radiographs for unresolved distension, thereby exposing infants to unnecessary radiation. Reducing the lactose load in each feed remains the cornerstone of treatment for developmental lactase deficiency.

Conclusion: High index of suspicion is needed to diagnose developmental lactase deficiency early in preterm infants with feeding intolerance to avoid unnecessary and potentially harmful investigations and treatment. There is an urgent need to develop reliable diagnostic methods to identify developmental lactase deficiency for preterm infants in the near future.

Keywords: Developmental lactase deficiency; lactase activity; lactose intolerance; lactose free formula

Abstract ID: A-0014

A Silent Bleed: Neonatal Subpial Haemorrhage

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ABSTRACT

Background: Subpial haemorrhage (SPH) is a rare intracranial bleed occurring between the pia mater and cerebral cortex. It remains under-recognised due to its subtle clinical presentation and unclear pathophysiology. Symptoms may include seizures, respiratory distress, or nonspecific neurologic signs. We report a case of neonatal SPH highlighting characteristic imaging findings, potential prenatal aetiology, and a favourable outcome with conservative management.

Case Report: A late preterm male infant (36 weeks' gestation, 1.88 kg) was delivered via emergency caesarean section for foetal distress. Postnatally, he developed respiratory distress requiring intubation. Ophthalmologic examination revealed rubeosis iridis, suggestive of chronic intrauterine hypoxia. Initial laboratory investigations showed anaemia (Hb: 9 g/dL), thrombocytopenia (74 x 10^9/L), and coagulopathy, all of which resolved after transfusion. Cranial ultrasonography and MRI revealed a large right temporal subpial haemorrhage (4.4 x 4.9 x 5.5 cm) associated with cortical infarction, midline shift, and obstructive hydrocephalus. Focal seizures developed at 84 hours of life and was controlled with phenobarbitone. Neurosurgical intervention was declined by the parents, and conservative management was pursued. The infant showed steady recovery and achieved age-appropriate developmental milestones at six months follow-up.

Conclusion: Subpial haemorrhage remains a diagnostic challenge in neonates, with MRI being essential. In this case, the MRI findings of a well-demarcated ellipsoid haemorrhage with adjacent cortical infarction were key to establishing the diagnosis. While previously associated with birth trauma, this case suggests a prenatal origin, supported by signs of chronic hypoxia and an uncomplicated delivery. The outcome spectrum in SPH is highly variable, ranging from severe neurological sequelae to full recovery. Our case demonstrates that, in selected patients, conservative management may result in a favourable prognosis. Early recognition and individualised management strategies are essential. Further research is needed to delineate risk factors, refine diagnostic criteria, and guide treatment approaches

Keywords: Neonatal MRI; neonatal intensive care; neonatal intracranial bleed; neonatal neuroimaging; neonatal neurology; neonatal subpial haemorrhage

Abstract ID: A-0015

Tiny and Tachycardic: Neonatal Thyrotoxicosis in a Preterm Infant

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ABSTRACT

Introduction: Neonatal thyrotoxicosis is rare compared to congenital hypothyroidism but can result in serious morbidity and mortality if unrecognised. We present a case of neonatal thyrotoxicosis in a preterm infant, initially masked by features of prematurity, emphasising the importance of clinical vigilance and early intervention.

Case description: A preterm female infant was delivered at 31 weeks and 5 days via emergency Caesarean section for foetal distress. The 26-year-old primigravida mother had diet-controlled gestational diabetes, presented with foul-smelling liquor and maternal tachycardia, and was treated for chorioamnionitis. Baby required intubation for respiratory distress and was extubated on day 9 of life. Tachycardia during the first week of life was initially attributed to prematurity. However, cord blood and day 5 thyroid function tests revealed TSH <0.01, free T4 37.16 and 38.89, respectively. Clinically, the infant appeared small for gestational age with poor muscle bulk, jitteriness, and inadequate weight gain despite optimised caloric intake. Further maternal history indicated symptoms suggestive of hyperthyroidism, including palpitations and neck swelling during pregnancy. Maternal testing confirmed positive anti-TPO antibodies, suggesting autoimmune thyroid disease. Neonatal thyrotoxicosis was diagnosed, and the infant was started on Carbimazole and Propranolol on day 12. Clinical improvement followed, along with stabilisation of thyroid function. Antithyroid medications were discontinued by day 63. The infant later developed transient hypothyroidism, for which Levothyroxine was initiated and discontinued at 5 months after thyroid levels normalised.

Discussion: This case underscores the importance of clinical vigilance, as symptoms of neonatal thyrotoxicosis can mimic prematurity. Persistent tachycardia, poor weight gain, and jitteriness should prompt early and repeated thyroid function testing. Thorough maternal history and targeted thyroid screening are essential, particularly in symptomatic mothers. Timely initiation and careful titration of antithyroid therapy, guided by clinical and biochemical monitoring, can result in favourable outcomes.

Keywords: Hyperthyroidism; neonatal; thyrotoxicosis

Abstract ID: A-0016

The Invisible Threat: Diagnosing Postnatally Acquired Neonatal Smear Positive Pulmonary Tuberculosis in an Asymptomatic Household - A Case Report

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ABSTRACT

Introduction: Postnatally acquired neonatal tuberculosis (TB) is a rare but serious condition caused by horizontal transmission of Mycobacterium tuberculosis (MTB) after birth. Neonates are vulnerable due to their immature immune system, and often present with nonspecific symptoms, mimicking other neonatal infections I.e. sepsis or pneumonia, making diagnosis challenging.
Case description: A BCG-vaccinated baby girl who was born at 36 weeks gestation with birthweight of 3kg, presented at day 20 of life with fever, breathlessness and slow weight gain. She was in respiratory failure which required intubation and ventilation. Systemic examinations were otherwise normal. Chest radiographs showed generalised persistent reticulonodular changes. Acid-fast bacilli was detected in tracheal aspirate samples. Mycobacterium gene Xpert detected MTB complex without Rifampicin resistance. Growth resembling Mycobacterium tuberculosis morphologically detected from MTB culture. Cerebrospinal fluid tests and HIV screening were all normal. 4 drug anti-TB regimen was commenced on day 4 of admission. Improvement was observed clinically after 10 days of starting treatment. Maternal grandfather passed away in April 2024 due to smear positive PTB and TB laryngitis. Family screening following the death was all negative. Mother conceived in June 2024 and was well throughout pregnancy. Following the baby's diagnosis, family members were re-screened and found to be negative, except for the maternal great-grandmother, who had an abnormal chest X-ray and was referred to a chest physician for further evaluation.
Discussion: Baby has severe respiratory disease with negative results from standard workup, i.e. QIASTAT and culture, hence, prompting investigations for PTB. Smear positivity is rare due to the paucibacillary nature of childhood TB.
Conclusion: Postnatally acquired neonatal PTB, though rare, should be considered in neonates presenting with respiratory distress and poor weight gain, especially if there is significant TB contact. High index of suspicion is crucial in early diagnosis, timely treatment, and eventually improving outcomes, as highlighted in this case report.

Keywords: Contact screening; diagnosis; neonate; smear positive pulmonary tuberculosis; treatment

Abstract ID: A-0017

From Fright to Relief: The Journey of a Congenital Hepatic Haemangioma

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ABSTRACT

Introduction: Haemangiomas are benign vascular neoplasms that involve the skin and visceral organs with the liver being the second most involved after skin. Congenital hepatic haemangioma is rare, mostly fully formed at birth and involutes during infancy period which contrasts with infantile haemangioma.

Case report: We report a case of congenital hepatic haemangioma in a 36-week baby boy. He was intubated after birth due to respiratory distress with distended abdomen. Abdominal ultrasound revealed a heterogeneous cystic mass measuring 4.6 x 5.3 x 6.2 cm with internal vascularity. The baby has thrombocytopenia which normalised by 2 weeks of age and an elevated serum alpha-fetoprotein levels (107,519 IU/ml) which subsequently show a declining trend. Due to the large congenital hepatic haemangioma with intratumorally arteriovenous portovenous shunts seen in subsequent serial ultrasonography, he developed high-output cardiac failure by the second week of life and was effectively managed with two anti-failure medications. He was managed conservatively, and serial follow-up of abdominal ultrasounds demonstrated a reduction in the size of the mass.

Discussion: In our case, the patient has rapid involuting congenital haemangioma. Large congenital haemangioma is associated with high output cardiac failure, pulmonary hypertension, thrombocytopenia with deranged coagulation profile and abdominal compartment syndrome. Serial ultrasonography of the mass will show reduction in size and increasing intratumorally calcifications which coincides with involution as seen in our patient. The mainstay of treatment will be conservative. Awareness and correct identification of congenital hepatic haemangioma can prevent invasive testing and treatment of an otherwise benign condition.

Keywords: Congenital haemangioma

Abstract ID: A-0018

Hypothyroidism in Premature Infants: Relationship with Gestational Age and the Need for Increased Monitoring - A Retrospective Cohort Study

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ABSTRACT

Background: Congenital hypothyroidism (CH) is a common endocrine disorder present at birth and a preventable cause of intellectual disability. "Hypothyroidism of prematurity" occurs more frequently in preterm neonates, causing delayed thyroid-stimulating hormone (TSH) surge, leading to a smaller increase in T4 levels. In Malaysia, guidelines recommend repeating TFT two weeks after the first cord TSH or TFT, then every two weeks until discharge, and two weeks post-discharge for preterm neonates.

Objective: To investigate the relationship between hypothyroidism in extremely preterm (EP), very preterm (VP), moderate preterm (MP) and late preterm (LP). To assess the need to repeat TFT 2-weekly in preterm infants.

Methods: This retrospective cohort study reviewed 447 preterm births from the HTAR NICU admissions (1st July 2023-30th June 2024). These neonates are further analysed according to their gestational age group and respective T4 levels.

Results: Out of 447 premature neonates, 5 were excluded due to Down syndrome/dysmorphism, leaving 442 infants. Further analysis done for the repeated T4 level in each week of life. Analysis of T4 levels by week revealed the highest percentage of hypothyroidism is found in weeks 2 and 3 of life across all groups, with lower percent subsequently in week 4, 5, 6 and more than 6 weeks. Testing for correlation shows negative correlation in the group EP (p=0.035), VP (p=0.050) ,MP (p=0.042) and LP (p=0.026).

Conclusion: The percentage of hypothyroidism decreases with maturity across all groups. Therefore, it may be beneficial to perform a repeat TFT at 2 weeks of age, with the possibility of extending the testing intervals after the 4th week of life. However, the number of patients in each group varies, and the relatively small sample size may act as a confounding factor. Future research should involve larger-scale prospective studies across multiple centers.

Keywords: Hypothyroidism; premature infants

Abstract ID: A-0020

Neonatal Presentation of Reticulated Capillary Malformation: A Case Report on Possible Klippel-Trenaunay Syndrome and Diagnostic Considerations

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ABSTRACT

Introduction: Klippel-Trenaunay Syndrome (KTS) is a rare congenital vascular disorder characterised by capillary malformation, venous malformation, and limb overgrowth. Neonatal presentations can be subtle and often mimic other conditions, making early recognition crucial for appropriate management.

Case Report: This case report describes a neonatal presentation with vascular skin lesions and respiratory distress, initially raising suspicion for KTS, and emphasises the importance of differential diagnosis and dermatology consultation.A term Malay neonate was admitted to the NICU at birth due to meconium-stained amniotic fluid and respiratory distress, requiring non-invasive ventilation and later intubation. Examination revealed multiple blanchable purplish lesions on the left lower limb extending to the buttocks, suggesting a vascular malformation. There was no limb asymmetry or overgrowth, and the TORCHES screen was negative. Clinical evaluation showed no evidence of soft tissue hypertrophy, and the lesions were consistent with capillary malformations. This raised concern for KTS. Dermatology consultation confirmed reticulated capillary malformations, with a provisional diagnosis of possible KTS.

Conclusion: This case highlights the importance of a structured diagnostic approach when evaluating neonatal vascular skin lesions. While KTS typically involves limb overgrowth, capillary malformations can be an early sign. Timely dermatology referral and investigation are key to accurate diagnosis and appropriate management.

Keywords: Capillary malformation; Klippel-Trenaunay Syndrome; limb discoloration; neonatal case; vascular lesion

Abstract ID: A-0021

Bladder Exstrophy-Epispadias Complex in a Newborn: A Case Report

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ABSTRACT

Introduction: The bladder exstrophy–epispadias complex (BEEC) is a rare congenital anomaly with a global prevalence of approximately 3 to 5 per 100,000 live births. We report a case of antenatally undiagnosed BEEC, emphasising postnatal management in a setting where definitive surgical repair is not planned in the immediate period.

Case description: A male neonate was born at 36 weeks and 3 days to a Rohingya mother with gestational diabetes managed by diet. The baby was born before arrival (BBA) and transported to the hospital after birth. Examination revealed an exposed, everted bladder draining urine below the umbilical stump, with a dorsally opened urethral plate extending from the bladder neck to the glans. The corpora cavernosa was visible alongside the urethral plate. The scrotum was well formed, with the right testis descended and the left palpable in the inguinal region. Other systemic examinations were unremarkable. The infant was treated empirically for presumed sepsis with a 5-day course of intravenous penicillin and gentamicin. Renal ultrasound showed no structural anomalies. He remained stable, with normal urine and stool output. The exposed bladder mucosa was protected using sterile dressings, and parents were trained in daily wound care. Following consultation with the Paediatric Surgery team, definitive surgical repair is planned when the infant is older. The baby was discharged with outpatient follow-up once parents were confident with home care.

Discussion: Bladder exstrophy is a rare congenital anomaly, and clinicians may be unfamiliar with its immediate postnatal management, particularly in settings where surgical expertise is limited or delayed. While the literature largely focuses on surgical correction, there is comparatively less emphasis on the initial medical and supportive care required in the neonatal period. This case highlights postnatal management, including protection of exposed bladder mucosa, infection prevention, relevant investigations, and guidance on monitoring and follow-up.

Keywords: Bladder; congenital; exstrophy; epispadias; neonate

Abstract ID: A-0022

Hypoxic-Ischaemic Encephalopathy, Perinatal Stroke or both? - A Case Report

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ABSTRACT

Background: Perinatal stroke is a focal cerebrovascular event-either infarction or haemorrhage-occurring between 28 weeks of gestation and 28 postnatal days. Perinatal stroke commonly manifests with seizures within the first 72 hours of life, while hypoxic-ischaemic encephalopathy (HIE) typically presents at birth with signs of encephalopathy, such as hypotonia, diminished primitive reflexes and seizures. Despite differing timelines and presentations, the overlapping clinical features and risk factors of these two entities often lead to diagnostic uncertainty.

Case Report: We present a case of perinatal stroke which was initially treated as HIE. A baby boy was born full term with a birth weight of 2770g by emergency lower segment caesarean section (EMLSCS) for non-reassuring foetal status. The mother presented in labour and had thick meconium-stained liquor. The patient was born with a poor Apgar score and respiratory distress requiring intubation and mechanical ventilation at birth. The patient did not fulfil criteria for cooling therapy until he developed a focal seizure at 7 hours of life. Subsequently, therapeutic hypothermia therapy was initiated with the diagnosis of neonatal encephalopathy. Amplitude-integrated electroencephalogram (aEEG) revealed burst suppression pattern. A magnetic resonance imaging (MRI) of the brain performed on day 10 demonstrated a subacute infarct in the left posterior cerebral artery territory, with a haemorrhagic component in the left occipital lobe and signs of early hydrocephalus. Additional punctate diffusion restrictions suggested multifocal involvement. Thrombophilia screen and echocardiogram were unremarkable. The patient has shown normal neurodevelopment to date with no recurrence of seizures.

Discussion: The pathophysiology of perinatal stroke is similar to HIE which may lead to similar presentation at birth. Due to the difficulty in differentiating these two diseases, initiating therapeutic hypothermia for HIE is appropriate in this case. Utilisation of scoring tools may aid objective interpretation of MRI findings and prognostication of HIE.

Keywords: Hypoxic-ischaemic encephalopathy; neonatal encephalopathy; perinatal stroke; therapeutic hypothermia

Abstract ID: A-0023

A Case Report of Nonimmune Hydrops Fetalis Secondary to Noonan Syndrome

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ABSTRACT

Introduction: Nonimmune (NIHF) accounts for approximately 90% of all hydrops cases and remains a significant diagnostic challenge in neonatal care. NIHF can result from a wide array of underlying conditions and due to its diverse aetiologies, establishing a definitive diagnosis requires a comprehensive evaluation. We report a rare case of NIHF secondary to Noonan syndrome.

Case Report: A female infant was delivered macrosomic with birth weight of 3.2kg at 34 weeks of gestation via emergency lower segment Caesarean section due to foetal distress. The mother, a 34-year-old para 3, had been diagnosed with polyhydramnios and foetal bilateral pleural effusions at 32 weeks. Antenatal amniocentesis (chromosomal microarray analysis) revealed a 2.48 Mb chromosomal deletion at 3p26.3, classified as a variant of uncertain significance. She exhibited several dysmorphic features, including a webbed neck, micrognathia, widely spaced nipples, generalised skin oedema and bilateral pleural effusions. Echocardiography revealed mild proximal left pulmonary stenosis. Other diagnostic investigations, including full blood count, haemoglobin analysis, metabolic screening and TORCHES infections panel failed to determine the aetiology of the hydrops. However, whole genome sequencing later identified a pathogenic variant in the PTPN11 gene, confirming a diagnosis of Noonan syndrome. During her prolonged NICU stay, she required multiple thoracocentesis for pleural effusions, prolonged mechanical ventilation due to upper airway obstruction and treatment for recurrent pneumonia. Other complications include laryngomalacia, bronchomalacia, and faltering growth. Despite a stormy clinical course requiring multidisciplinary care, she was eventually discharged at five months of age with home continuous positive airway pressure (CPAP) support.

Discussion: This case highlights an atypical presentation of Noonan syndrome characterised by nonimmune hydrops fetalis. Postnatal evaluation and confirmatory genetic testing are imperative, particularly in cases where antenatal amniocentesis results are inconclusive, to establish an accurate diagnosis and guide further management.

Keywords: Neonate; nonimmune hydrops fetalis; Noonan syndrome

Abstract ID: A-0024

Intracranial Haemorrhage in Neonate with Severe Haemophilia A

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ABSTRACT

Introduction: Haemophilia A is an X-linked recessive bleeding disorder characterised by a deficiency of coagulation factor VIII. Neonatal presentation is rare but they can present with intracranial haemorrhage which associated with high mortality and neurological sequelae. We illustrate a case of severe haemophilia A in a neonate who developed bilateral spontaneous cephalohematoma and acute subdural haemorrhage following uncomplicated delivery.

Case description: A male neonate with birth weight 3 kg, born at 40 weeks via spontaneous vaginal delivery, presented at 20 hours of life with progressive scalp swelling in the postnatal ward. Antenatal and intrapartum were uneventful. Intramuscular Vitamin K was administered at birth. On examination, he was active, well-perfused, normotensive, and not tachycardic. Bilateral scalp swelling was noted at the temporal region consistent with cephalohematoma, measuring 7 cm x 8 cm and 5 cm x 5 cm, respectively. There was no swelling over the injection site. Neurological examination was unremarkable, anterior fontanelle was normotensive and both pupils were equal and reactive. There was no family history of haemophilia. Laboratory investigations revealed a markedly prolonged activated partial thromboplastin time (aPTT) 110s, prompted an evaluation for haemophilia that revealed FVIII activity of 1%. He received multiple transfusions of fresh frozen plasma and packed red blood cells. However, the scalp swelling progressively became larger with significant drop in haemoglobin. Computed tomography brain on Day 7 of life revealed acute subdural haemorrhage. Treatment with factor VIII replacement was initiated, leading to clinical improvement. Prophylactic weekly factor VIII was started but discontinued after detection of inhibitors (inhibitor level 5 BU) on day 26 of exposure.

Conclusion: Early recognition and prompt initiation of factor VIII replacement are critical to minimising morbidity, mortality and improving long term outcomes.

Keywords: Factor VIII; Haemophilia A; intracranial haemorrhage

Abstract ID: A-0025

From Maternal Diagnosis to Neonatal Insight: A Case of Silent Hypocalcaemia in the Newborn

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ABSTRACT

Introduction: Neonatal hypocalcaemia is a metabolic disturbance that may be asymptomatic or present with signs such as seizures, jitteriness, or tetany. It is classified based on onset, with early-onset hypocalcaemia occurring within the first 72 hours of life. Common causes include prematurity, perinatal asphyxia, and maternal diabetes. A rare recognised cause is maternal hyperparathyroidism. In this condition, elevated maternal calcium levels suppress foetal parathyroid function in utero. After birth, sudden withdrawal of maternal calcium affects the neonate's impaired parathyroid response, resulting in hypocalcaemia. This can be clinically silent, making targeted screening in high-risk neonates essential.

Case description: We present a case of asymptomatic early-onset severe neonatal hypocalcaemia identified following postpartum diagnosis of maternal hyperparathyroidism.

A term baby girl was delivered at 38 weeks 2 days via emergency Caesarean section. She was admitted to our Special Care Nursery for transient tachypnoea of newborn. On day 4 of life, we were notified that her mother was newly diagnosed with hyperparathyroidism postpartum. Following that, screening was done and the baby was found to be hypocalcaemic, with the lowest ionised calcium recorded at 0.55 mmol/L. Multiple corrections were required and she remained asymptomatic. Case was co-managed with Paediatric Endocrinologist – calcium supplementation was optimised accordingly.

Discussion: This case emphasises the need to consider maternal hyperparathyroidism in cases of neonatal hypocalcaemia and at times, it may be the only clue. Awareness among healthcare, proactive screening and early involvement of endocrinologist are essential to avoid potential complications. Multidisciplinary coordination is key, and routine calcium screening may aid in detecting maternal endocrine disorders earlier, improving outcomes for both mother and child.

Keywords: Neonatal hypocalcaemia; perinatal hyperparathyroidism

Abstract ID: A-0028

Wandering Spleen in Pregnancy with Thrombocytopenia - Silent but Significant

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ABSTRACT

Introduction: Wandering spleen, or ectopic spleen, is a rare condition accounting for approximately 0.2% of cases, with a higher prevalence among women. It results from laxity of the splenic ligaments. Pregnancy itself contributes to this risk due to progesterone effect. A complicating factor in this case was thrombocytopenia, a common haematological issue during pregnancy. However, managing thrombocytopenia alongside a wandering spleen poses unique challenges due to the potential risk of hypersplenism and splenic complications such as torsion or infarction, necessitating vigilant monitoring.

Case description: We report a case involving a 32-year-old Temiar Orang Asli woman, gravida 3, who was referred at 24 weeks' gestation for splenomegaly and thrombocytopenia. Clinical examination revealed a right hypochondriac mass, and subsequent ultrasound confirmed an enlarged spleen measuring 15.6 cm, with absence of the spleen in its normal anatomical position. Her platelet count showed a declining trend, dropping from 116,000 to 98,000, although peripheral blood film and infection screenings were unremarkable. A multidisciplinary team decided on conservative management, with two-weekly monitoring of splenic size, vascularity, and platelet counts. The patient remained asymptomatic and successfully completed her pregnancy, delivering vaginally at 39 weeks without complications. Plans were made for elective splenectomy postnatally.

Discussion: Most of the reported case of wandering spleen, presented with acute abdomen as a result of splenic torsion. However in our case, we manage to treat conservatively, as the patient is asymptomatic. Although the initial drop in platelet counts raised concern, as the risk of platelet sequestration and hypersplenism, luckily spontaneous normalisation occurred without intervention. Unlike most reported cases requiring surgery, our patient completed pregnancy without complication, emphasising that expectant management can be successful with proper surveillance.

Conclusion: Wandering spleen during pregnancy, though rare, can be managed conservatively in asymptomatic patients through early diagnosis, coordinated care and diligent follow-up.

Keywords: Pregnancy; splenomegaly; thrombocytopenia; wandering spleen

Abstract ID: A-0031

Methemoglobinemia and Basic Management: A Case Report on Methemoglobinemia with Acute Gastroenteritis and Lactose Intolerance

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ABSTRACT

Introduction: Methaemoglobinemia is a rare disorder in which haemoglobin is oxidised to methaemoglobin (MetHb). The allosteric changes in haemoglobin result in the irreversible binding of oxygen and causing hypoxia. Neonatal presentation often includes cyanosis and hypoxemia.
Case Report: A Day-24 old term baby girl, presented with severe dehydration secondary to acute gastroenteritis and hypoxemia. Initial blood gas showed metabolic acidosis with high MetHb : pH 7.22, PCO2 26.2, PO2 36.2, HCO3 12.9, BE -16.9, MetHb 17.9%, Lactate 0.8. She required nasal oxygen 2L/min and three times fluid boluses on arrival 10 ml/kg then followed by 10% fluid deficit correction. Antibiotics (Metronidazole, Cefotaxime) were started, and stool tests showed reducing sugars. After switching to lactose-free formula milk, blood gases normalised on day 4: pH 7.36, PCO2 38.7, PO2 37.1, HCO3 21.6, BE -3.2, MetHb 5.5% and Lactate 2.7.
Discussion: Methemoglobinemia can be inherited or acquired, with the acquired form being more common. However, distinguishing causes is not necessary for immediate treatment. The main morbidity in methemoglobinemia is related to the hypoxic state. The first-line treatment for MetHb is intravenous methylene blue (MB). Asymptomatic patients with MetHb levels under 20% can be monitored. Oxygen supplementation and hydration are essential for managing the hypoxic state. Timely treatment and investigation are key for proper management.

Keywords: Cyanosis; hypoxemia; methemoglobinemia; neonate

Abstract ID: A-0033

From Diagnosis to Decision-Making: Postnatal Management of Otocephaly - A Case Series

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ABSTRACT

Introduction: Otocephaly is an extremely rare and severe congenital craniofacial malformation, with an estimated incidence of less than 1 in 70,000 live births. It is primarily characterised by agnathia or severe mandibular hypoplasia, melotia, microstomia and either aglossia or microglossia. These anomalies reflect disruptions in the development of the first branchial arch. In this report, we present a case series of three neonates diagnosed with otocephaly.

Case description: Case 1 - A premature female infant was delivered via Caesarean section at 31 weeks. Antenatal imaging revealed polyhydramnios, with a suspicion of duodenal atresia. On physical examination, there was bilateral down-slanting palpebral fissures, hypertelorism, microglossia, agnathia and synotia. She succumbed within one hour of life.

Case 2 - A premature infant was delivered at 28 weeks and 3 days of gestation via spontaneous vaginal delivery. Antenatal ultrasound had revealed polyhydramnios. At birth, the neonate was presented with microstomia, agnathia and synotia. In light of the severity and prognosis, no active resuscitation was initiated and he succumbed.

Case 3 - A preterm male infant was delivered at 36 weeks and 4 days of gestation via spontaneous vaginal delivery. A detailed antenatal scan revealed a beaked nose, small chin, small oral aperture, and polyhydramnios. At birth, the neonate was non-vigorous with microstomia and bilateral low set ears. Immediate resuscitation was required and an emergency tracheostomy was performed, however he succumbed.

Discussion: Otocephaly represents a rare and typically lethal congenital anomaly. All three cases in our series shared antenatal features of polyhydramnios with postnatal findings consistent with otocephaly. Early prenatal detection through detailed anomaly scans and the presence of associated findings such as polyhydramnios can aid in anticipating this condition.

Keywords: Otocephaly; perinatal

Abstract ID: A-0034

Neonatal Acute Liver Failure: A Race Against Time - Cases of Viral Aetiologies with Fatal Outcome

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ABSTRACT

Introduction: Neonatal acute liver failure (NALF) is a rare but life-threatening condition, with viral infections being a common etiology. We present two cases of NALF secondary to viral infections that resulted in fatal outcomes in our neonatal intensive care unit, highlighting their clinical presentation and disease progression.

Case description: Case 1 - A term female infant with foetal intrauterine growth restriction and a birth weight of 2500 g developed jaundice, poor feeding and weight loss at 6 days old. While initial investigations did not suggest infection, her liver function was abnormal with liver transaminitis that rapidly worsened. Over the next two days, her condition deteriorated further with coagulopathy and upper gastrointestinal bleeding, requiring support with ventilation, inotropes, blood products and intravenous immunoglobulin. Given a high suspicion of disseminated neonatal Herpes Simplex Virus (HSV) infection, intravenous acyclovir treatment was initiated. Unfortunately, she succumbed and HSV infection was confirmed with the detection of HSV 2 genome DNA.
Case 2 - A term male infant, admitted at birth due to an antenatal diagnosis of a complete vascular ring, presented with dysmorphic features, including a smooth philtrum, long, slender fingers and toes. On day 12 of life, developed pneumonia, requiring increased ventilatory support. Nasopharyngeal aspirate tested positive for Human Metapneumovirus A+B. He then developed conjugated hyperbilirubinemia and rapidly worsening transaminitis, progressing to acute liver failure with coagulopathy, hypoalbuminemia, and hyperammonaemia. Despite treatment with intravenous immunoglobulin, acyclovir, and meropenem, he showed no response and was deemed too unstable for an exchange transfusion and finally succumbed.
Discussion: NALF often presents with subtle initial symptoms but progresses rapidly. Early recognition is essential to prevent severe complications and improve outcomes.

Keywords: Liver failure; neonate

Abstract ID: A-0036

A Wolf in Sheep's Clothing: A Benign Tumor with Hidden Challenges: Neonatal Cardiac Rhabdomyoma

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ABSTRACT

Introduction: Primary cardiac tumours in children are rare with cardiac rhabdomyomas being the most common and frequently associated with tuberous sclerosis complex (TSC). While typically benign with a tendency for spontaneous regression, these tumours can also cause significant morbidity depending on their size and location.

Case description: We encountered two neonatal cases presenting with respiratory distress at an early postnatal period who were diagnosed to have multiple large lobulated intracardiac mass consistent with cardiac rhabdomyoma through a screening echocardiography. The first infant was managed conservatively and demonstrated spontaneous tumour regression over time, with no extracardiac features nor family history suggestive of tuberous sclerosis. In contrast, the second infant developed severe left ventricular outflow tract obstruction and cardiac arrhythmia. Although the initiation of oral sirolimus was planned, unfortunately, the baby succumbed despite supportive treatment.

Discussion: These cases illustrate the variable clinical course of cardiac rhabdomyoma. While expectant management remains appropriate for asymptomatic patients due to the tumour's regressive nature, it is evident that symptomatic neonates may face life-threatening cardiac complications. This highlights the need for tailored management strategies in improving outcomes in affected patients. Till date, sirolimus has been reported to have a significant role in promoting the regression of cardiac rhabdomyomas, yet data on dose, duration and safety profile in newborns remains limited.

Keywords: Cardiac rhabdomyoma; neonate

Abstract ID: A-0037

Born into a Viral Storm: Exploring MIS-N in the Wake of Maternal Influenza

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ABSTRACT

This case report describes a neonate presenting with MIS-N (Multisystem Inflammatory Syndrome in Neonates) without COVID-19 infection but following a recent Influenza A infection in mother. The baby boy was born at 36 weeks, weighing 1.6 kg. His mother had contracted Influenza A infection (COVID screening negative) one week before delivery and was referred due to late-onset pregnancy-induced hypertension and foetal distress, leading to an emergency C-section. The placenta appeared healthy. He was born vigorous with a good Apgar score but required non-invasive ventilation for mild respiratory distress for four days. He was later weaned to room air by day 11 of life. He had several complications during first few days of life, including hypoglycaemia (treated with IVI glucagon), pathological jaundice with conjugated hyperbilirubinemia and transaminitis, persistent thrombocytopenia and metabolic acidosis with hyperlactatemia. On day 5 of life, he developed cracked lips and skin peeling, although there were no temperature instabilities. His COVID 19 polymerase chain reaction tested negative. A formal echocardiogram showed moderately dilated coronary arteries [LMCA 2.23 mm (Z-score:4.8), LAD 1.9 mm (Z-score:4.68), RCA 1.6 mm (Z-score:3.23)] and a small ASD secundum. Abdominal ultrasound revealed a left UTD P1. The baby was diagnosed with MIS-N and treated with IVIg (1 g/kg for two days), and he was started on oral aspirin once his platelet counts improved. A follow-up echocardiogram at day 15 of life post IVIg showed normal-sized coronary arteries. Other blood parameters also showed improvement. The maternal Influenza A infection likely triggered a cytokine storm, resulting in foetal immune activation and inappropriate immune response that caused inflammation in multiple organ systems, which is characteristic of MIS-N. Dermatological manifestation was a unique entity. Aim of this case report is to highlight the possibility of MIS-N in other maternal viral infections.

Keywords: Cytokine storm; maternal influenza; MIS-N

Abstract ID: A-0039

Post-Natal Remote Care Follow-Up via Video-Call: Trial Study in KPJ Perdana Specialist Hospital, Kota Bharu, Kelantan

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ABSTRACT

Background: In response to the increasing demand for high-quality postnatal care, KPJ Perdana Specialist Hospital has introduced a remote follow-up program aimed at supporting mothers and newborns during the critical early days following hospital discharge. This initiative, inspired by the efficient postnatal practices of Kementerian Kesihatan Malaysia (KKM), leverages virtual consultation technologies to enhance care accessibility, reduce unnecessary clinic visits, and strengthen the continuity of care.

Objectives: The objective was to monitor and manage common postnatal concerns such as neonatal jaundice, feeding difficulties, sepsis risk, and maternal recovery between days 1 to 5 post-discharge.

Methods: A cohort of 51 mother-infant pairs discharged between October 2024 and March 2025 were enrolled, excluding those with neonatal complications requiring tertiary care. Consultations were conducted via scheduled video calls led by Staff Registered Nurses (SRNs), with oversight by a Consultant Paediatrician. Clinical assessments included infant feeding, weight, jaundice signs, sleep, stool patterns, and maternal well-being.

Results: The study population had a mean maternal age of 32 years and mean gestational age of 38.2 weeks. Deliveries included 39 normal and 12 caesarean sections, with an almost equal male-to-female ratio. Three participants were lost to follow-up. Responses indicated strong engagement and the feasibility of early postnatal remote care.

Conclusion: The program demonstrated potential in enhancing neonatal and maternal outcomes, providing timely interventions, and fostering trust between healthcare providers and families.

Keywords: Fostering trust; post-natal; remote care; timely intervention; video-call

Abstract ID: A-0040

Portal Vein Thrombosis in the Donor Twin of a Twin Reversed Arterial Perfusion (TRAP) Sequence: A Case Report

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ABSTRACT

Background: Twin reversed arterial perfusion (TRAP) sequence is a rare complication of monozygous pregnancies. In this complication, a donor twin with normally developed organs provides blood supply to a recipient twin without definitive heart structure, the acardiac twin. The pathophysiology of this phenomenon is still not well understood, but it is proposed that arterial blood flow flows in a reverse manner from the donor twin towards the acardiac twin, instead of away from it. Likewise, neonatal portal vein thrombosis (PVT) is often observed in patients with a history of umbilical vein catheterisation (UVC) and rarely occurs spontaneously.

Case Report: We report a case of a portal vein thrombosis in an infant with TRAP sequence. The mother was a 30-year-old primigravida with no underlying medical illness. At 18 weeks of gestation, a diagnosis of TRAP sequence was made. The donor twin showed normal growth and structures while the acardiac twin showed no foetal heart pulsation and no brain development. Radiofrequency ablation of the blood supply to the acardiac twin was performed at 20 weeks of gestation. The donor twin was born via emergency lower segment caesarean section due to failed induction of labour and was born vigorous. There were no hydropic features and the patient was systemically well. An ultrasound abdomen performed after birth showed left intrahepatic vein thrombosis. Thrombophilia and coagulopathy screening were normal.

Discussion: Neonatal PVT is rarely seen in infants without a history of UVC insertion. In this case, however, we postulate that the PVT may have resulted from abnormal perfusion associated with the TRAP sequence. To our knowledge, there are no published reports linking PVT to TRAP sequence. This observation highlights the need for further investigation into atypical causes of neonatal PVT, particularly in the context of rare conditions like TRAP sequence.

Keywords: Portal vein thrombosis; twin pregnancy

Abstract ID: A-0041

Parental Knowledge and Perception of Premature Baby Care: A Cross-Sectional Study Among Parents of Premature Infants in Hospital Pulau Pinang.

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ABSTRACT

Background: Premature infants are vulnerable to various complications, including respiratory issues, feeding intolerance, infections, and long-term neurodevelopmental delay. Despite advancements in neonatal care, post-discharge outcomes remain highly dependent on parental preparedness. Inadequate knowledge and misconceptions may lead to increased hospital readmissions and caregiver stress. However, there is limited research regarding this, particularly in our local setting.
Objectives: This study aims to assess parental knowledge regarding the care of premature infants after hospital discharge. Specific objectives include identifying common misconceptions, evaluating parental confidence, and determining preferred sources of information and support services.
Methods: A cross-sectional survey was conducted among 100 parents of preterm infants (<37 weeks gestation) attending follow-up in the Neonatal clinic, Hospital Pulau Pinang. A structured questionnaire was used to evaluate the demographics and knowledge of parents. Data was analysed using SPSS version 26.
Expected Results: The study aims to identify significant knowledge gaps and areas of low confidence among parents regarding the care of premature infants. These findings will lead to development of targeted educational materials and follow-up support services.
Conclusions: It is crucial to understand parental knowledge and perceptions to improve neonatal discharge education and outcomes for premature infants. This study will provide local insights that can help shape more effective, family-centered care models and neonatal policies in Hospital Pulau Pinang.

Keywords: Premature baby care

Abstract ID: A-0042

Beneath the Golden Skin: A Hidden War of Antibodies and Iron

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ABSTRACT

Background: Gestational Alloimmune Liver Disease (GALD) is a rare but life-threatening neonatal liver disorder caused by maternal alloimmune injury. Early diagnosis and timely immunotherapy are key to improving outcomes.

Case Report: A female infant was born at 36 weeks 6 days via emergency LSCS for failed induction due to intrauterine growth restriction (birth weight 2.6 kg). Maternal history included two prior adverse outcomes: an early neonatal death with findings suspicious for neonatal hemochromatosis, and a term intrauterine death. The infant was admitted to NICU at 11 hours of life for symptomatic hypoglycaemia (glucose 0.7 mmol/L). Initial investigations revealed deranged liver enzymes (AST 270 U/L, ALT 33 U/L, ALP 282 U/L), hypoalbuminaemia (28 g/L), conjugated hyperbilirubinaemia (22%), coagulopathy (PT 43.3, INR 3.61, APTT 84.9), hyperferritinaemia (5959), elevated transferrin saturation (52%), and raised alpha-fetoprotein (>300,000 ng/ml). Abdominal ultrasound showed increased periportal echogenicity. With high suspicion for Gestational Alloimmune Liver Disease (GALD), she underwent exchange transfusion at 24 hours of life, followed by IVIG (1 g/kg), daily IV albumin, and vitamin K. Empirical antibiotics and acyclovir were administered for one week. Blood cultures remained negative. Liver biopsy on day 5 showed mucous extravasation with staining supportive of neonatal hemochromatosis. Liver function and coagulation profile improved and normalised by day 20 of life. A transient AST elevation on day 14 of life coincided with ophthalmia neonatorum, with ESBL Klebsiella pneumoniae isolated from eye swab. MRI T2* at day 28 of life showed no extrahepatic hemosiderin and normal liver iron load. Her initial growth was suboptimal but improved with caloric optimisation, achieving catch-up growth by one month. At one year, her liver function remained normal with no signs of cirrhosis.

Conclusion: This case highlights the importance of early recognition and prompt immunotherapy in suspected GALD to improve survival and long-term hepatic outcomes.

Keywords: Gestational alloimmune liver disease; hypoglycaemia

Abstract ID: A-0045

Case Series of Nutritional Rickets in Neonatal Intensive Care Unit, Hospital Sultanah Bahiyah

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ABSTRACT

Introduction: Vitamin D is an essential nutrient that is crucial in maintaining bone health and calcium homeostasis, prenatally and during children's growing phase. Pregnant women with vitamin D insufficiency or deficiency can affect foetal skeleton development and calcium accretion. Nutritional rickets in neonates can be asymptomatic, or range from mild to severe presentations i.e. seizure or fractures.

Case Series: We retrospectively reviewed the clinical characteristics of six neonates diagnosed with nutritional rickets between 2023 and 2025. Three presented with seizures, while the other three had skull fractures. All were term, well-grown male infants born to Malay mothers aged 23-34 years. The mothers were generally healthy, except for one with obesity and another with anaemia and chorioamnionitis. Five neonates were delivered via lower segment Caesarean section (LSCS), and one via vacuum-assisted vaginal delivery. Two neonates with skull fractures were identified at birth, and a third was diagnosed on day three of life. One of these infants developed an intracranial haemorrhage requiring surgical intervention. Three neonates presented between 2 and 3 weeks of age with recurrent seizures and were found to have severe hypocalcaemia, with corrected calcium levels ranging from 1.49-1.97 mmol/L. Their 25-hydroxyvitamin D [25(OH)D3] levels were deficient (11-31 nmol/L), while intact parathyroid hormone (iPTH) levels were normal or elevated (32-77.3 pg/mL). The absence of an iPTH rise in some cases may be attributed to prior intravenous calcium infusion for rescue, as iPTH was measured later during stabilisation. Aside from skull fractures, no other radiographic abnormalities were observed. Due to logistical constraints, only two mothers had their bone profile and vitamin D status evaluated, both of which were consistent with their respective infants' deficiencies. All neonates were treated with appropriate calcium and cholecalciferol supplementation, and their mothers were counselled accordingly.

Discussion: Global consensus of nutritional rickets recommends adequate vitamin D and calcium intake among childbearing age and pregnant women. Similarly, all infants (0-12 months old) should be supplemented with vitamin D, regardless of their feeding mode. Awareness about calcium and vitamin D deficiency in both mother and infant, is crucial for promoting healthy bone development and overall well-being.

Keywords: Calcium; hypocalcaemic seizures; neonate; skull fracture; vitamin D deficiency

Abstract ID: A-0046

From Stridor to Stability: A Case of Neonatal Vocal Cord Paralysis

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ABSTRACT

Background: Congenital vocal cord paralysis (VCP) is the second most common cause of congenital stridor, and can present in both bilateral and unilateral forms, with each accounting for approximately 50% of cases. Contributing factors includes iatrogenic injury and neurological disorders. However, the majority of cases are idiopathic in origin. This report discusses a case of an infant with a left ectopic thymus compressing the left recurrent laryngeal palsy resulting in stridor soon after birth.
Case Report: A term male newborn was delivered via Caesarean section following an uncomplicated pregnancy and delivery with APGAR scores 9 and 10. He developed loud inspiratory stridor with chest recessions on day 6 of life, requiring CPAP support. Physical examination revealed no dysmorphism or neurological deficits, and echocardiography ruled out external compression from vascular structures. Otorhinolaryngology (ORL) consult was arranged and a bedside flexible nasopharyngo-laryngoscopy revealed left vocal cord immobility in the paramedian position, consistent with unilateral vocal cord palsy. MRI later identified an ectopic left cervical thymus at left tracheoesophageal groove. The management was of a conservative, multidisciplinary approach involving neonatology, otorhinolaryngology, occupational and speech-language pathology teams, with CPAP support, nasogastric tube feeding, anti-reflux medications, and close respiratory monitoring. The infant showed improved voice strength and resolution of stridor by day 48 of life, and a repeat direct laryngoscopy showed improvement in vocal cord mobility. He was then discharged at day 50 of life, with scheduled follow-up appointments to monitor his symptoms and vocal cord recovery.
Discussion: This case highlights the critical importance of early detection of vocal cord palsy in neonates presenting with stridor. In mild unilateral cases, conservative treatment can lead to a good prognosis without surgical intervention. Careful monitoring and follow-up are vital to achieve optimal outcomes in airway management, feeding, and overall growth and development.

Keywords: Airway management; congenital stridor; neonatal respiratory distress; vocal cord paralysis

Abstract ID: A-0049

Targeting mTOR Inhibition in a Neonate with Cardiac Rhabdomyoma: Sirolimus as a Game Changer

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ABSTRACT

Background: Tuberous sclerosis complex (TSC) is a rare autosomal dominant neurocutaneous multi-system disorder caused by pathogenic variants in the TSC1 and TSC2 genes. These genes produce tuberin and hamartin which forms a complex that negatively regulates the mechanistic target of rapamycin (mTOR) cascade. Thus, defect in TSC1 or TSC2 gene leads to aberrant activation of mTOR and resulting in heightened cell proliferation. Clinical manifestations of TSC include the precipitation of hamartomas in multiple organs. Cardiac rhabdomyoma is one of the many manifestations of TSC which may potentially lead to significant hemodynamic compromise, arrhythmias or obstruction, necessitating early intervention. Sirolimus, an mTOR inhibitor, has emerged as a promising non-surgical therapeutic option.

Case Report: We present a case of a preterm baby boy was born at 34 weeks gestation with birth weight of 2060 g to a parent with TSC. He was antenatally diagnosed with multiple cardiac masses. He had an elder sibling who passed away during neonatal period due to large cardiac rhabdomyomas which were inoperable. He was born vigorous and was admitted to NICU for brief ventilation due to transient tachypnoea of newborn. Postnatal ECHO showed large cardiac masses (rhabdomyomas) of varying size causing left ventricular outflow obstruction, for which he was started on oral Sirolimus 0.5 mg/m^2/day on Day 2 of life. Serial ECHO showed marked regression of cardiac tumours.

Conclusion: Sirolimus therapy appears to be an effective and well tolerated alternative to surgical intervention in neonates with symptomatic cardiac rhabdomyomas, especially in the context of TSC. Early diagnosis and prompt initiation of mTOR inhibition may lead to rapid tumour regression and improved clinical outcomes.

Keywords: Cardiac rhabdomyoma; tuberous sclerosis complex

Abstract ID: A-0050

Unmasking The Hidden Threat: Postnatal Cytomegalovirus Infection in an Extremely Low Birth Preterm Infant

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ABSTRACT

Background: Postnatal cytomegalovirus (pCMV) refers to postnatal acquisition of CMV and transmission commonly occurs through breast milk. pCMV remains an under-recognised cause of morbidity in preterm infants as its clinical presentation often nonspecific, mimicking common neonatal conditions such as sepsis or cholestasis. Without high index of suspicion, diagnosis may be delayed and this could potentially impact the outcomes.

Case Report: We report a case of an extremely low birth weight infant born via spontaneous vertex delivery at 27 weeks with birth weight of 770 grams. Growth parameters were appropriate for gestational age. Mother is 35 years old, para 2, antenatal history she has chronic hypertension and overt diabetes mellitus. The infant was initially admitted for respiratory distress syndrome, later complicated by bronchopulmonary dysplasia (BPD), a hemodynamically significant patent ductus arteriosus (PDA) with cardiac failure, and stage 3 retinopathy of prematurity (ROP). She experienced multiple episodes of ventilator-associated pneumonia, although blood cultures remained persistently negative. On day 51 of life, she developed a rising C-reactive protein (CRP) level and persistent severe thrombocytopenia, prompting empirical antibiotic and antifungal therapy. Despite treatment, blood cultures continued to be negative. She subsequently developed transaminitis, conjugated hyperbilirubinaemia, hepatomegaly, and pale stools. An abdominal ultrasound revealed features suspicious of biliary atresia, while cranial ultrasound showed no intracranial calcifications. TORCH screening performed on day 59 revealed positive cytomegalovirus (CMV) immunoglobulin M. Blood CMV polymerase chain reaction (PCR) confirmed a high viral load of 34,700 IU/mL. Intravenous ganciclovir was initiated, with good clinical response. One month after treatment, her urine CMV PCR showed a significant reduction in viral load to 4,463 IU/mL. Her haematological parameters normalised, liver function improved, and cholestasis resolved.

Conclusion: This case underscores the importance of maintaining a high index of suspicion for pCMV, given its highly heterogenous and non-specific clinical presentation, which can easily lead to delayed diagnosis and treatment.

Keywords: Postnatal cytomegalovirus infection

Abstract ID: A-0051

Neonatal Supraventricular Tachycardia: Case Series and Management Outcomes

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ABSTRACT

Introduction: Supraventricular tachycardia (SVT) is one of the most common cardiac conditions requiring emergency cardiac interventions in neonates. Incidence occurred approximately 1 in 250 neonates and 1 in 10 infants with congenital heart disease.

Case description: We describe three neonates diagnosed with supraventricular tachycardia (SVT) managed in our department. Two of the infants were born at term via Caesarean section due to foetal tachycardia, with antenatal heart rates recorded at approximately 200 beats per minute (bpm). Both were of normal birth weight, and their mothers had gestational diabetes mellitus (GDM). At birth, the heart rates exceeded 220 bpm, requiring intravenous adenosine followed by amiodarone for rhythm control. Echocardiography revealed patent foramen ovale in both cases, with no structural heart defects. Blood investigations were unremarkable. Both infants were discharged in stable condition on oral propranolol and amiodarone. The third baby was born at 36 weeks with normal birth weight via caesarean section for foetal bradycardia whose mother had GDM. Echocardiography showed double outlet right ventricle and transposition of great arteries, consistent with the antenatal detailed ultrasonography. She underwent pulmonary artery banding, atrial septostomy and PDA ligation, at day 35 of life, which was complicated with sternal wound infection. She developed haemodynamically unstable SVT which required defibrillation, CPR and amiodarone. She passed away at 2 months old due to nosocomial sepsis.

Discussion: SVT in neonates can present acutely and require prompt recognition and intervention to prevent morbidity and mortality. In our cases, two term infants without significant structural heart disease responded well with pharmacological therapy and had favourable outcomes. However, the third case highlights the complexity in managing SVT in complex congenital heart disease and associated with poor outcomes especially in cases with postoperative complications and sepsis. Persistent foetal tachycardia in antepartum period may be an early sign of neonatal SVT, especially in the setting of maternal GDM, hence early recognition and intervention are crucial for better prognosis.

Keywords: Supraventricular tachycardia

Abstract ID: A-0052

A Line Crossed: Hepatic and Peritoneal Complications from Umbilical Venous Catheter Malposition in a Micro Preemie

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ABSTRACT

Background: Umbilical venous catheter (UVC) placement is a common procedure in the neonatal intensive care unit (NICU) for central venous access in preterm infants. While UVC use is generally safe, catheter malposition can result in serious and potentially life-threatening complications. We report a case of total parenteral nutrition (TPN) ascites and hepatic injury secondary to a low-lying UVC in an extremely preterm infant.

Case report: A male infant weighing 720 grams was born at 25 weeks' gestation via spontaneous vaginal delivery to a 31-year-old primigravida with gestational diabetes and prior cervical cerclage. He required early intubation, surfactant, and high-frequency ventilation for respiratory distress syndrome; and was treated with broad-spectrum antibiotics for early-onset Klebsiella pneumoniae (ESBL) sepsis. Umbilical arterial and venous catheters were inserted on Day 1 of life. Imaging showed the 3.5Fr UVC tip to be low-lying. Although recognised as suboptimal, the catheter was used temporarily for TPN administration as alternative central access was not immediately feasible. On Day 4, he developed abdominal distension, whitish scrotal swelling, haemodynamic instability and severe mixed acidosis. Ultrasound revealed generalised ascites and a hepatic fluid collection in segment VIII, suggestive of extravasation. Paracentesis yielded milky fluid consistent with TPN. A peritoneal drain was inserted and remained for two days, with gradual improvement under conservative management. At two months of age, the infant developed sigmoid colon perforation requiring laparotomy and colostomy. Intraoperatively, dense interloop and anterior abdominal wall adhesions were noted, likely sequelae of prior TPN ascites. He later underwent successful stoma reversal and was discharged at five months on room air and full feeds.

Conclusion: This case underscores the importance of accurate UVC tip confirmation and the need to reassess continued use if malpositioned. In extremely preterm infants, catheter malposition can result in serious complications, including hepatic injury and TPN ascites, with potential long-term morbidity.

Keywords: Complications; neonatal; preterm; Total Parenteral Nutrition (TPN); umbilical venous catheter (UVC)

Abstract ID: A-0054

Red Blood Cell Transfusion and Short-Term Outcome Among Very Low Birthweight Infant - A Retrospective Cross-Sectional Study

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ABSTRACT

Background: Preterm infants often develop anaemia due to immature haematopoiesis and iatrogenic phlebotomy. As a result, red blood cell (RBC) transfusion is common in this population. However, RBC transfusion carries potential risks. Studies have linked it to short-term complications such as mortality, bronchopulmonary dysplasia (BPD), retinopathy of prematurity (ROP), necrotising enterocolitis (NEC), and sepsis.

Objectives: To analyse the relationship between RBC transfusion and outcomes including mortality, bronchopulmonary dysplasia (BPD), necrotising enterocolitis (Bell's Stage II and above), culture-positive sepsis, and severe retinopathy of prematurity (ROP Grade 3) among very low birth weight (VLBW) infants <1500g.

Methodology: This is a retrospective cross-sectional study involving all VLBW infants <1500g born between 1 January 2022 and 31 December 2023 at Hospital Tunku Azizah Kuala Lumpur. Hospital Information System (HIS) records of the study population were reviewed. Data were entered into SPSS version 27. Quantitative variables were compared using the Student's t-test (parametric) or Mann–Whitney U test (non-parametric). Categorical variables were compared using the Chi-square or Fisher's exact test.

Results: A total of 363 infants were included in the study. Of these, 153 (42%) received at least one RBC transfusion during their neonatal admission. RBC transfusion was significantly associated with an increased risk of mortality (Risk Ratio [RR] 1.86, $p = 0.004$) and BPD (RR 2.99, $p < 0.001$). It was also associated with a higher risk of NEC (Bell's Stage II and above), culture-positive sepsis, and severe ROP (Grade 3).

Conclusion: Our study shows that RBC transfusion is significantly associated with adverse clinical outcomes in VLBW preterm infants. However, this association may not indicate causality. Rather, the need for transfusion may reflect unmeasured factors such as underlying disease severity that contribute to poor outcomes in this population.

Keywords: Bronchopulmonary dysplasia; mortality; NEC; neonatology; outcome; RBC transfusion; ROP; sepsis

Abstract ID: A-0055

Metabolic Mayday: A Neonatal Collapse Secondary to Carnitine Palmitoyl Transferase II Deficiency

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ABSTRACT

Background: Inborn errors of metabolism (IEMs) may present as a rare but important cause of critical neonatal collapse. Fatty acid oxidation disorders, such as Carnitine Palmitoyl Transferase II (CPT2) deficiency, can result in hypoketotic hypoglycaemia, cardiomyopathy and less commonly seizures. Early identification and treatment are vital to prevent mortality and long-term morbidity.
Case report: A term male newborn was delivered via spontaneous vaginal delivery without perinatal complications with birth weight of 2.5 kg. Antenatal issue was maternal diabetes on insulin therapy and parents who are first cousins. After delivery, he developed respiratory distress and was treated for congenital pneumonia. Feeding was initiated shortly after admission and tolerated well. At day 6 of life, he was found in collapsed state with glucose of 1.6 mmol/L. Following cardiopulmonary resuscitation, he achieved return of spontaneous circulation. However, he developed recurrent seizures and persistent metabolic acidosis with elevated serum lactate and ammonium levels. Metabolic team consult was obtained and an urgent IEM screening was sent which revealed CPT2 Deficiency. His condition was stabilised via correction of acidosis, respiratory support and high concentration glucose infusion. He was concurrently started on special infant formula (Novo Hi-MCT) as well as oral carnitine. The infant progressed well with appropriate weight gain and was subsequently transferred to Metabolic Unit Hospital Tunku Azizah for continuation of care.
Conclusion: CPT2 deficiency, although rare, should be considered in cases of sudden neonatal collapse. CPT2 deficiency impairs the mitochondrial β-oxidation of long-chain fatty acids, critical during periods of fasting or metabolic stress. In neonates, this can rapidly lead to energy failure, hypoglycaemia, cardiac arrhythmias, and sudden death if untreated. Management focuses on maintaining normal glucose level and long-term dietary modifications. Prompt recognition and high clinical suspicion of IEM is critical in preventing metabolic crises and improving outcome.

Keywords: CPT2 deficiency; fatty acid oxidation; inborn error of metabolism; neonatal collapse

Abstract ID: A-0056

Congenital Hypothyroidism with Necrotising Enterocolitis in a Newborn Treated with Intravenous L-Thyroxine: A Case Report

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ABSTRACT

Introduction: Congenital hypothyroidism (CH) is a common neonatal endocrine disorder, and if untreated, can lead to irreversible neurodevelopmental deficits. Necrotising enterocolitis (NEC) is a severe gastrointestinal emergency predominantly seen in preterm infants. Its occurrence in term neonates is rare and often linked to perinatal risk factors. The coexistence of CH and NEC is uncommon and presents unique therapeutic challenges

Case report: We report a case of a term male neonate born to a mother with overt diabetes mellitus. Birth was complicated by shoulder dystocia due to macrosomia (3.8 kg). Although initially stable, he developed respiratory distress requiring ventilation for two days. On day 7 of life, the infant developed vomiting and abdominal distension. Imaging was suggestive of NEC, and intravenous antibiotics were initiated. Despite medical therapy, the infant's condition worsened, with increasing abdominal discoloration and sepsis. He underwent laparotomy on day 17 of life, revealing perforated NEC. Concurrently, newborn screening revealed markedly elevated cord TSH (285.85 IU/L) with low T4 (8.09 pmol/L), and repeated thyroid function test on day 7 of life confirmed CH (TSH 341.69 IU/L, T4 <5.41 pmol/L). Due to impaired gut function, oral levothyroxine was not viable. Intravenous thyroxine was initiated on day 10 of life. The infant achieved a euthyroid state by day 23 of life and transitioned to oral therapy by day 28 of life after full enteral feeding was reestablished.

Conclusion: Thyroid hormone deficiency may contribute to impaired gut motility and mesenteric perfusion, predisposing to NEC. In cases where enteral absorption is compromised, intravenous thyroxine is a critical therapeutic option. Early recognition and appropriate hormone replacement are essential to optimise outcomes.

Keywords: Congenital hypothyroidism; intravenous thyroxine; necrotising enterocolitis; NEC

Abstract ID: A-0057

Not All That Desaturates is Hypoxic: A Rare Presentation of Hb Little Venice in a Newborn

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ABSTRACT

Background: Cyanosis in term neonates often raises concerns for critical cardiopulmonary pathology. However, non-cardiopulmonary causes must also be considered, especially when there is discordance of arterial oxygen levels and saturation.

Case presentation: We describe a term baby who was born well to a multiparous mother with an uneventful antepartum course. Baby was ventilated at birth due to cyanosis. There was a huge discordance of PaO2 and SpO2. Echocardiography excluded structural cardiac defects. Blood investigation ruled out methemoglobinemia. He was extubated on day 2 of life but required multiple packed cell transfusion thereafter due to ongoing haemolysis. DNA Analysis taken at 3 months of age identified the presence of an abnormal haemoglobin variant, Hb Little Venice. DNA Analysis of both parents are normal.

Conclusion: Haemoglobin variants like Hb Little Venice, Hb M variants are important differentials in neonates with discordance of arterial oxygen level and saturation, apart from dyshaemoglobinemia such as methemoglobinemia. Recognising the pattern of 'saturation-gap' helps avoid misdiagnosis of hypoxic conditions and guides appropriate management.

Keywords: Cyanosis, Hb Little Venice

Abstract ID: A-0058

Forceps and Fragility: Managing Neonatal Head Injuries in Challenging Deliveries

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ABSTRACT

Introduction: Birth injuries refer to neonatal physical injuries occurring during labour and delivery. Though rare, intracranial injuries are among the most severe complications, especially in instrumental deliveries. Acute subdural haemorrhages and cranial fractures are recognized as critical neonatal concerns, and the use of instrumental deliveries has been consistently associated with an increased risk of intracranial trauma. Current evidence advocate evidence-based and patient-centred approaches to minimise trauma. This report reviews three cases of neonatal head injuries following forceps-assisted deliveries, focusing on management and outcomes.

Case Report: Case 1 - NA, delivered at 38 weeks with foetal bradycardia, antenatally complicated by gestational diabetes and hypertension. At birth, resuscitation and intubation were required. Clinical findings included corneal cloudiness, periorbital bruising, facial lacerations, and intraretinal haemorrhages. Imaging revealed acute subdural haemorrhages, depressed occipital fractures, displaced skull fragments, and cephalohematoma. NA was managed by multidisciplinary approach alongside neuroimaging and parental counselling. Subsequently, discharged with ophthalmology, paediatrics, and neurosurgical follow-ups.

Case 2 - NB, delivered at 38+1 weeks for foetal bradycardia, developed respiratory distress requiring CPAP support. Examination noted multiple forceps marks, a frontal indentation, and cranial asymmetry. Imaging revealed acute subdural haemorrhages, sulcal effacement, lambdoid suture diastasis, and cranial fractures. Care focused on respiratory support, neuroprotection, craniofacial assessment, and parental counselling. NB was discharged well with neurosurgical and paediatric follow-ups.

Case 3 - NC, a preterm infant delivered at 33 weeks via emergency Caesarean section with forceps extraction for foetal distress. Findings included facial, scalp, chest, and limb bruises. CT brain showed acute subdural haemorrhages with subarachnoid and cerebellar tentorium extension, bilateral fronto-parieto-temporal subdural effusions, and left parietal fracture. Management included neuroimaging, respiratory and neuroprotection strategies, craniofacial monitoring, and parental counselling. NC remained under multidisciplinary follow-up.

Conclusion: Timely multidisciplinary management is crucial in neonatal head injuries following difficult deliveries. Prompt intervention significantly reduces long-term morbidity and improves neonatal survival outcomes.

Keywords: Birth trauma; instrumental deliveries; intracranial haemorrhage; neonatal head injuries; skull fracture

Abstract ID: A-0059

A Rare Case of Bladder Exstrophy and Epispadias Complex and Mayer-Rokitansky-Kьster-Hauser Syndrome

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ABSTRACT

Introduction: Bladder exstrophy and epispadias complex (BEEC) is a rare congenital malformation of the genitourinary system, often associated with other anomalies.

Case description: We report a rare case of a term newborn with multiple congenital anomalies, including bladder exstrophy, ambiguous genitalia, and myelomeningocele, which were undiagnosed antenatally. The baby was delivered at term via spontaneous vertex delivery and presented with a lower abdominal wall defect and bladder exstrophy. Ambiguous genitalia were noted, and karyotyping revealed a normal female genotype. Pelvic MRI showed an underdeveloped female reproductive system, and a failed hearing assessment was consistent with type II Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome. The baby also had a myelomeningocele at the L5/S1 level, with a low-lying tethered cord and syringomyelia. Plans were made for neurosurgical intervention and later reconstructive surgery of the bladder and genitalia.

Discussion: BEEC is a rare condition affecting the genitourinary, gastrointestinal, and musculoskeletal systems. Cloacal exstrophy (OEIS syndrome) is the most severe form of BEEC, characterised by omphalocele, cloacal exstrophy, imperforate anus, and spinal defects. These are among the most severe urologic birth defects due to their significant impact on urinary continence, sexual function, increased risk of recurrent urinary tract infections, and potential renal impairment. BEEC and MRKH syndrome are distinct congenital anomalies that can co-occur due to shared embryological origins. Both conditions may also be associated with other anomalies, including spinal dysraphism. Although challenging, antenatal diagnosis is possible with detailed foetal scanning. Management is complex and requires a multidisciplinary approach to address the anatomical, functional, cosmetic, reproductive, sexual, and psychological aspects of care.

Keywords: Ambiguous genitalia; bladder exstrophy and epispadias complex; Mayer-Rokitansky-Küster-Hauser syndrome; myelomeningocele

Abstract ID: A-0061

A Startling Discovery: A Case of Hereditary Hyperekplexia Associated with ATAD1 Mutation

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ABSTRACT

Background: Hereditary hyperekplexia type 4 (HKPX4) is a rare genetic disorder characterised by neonatal-onset generalised hypertonia with little to no spontaneous movement and exaggerated startle reflex from birth. HKPX4 is most commonly associated with mutations in the GPHN gene (encoding gephyrin) or the ATAD1 gene (ATPase family AAA domain- containing protein 1).
Case presentation: We report a case of a term baby girl born via EMLSCS for foetal distress, who presented immediately after birth with diffused hypertonia, pronounced stiffness and exaggerated startle reflex. She was born to a pair of a healthy non-consanguineous "Orang Asli" young couple and is their first child. Neurological examination revealed normal alertness but marked fisting, generalised hypertonia and spasms which were exacerbated upon handling. Septic workup, neuroimaging and EEG were unremarkable. Whole exome sequencing sent at 3 months old identified ATAD1 gene mutation which is consistent with diagnosis of HKPX4. Baby was discharged home with Benzhexol and Baclofen.
Conclusion: Hyperekplexia is one of the rare differential diagnoses of a stiff newborn. Genetic testing plays a critical role in confirming rare gene mutations such as ATAD1 for diagnosis. Due to its rarity, long term outcome of ATAD1-related hyperekplexia is limited.

Keywords: ATAD1; hereditary hperekplexia

Abstract ID: A-0063

Discordant Toxoplasmosis Infection in a Dichorionic Diamniotic Twins Pregnancy: A Case Study

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ABSTRACT

Background; Congenital toxoplasmosis (CT) is a parasitic infection transmitted vertically during pregnancy, with clinical presentations ranging from asymptomatic to severe neurological impairment. Discordant CT in dizygotic twins is rare. We presented a case of discordant CT in dichorionic diamniotic (DCDA) twins.

Case report: A set of 35-week gestation DCDA twins were delivered via emergency caesarean section due to premature labour contraction. Antenatally, no structural anomalies were detected in either foetus. Both neonates were admitted to the neonatal intensive care unit for standard prematurity management. The first twin, a male infant, was noted to be asymmetrically small for gestational age. A cranial ultrasound revealed marked dilatation of the bilateral lateral and third ventricles, raising suspicion for obstructive hydrocephalus. Subsequent computed tomography of the brain confirmed non-communicating hydrocephalus with intracranial calcifications, findings suggestive of a congenital infection. TORCH screening revealed positive IgM for *Toxoplasma gondii.* The diagnosis of congenital toxoplasmosis was confirmed via polymerase chain reaction testing of the cerebrospinal fluid. A retrospective maternal history uncovered exposure to domestic cats and consumption of undercooked meat during pregnancy. Maternal Toxoplasma IgG was also positive, supporting a likely infection during the pregnancy. The affected infant was initiated on clindamycin, pyrimethamine, and folinic acid. However, he developed seizures during the course of treatment and showed a poor clinical response. Clindamycin was subsequently replaced with sulfadiazine, which led to improved disease control. He was discharged without active seizures and is currently under neurological follow-up. The second twin remained asymptomatic throughout hospitalisation. Serologic testing for toxoplasmosis was negative, and there were no clinical or radiological signs of infection. The infant was discharged in good condition and remains under routine developmental surveillance, with no complications reported to date.

Conclusion: Early recognition of congenital toxoplasmosis is essential for timely intervention and improved clinical outcomes.

Keywords: Congenital toxoplasmosis

Abstract ID: A-0064

Outcome of MDR *Acinetobacter baumannii* Outbreak Following an Improved Bundle Care Approach in the Neonatal Intensive Care Unit, Hospital Raja Perempuan Zainab II

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ABSTRACT

Background: An outbreak of multidrug-resistant *Acinetobacter baumannii* (MDR Ab) in the Neonatal Intensive Care Unit (NICU) poses a serious threat, with high potential for mortality and morbidity. A standard ventilator-associated pneumonia (VAP) bundle had been in use in our NICU, comprising hand hygiene, head elevation, daily equipment changes, oral care, buccal colostrum, infusion feeding, ventilator circuit care, and biweekly endotracheal tube changes. Despite adherence, MDR Ab outbreaks persisted. In October 2024, the care protocol was revised to include Kangaroo Mother Care and stricter compliance with bundle care practices every 4 hours instead of once per shift.
Objectives: To assess the impact of the revised bundle care checklist on MDR Ab infections among NICU babies at Hospital Raja Perempuan Zainab II.
Methods: This retrospective cohort study reviewed infants admitted to the NICU with MDR Ab identified from blood or tracheal samples between October 2023 and April 2025. Data were analysed before and after the revised bundle care implementation, using records from Infectious Disease Unit and patient folders.
Results: Prior to the revised bundle care (Oct 2023-Sept 2024), 30 infants tested positive for MDR Ab, with 10 deaths and 7 confirmed via blood culture. After the new bundle care strategy was introduced (Oct 2024-Apr 2025), cases dropped significantly to 11 infants, with 2 deaths and only 1 blood culture-confirmed case. No new cases were reported after January 2025.
Conclusion: The implementation of the revised bundle care significantly reduced MDR Ab infections and associated mortality and morbidity in the NICU.

Keywords: Bundle care; kangaroo mother care; MDR *Acinetobacter baumannii*

Abstract ID: A-0065

Targeted Antibiotic Use in Nosocomial Sepsis Cases in the Neonatal Unit of Hospital Seberang Jaya: Pathogen Distribution and Resistance Patterns

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ABSTRACT

Background: Nosocomial sepsis defined as infection that occurs in a neonate after 48 hours of admission and is a major cause of morbidity and mortality in neonatal unit. A local study reported incidence of nosocomial sepsis was 3.79 per 1000 admissions and 1.9 per 1000 patients. The most common pathogens were *Klebsiella pneumoniae* (29.4%), followed by coagulase-negative *Staphylococcus* (13.9%) and *Acinetobacter baumannii* (10.1%). Understanding the patterns of targeted antibiotic use and antibiotic resistance trends can help optimise patient care. This is the first study aims to identify the common pathogens responsible for nosocomial sepsis and the antibiotics used for treatment in the neonatal unit of Hospital Seberang Jaya.

Objectives: (i) To identify the pattern of targeted antibiotic use in culture-positive nosocomial sepsis; (ii) To describe the causative pathogens and their sensitivity patterns; (iii) To evaluate the clinical presentation of affected neonates.

Methods: This is a retrospective observational study will be conducted in the neonatal unit (NICU and SCN) Hospital Seberang Jaya with admission from January to December 2024. Neonates with nosocomial sepsis (>48 hours after admission) and positive blood cultures who received targeted antibiotics were included. Cases with culture-negative sepsis and incomplete records were excluded. Data will be extracted from e-antibiotic forms and patient notes, covering demographics, clinical signs, laboratory findings, antibiotic history, and patient outcomes. Data will be analysed using SPSS software with descriptive and inferential statistics. Descriptive statistics will outline common pathogens, antibiotic choices, and resistance patterns. Comparative and inferential statistics (Chi-square, t-test/Mann-Whitney) will assess antibiotic trends and outcomes.

Conclusion: The study is expected to identify common pathogens and their resistance patterns, guiding appropriate targeted therapy. It will also assess antibiotic adjustments post-culture and clinical outcomes. Results will use to validate the empirical antibiotic policies and improve antimicrobial stewardship.

Keywords: Antibiotic resistance; neonatal sepsis; nosocomial infections; pathogen distribution; targeted antibiotic therapy

Abstract ID: A-0066

A Curious Curve: Diaphragmatic Eventration in a Neonate with Congenital CMV - Coincidence or Clue?

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ABSTRACT

Background: Congenital cytomegalovirus (CMV) infection affects approximately 1 in 200 infants. They may commonly present with microcephaly, sensorineural hearing loss, hepatosplenomegaly, thrombocytopenia, and intracranial calcifications. Respiratory manifestations resulting from CMV pneumonitis and diaphragmatic eventration are exceedingly rare in this group.
Case report: We present a case of a term female newborn with petechial rashes, hepatosplenomegaly, and microcephaly, noted at birth. She had persistent thrombocytopenia with conjugated hyperbilirubinemia and developed early-onset respiratory distress requiring non-invasive ventilatory support. CMV antibodies were detected at birth, and a confirmatory CMV PCR revealed active infection. Magnetic resonance imaging (MRI) brain was consistent with features of congenital CMV. Antiviral therapy with oral valganciclovir was initiated, however despite clinical improvement, she remained oxygen dependent. Further workup showed radiographic evidence of diaphragmatic eventration, a rare finding that has been reported in a few case reports of congenital CMV. The diaphragmatic dysfunction supports a mechanical component rather than infectious cause for the respiratory distress. This is an important point to note as it may influence ventilatory strategies and prognosis. She tolerated the antiviral therapy without major adverse effects.
Conclusion: This case highlights the need to consider diaphragmatic dysfunction in neonates with congenital CMV who require prolonged respiratory support. The possible association between CMV and diaphragmatic dysfunction warrants further study, as recognising such anomalies may influence clinical management and prognosis of these patients

Keywords: CMV; congenital infections; diaphragmatic eventration

Abstract ID: A-0067

Practice of Daycare Phototherapy Service in District Hospital

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ABSTRACT

Background: Neonatal jaundice is a common cause of hospital admission in newborns. Prolonged inpatient stays for phototherapy can place strain on healthcare resources and families. Introducing a daycare-based approach can provide effective treatment while reducing hospital burden.
Case report: Daycare jaundice service can improve the management of neonatal jaundice by reducing hospital stay duration without compromising quality of care. The daycare model involves admitting eligible neonates for phototherapy for a 6-hour session during the day, after which they are discharged home with planned follow-up. This approach contrasts with the traditional 24-hour or longer inpatient admissions. Initial implementation of this service in the district hospital demonstrated a significant reduction in hospital stay duration while maintaining effective jaundice management The model also supports the principles of Baby-Friendly Hospital Initiative (BFHI) by promoting early bonding and breastfeeding.
Conclusion: Daycare phototherapy is an efficient and family-centered approach to managing neonatal jaundice. It reduces unnecessary hospital stays, optimises use of healthcare resources, and aligns with baby-friendly hospital standards.

Keywords: Neonatal jaundice

Abstract ID: A-0068

Recurrent Severe Hemolytic Anemia of Fetus and Newborn Secondary to Alloimmune Anti-E Antibodies: A Case Study

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ABSTRACT

Background: Haemolytic anaemia of foetus and newborn (HDFN) is a main cause for neonatal anemia and early hyperbilirubinemia. The most likely causes of HDFN are ABO or Rhesus incompatibility. Rarely, other minor blood groups cause HDFN.

Case Report: A term baby girl was delivered via caesarean section to a blood group O, Rh-positive mother with a history of three miscarriages and one stillbirth. She was admitted for transient tachypnoea of the newborn and found to have anaemia (Haemoglobin level (Hb) 11.3 g/dL) and early hyperbilirubinaemia, requiring intensive phototherapy. Otherwise, she did not show any clinical features of sepsis. Physical examination revealed mild pallor with jaundice but there was no dysmorphism, no hepatosplenomegaly, or evidence of bleeding. Investigations showed haemolytic anemia with a positive direct Coombs test (4+). The infant's blood group was O Rh-positive, phenotype CDe/cDE (R1R2). Maternal testing revealed anti-E antibodies (titer 1:256), confirming HDFN due to anti-E alloimmunisation. She was started on intensive phototherapy and intravenous Immunoglobulin (IVIG)(0.5g/kg). The iinfants's Hb level increased and she was discharged on day 7 of life with Hb 13.6 g/L. However, the infant demonstrated only a transient improvement in hemoglobin levels, as she was readmitted on day 14 of life for severe anemia (Hb 6.7 g/dL). The direct Coombs test (DCT) remained strongly positive (3+). She was managed with a partial exchange transfusion and administered a second dose of intravenous immunoglobulin (IVIG). Following treatment, her hemoglobin improved to 15.5 g/dL. She was discharged in stable condition and remains well on follow-up, with no recurrence of anemia or hyperbilirubinemia.

Conclusion: This case illustrates a recurrent HDFN involving minor blood incompatibility, which is rare compared to known literature. High index of suspicious is necessary for recurrent miscarriage during antenatal care for accurate diagnosis and timely treatment to prevent undesired complications.

Keywords: Anti-E alloimmunisation; haemolytic anaemia of foetus and newborn; neonate

Abstract ID: A-0069

From Resuscitation to Palliative Care: A Case of Neonatal Vein of Galen Malformation

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ABSTRACT

Background: Vein of Galen Malformation (VGM) is a rare and serious congenital vascular anomaly involving abnormal connections between cerebral arteries and the venous system. Early detection and management are crucial to prevent neurological damage or death. This case highlights a neonate with severe VGM presenting with hemodynamic compromise and multiorgan failure.

Case presentation: A 22-day-old female neonate, born at 37 weeks via elective Caesarean section due to antenatally detected anomalies (ventriculomegaly, congenital heart anomalies, and polyhydramnios), required resuscitation and intubation at birth due to low oxygen saturation (SpO2 40–45%). She appeared syndromic with macrocephaly, low-set ears, hypertelorism, and a loud systolic murmur. She was admitted to the NICU with persistent pulmonary hypertension and severe respiratory failure, requiring high ventilatory and inotropic support (dopamine, adrenaline). Abnormal venous flow in cranial ultrasound and echocardiography confirmed a diagnosis of vein of Galen malformation (VGM). Interdisciplinary consultations with paediatric cardiology, neurosurgery, and interventional radiology led to a decision to optimise the patient's hemodynamic status through pulmonary hypertension management and supportive care. Sildenafil and furosemide were initiated to manage pulmonary hypertension and fluid balance. However, despite stabilisation efforts, the infant required reintubation due to tachypnoea post-extubation and subsequently developed a nosocomial infection, further complicating her clinical course. On Day 22 of life, after a family conference and discussion with the medical team, the parents opted for palliative care, recognising the poor prognosis due to multiorgan failure.

Discussion: VGM is a rare, life-threatening vascular anomaly which requires early diagnosis and prompt management (stabilisation hemodynamic status, managing pulmonary hypertension, and possible surgical or interventional treatments) to prevent irreversible neurological damage and organ failure. Prognosis remains poor in severe neonatal cases despite aggressive support. Early imaging and interventional techniques (e.g., embolisation) have improved outcomes in selected patients, though surgery remains high-risk in critically ill neonates.

Keywords: Neonate; vein of Galen malformation

Abstract ID: A-0070

The Disguised Cyst: Neonatal Enteric Duplication Cyst Confused with an Ovarian Cyst

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ABSTRACT

Introduction: Enteric duplication cysts are rare congenital anomalies found along the alimentary tract, most commonly on the mesenteric border of the ileum. These cysts share a common muscular wall and vascular supply with the adjacent bowel. Prenatal detection via ultrasound is possible but limited, with only 20-30% identified antenatally. In female foetuses, distinguishing enteric duplication cysts from ovarian cysts can be particularly challenging due to overlapping sonographic features.
Case description: We report the case of a term baby girl admitted to our center following antenatal ultrasound findings of prominent bowel loops, a dilated stomach, and a suspected right-sided ovarian cyst measuring 3.5 x 4 cm. On the second day of life, she developed greenish gastric aspirates and non-bilious vomiting. Postnatal abdominal ultrasound confirmed a persistent intra-abdominal cystic mass. Given her clinical presentation and imaging findings she was referred to tertiary centre for surgical intervention. An exploratory laparotomy was performed. Intraoperatively findings revealed a duodenal duplication cyst. The cyst was successfully excised without complications. The patient had an uneventful recovery postoperatively.
Discussion: This case underscores the diagnostic challenges in distinguishing enteric duplication cysts from ovarian cysts in utero. While prenatal imaging can provide early clues, definitive diagnosis often requires postnatal evaluation and surgical exploration. Enteric duplication cysts, though rare, should be considered in the differential diagnosis of neonatal abdominal cystic lesions, especially when clinical symptoms such as vomiting or feeding intolerance emerge. Prompt surgical intervention can lead to favourable outcomes.

Keywords: Enteric duplication cyst

Abstract ID: A-0071

A Rare Case of Methemoglobinemia in a Neonate: Experience in Hospital Tengku Ampuan Afzan, Kuantan, Pahang

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ABSTRACT

Background: Methemoglobinemia is a rare and potentially life-threatening condition in neonates, characterised by the oxidation of haemoglobin to methaemoglobin, which is unable to bind and deliver oxygen effectively. Neonates, particularly those under four months of age, are especially vulnerable due to immature enzymatic systems involved in reducing methaemoglobin levels.
Case report: We report the case of a 21day-old male infant who presented with lethargy, cyanosis, and preceding history of loose stool. On admission, he was in compensated shock. Arterial blood gas analysis revealed severe metabolic acidosis (pH 6.77, HCO3 -5.7) and elevated haemoglobin levels (18%), consistent with symptomatic methemoglobinemia secondary to sepsis. The patient was successfully and managed with intravenous sodium bicarbonate, methylene blue, ventilatory support and antibiotics.
Conclusion: This case highlights the importance of considering methaemoglobinemia in neonates presenting with unexplained cyanosis and acidosis, especially in the context of sepsis.

Keywords: Methaemoglobinemia

Abstract ID: A-0072

An Audit of Early-Onset Neonatal Sepsis and Antibiotic Use in the NICU of Hospital Tunku Azizah, Kuala Lumpur

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ABSTRACT

Background: Early-onset sepsis (EOS) is a critical condition in infants occurring within the first 72 hours of life. Managing EOS with empirical antibiotic contributes to antimicrobial resistance as well as disrupting the developing microbiome. Identifying and reducing unnecessary antibiotic use in EOS is essential for improving neonatal care

Objectives: To assess predictors of antibiotic necessity as well as the rate and reasons for antibiotic use in infants born at ≥35 weeks' gestation with suspected or at risk of EOS

Methods:A retrospective audit of NICU admissions for suspected EOS (November to December 2024), evaluating antibiotic prescribing practices in term and near-term infants.

Results: A total of 233 medical records were reviewed, 89.6% (n=209) presenting with clinical signs of infection. Antibiotics were initiated for neonatal indications (88.8%, n=207) versus maternal risk factors (11.6%, n=26). Only 6 out of 233 blood cultures were positive, with one showing clinically significant growth. 96.1%(n=224) infants received empirical C-penicillin and Gentamicin, with 33% continuing more than 5 days. Antibiotic duration varied, <48 hours (13.7%), 48-72 hours (22.8%), >72 hours (63.5%). 24.6% (n=58) of clinically stable infants had antibiotics continued beyond 48 hours while awaiting negative culture results. Prolonged antibiotic use was also influenced by persistent respiratory issues and abnormal chest radiographs.

Conclusion: Despite rare confirmed sepsis, prolonged antibiotic use persists due to clinical suspicion. Enhanced risk stratification and culture-guided stewardship are urgently needed to reduce unnecessary antibiotic exposure.

Keywords: Antibiotics; near-term infant; Neonatal Early-Onset Sepsis (EOS); NICU; term infant

Abstract ID: A-0075

Meconium Peritonitis and Pseudocyst, A Rare Cause of Non-Immune Hydrops Fetalis

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ABSTRACT

Background: Non-immune hydrops fetalis (NIHF) is often a lethal foetal condition with a diverse aetiology. Meconium peritonitis is a rare cause of non-immune hydrops fetalis (NIHF). Leakage of meconium can trigger a fibrotic inflammatory response, leading to pseudocyst formation and if large, can impair venous return resulting in hydrops fetalis. We report a case of NIHF secondary to meconium peritonitis complicated by the formation of meconium pseudocyst.

Case Report: This is a female infant born at 30 weeks' gestation to a 32-year-old primigravida who was diagnosed antenatally with hydrops fetalis and an intra-abdominal mass. Antenatal scans revealed generalised foetal oedema with ascites, bilateral pleural effusion, pericardial effusions, and a large avascular hypoechoic mass in the foetal abdomen. The baby was delivered via emergency Caesarean section with an Apgar score of 4165 and birth weight of 2050 g. She was intubated at five minutes of life due to poor respiratory effort. Postnatally, she presented with generalised oedema, gross abdominal distension with respiratory compromise requiring urgent peritoneal drainage and high ventilatory support. Following stabilisation, she underwent exploratory laparotomy, bowel resection and ileostomy at day 8 of life. Intra-operatively, dense adhesions, dilated and inflamed small bowels with bowel perforation 60cm from the duodenojejunal junction forming meconium pseudocyst and microcolon were identified. Post operatively, she required high-frequency oscillatory ventilation (HFOV) for persistent respiratory acidosis which was eventually weaned to conventional ventilation and extubated. Peritoneal cultures grew Extended-Spectrum Beta-Lactamase *Klebsiella aerogenes*, treated successfully with meropenem and vancomycin. Histopathology findings of the small bowel revealed intestinal duplication cyst with serositis and microcalcifications. Chromosomal analysis, TORCHES and haemolysis screens were unremarkable. Whole exome sequencing was sent for further evaluation.

Conclusion: This case highlights meconium pseudocyst as a rare but important differential diagnosis of NIHF. Early antenatal suspicion coupled with prompt multidisplinary management is essential to ensure an optimised outcome.

Keywords: Hydrops fetalis; meconium peritonitis; meconium pseudocyst

Abstract ID: A-0076

Case Reports of Congenital Toxoplasmosis in Segamat Hospital

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ABSTRACT

Background: Congenital toxoplasmosis, resulting from vertical transmission from infected mothers with protozoa Toxoplasma gondii, is a significant cause of morbidity and mortality in foetuses and neonates. It can be transmitted through contaminated food, water, or contact with cat faeces. Approximately 10 to 30% of infants with congenital toxoplasmosis have clinical features. The severity depends on gestational age at infection, with early infections often leading to severe complications, including chorioretinitis, hydrocephalus, intracranial calcifications, and neurodevelopmental impairment.

Case Report: We are reporting 2 severe cases of congenital toxoplasmosis during neonatal period in Segamat Hospital. Both mothers of cases had close exposure to cats during pregnancy.

Case 1 - Baby A was born preterm (32 weeks gestation), birth weight 2.19 kg (appropriate for gestational age). She showed severe symptomatic infection with multiorgan involvement comprised hydrocephalus, blueberry muffin rashes, hepatosplenomegaly, large patent ductus arteriosus and chorioretinitis. She passed away at day 2 of life.

Case 2 - Baby B was born term with birth weight 1.97 kg (symmetrical small gestational age). He had intracranial involvement, thrombocytopenia and liver impairment. He was treated as congenital toxoplasmosis and CMV infection. He received intensive and prolonged treatment. He survived but had profound hearing loss and developmental delay. Currently, he is 2 years old receiving multidisciplinary interventions.

Discussion: Intrauterine infection such as congenital toxoplasmosis and CMV infection can cause significant morbidity and mortality. All pregnant mothers should be informed regarding risk of congenital toxoplasmosis from exposure to cat's faeces. All foetuses and newborns with maternal antenatal exposure to cats, especially those with intrauterine growth retardation, should be screened for congenital malformations and congenital infections.

Keywords: Congenital toxoplasmosis

Abstract ID: A-0077

The Use of Neonatal Sequential Organ Failure Assessment Score to Predict Mortality and Morbidity in a Tertiary Centre in Sabah

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ABSTRACT

Background: Neonatal mortality continues to pose a significant public health challenge globally, particularly in developing nations such as Malaysia. Despite advancements in neonatal intensive care, timely identification of critically ill neonates remains crucial to reduce adverse outcomes. Early recognition of organ dysfunction allows for prompt interventions, improving survival and long-term health. Among various scoring systems, the Neonatal Sequential Organ Failure Assessment (nSOFA) score has emerged as a promising tool for predicting morbidity and mortality in neonates. However, its applicability and reliability in Malaysian clinical settings have yet to be comprehensively evaluated.
Objective: This study aims to determine the predictive validity of the nSOFA score in forecasting neonatal mortality and morbidity in a tertiary hospital setting in Sabah, Malaysia.
Methods: A prospective cohort study was conducted in the Level 3 Neonatal Intensive Care Unit (NICU) of Sabah Women and Children Hospital, involving neonates admitted between January and April 2025. The nSOFA score was calculated at admission and again at 24 hours for both new admissions and transfer-in cases. Clinical outcomes were recorded on day 28 of life to assess mortality and morbidity. Statistical analyses, including receiver operating characteristic (ROC) curves and sensitivity/specificity evaluations, were performed to assess the predictive performance of the score.
Results: Preliminary findings suggest that the nSOFA score has reliable predictive accuracy in identifying neonates at high risk for mortality and morbidity. These results are consistent with previous international studies, supporting its utility in diverse clinical environments.
Conclusion: The nSOFA score appears to be a valuable tool for early risk stratification in critically ill neonates in Malaysian NICUs. Its implementation may support more informed clinical decision-making and resource allocation, potentially improving neonatal outcomes and contributing to broader healthcare policy development.

Keywords: Neonatal mortality prediction; nSOFA

Abstract ID: A-0078

Clinical Audit on Screening of Congenital Hypothyroidism in Paediatric Department Hospital Tuanku Fauziah

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ABSTRACT

Introduction: Congenital hypothyroidism (CH) is the most common congenital endocrine disorder, and most common preventable cause of mental retardation in children. This audit evaluates the effectiveness of the screening process for CH in our department.

Methodology: A retrospective review of workflow and medical records was conducted, covering all newborns screened for CH from January to June 2024. Primary outcome was identifying number of neonates with abnormal/rejected cord TSH(cTSH) that had a follow-up with repeat thyroid function test (TFT) by 1 week of life. Secondary outcomes included number of affected neonates who had a complete clinical evaluation at 2 weeks of life. This audit uses the Consensus Guidelines on Screening, Diagnosis, and Management of Congenital Hypothyroidism in Malaysia as a benchmark. Department consensus is that all newborns with rejected or abnormal cTSH must be screened with a repeat TFT by 1 week of life and have a complete clinical evaluation by 2 weeks of life.

Results: Only 62% of neonates with rejected or abnormal cTSH had a follow-up with a repeat TFT by 1 week of life ,while only 58% had a review by 2 weeks of life, with most have them having incomplete clinical evaluation.

Interventions: An interdepartmental meeting between the Paediatric and Pathology Departments was conducted to revise the workflow for communicating abnormal cord blood thyroid-stimulating hormone (cTSH) results: A standardised flowchart and checklist were developed and implemented to guide clinical review and ensure consistency. A dedicated CORD TSH Team was established to oversee the screening process, enhance documentation, and facilitate patient recall through tagging of paediatric case notes. To support implementation, a departmental Continuing Medical Education session was organised to highlight relevant Clinical Practice Guidelines and introduce the new workflow and checklist to all clinical staff.

Outcome: In reaudit post interventions, all patients with abnormal/rejected cord TSH were meeting the set standards set by department.

Keywords: Congenital hypothyroidism

Abstract ID: A-0079

Microvillus Inclusion Disease: A Case Report and Review of Management Challenges

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ABSTRACT

Background: Microvillus inclusion disease (MVID), is a rare autosomal recessive disorder characterised by early onset secretory diarrhoea and profound malabsorption leading to severe dehydration and failure to thrive, typically presenting during neonatal period. The condition is frequently associated with consanguinity and carries significant diagnostic and management challenges due to its rarity and complexity. Early diagnosis is crucial due to the life-threatening nature of the condition and the need for lifelong nutritional support.

Case Report: We report a case of a term neonate with antenatal bowel dilatation and polyhydramnios indicating intra-uterine diarrhoea. Parents are consanguineous with early neonatal demise of firstborn due to suspected bowel pathology. Her clinical course was characterised by recurrent mixed secretory and osmotic diarrhoea whenever feeding exceeded 40ml/kg/day with metabolic acidosis, septic episodes and growth failure. Extensive investigations, including serial abdominal imaging, metabolic screening and immunological workups were inconclusive. Given her persistent diarrhoea, growth failure, and consanguinity, congenital diarrhoea and enteropathies (CODE) was suspected. Whole exome sequencing (WES) revealed homozygous mutation in syntaxin 3 (STX3) gene, confirming the diagnosis of MVID. She also has retinal involvement leading to a syndrome with both intestinal and retinal involvement. She is currently on specialised nutritional rehabilitation and training for home parenteral nutrition.

Conclusion: This case illustrates the diagnostic challenges and management complexity of CODE, emphasising the importance of early clinical diagnosis in neonates presenting with secretory diarrhoea, consanguinity and failure to thrive. Genetic testing plays a pivotal role in confirming the diagnosis. Management remains supportive, centered on nutritional rehabilitation, while long-term survival may require intestinal transplantation. Early referral to a specialised center with multidisciplinary expertise is crucial in optimising outcomes in these patients.

Keywords: Congenital diarrhoea and enteropathies (CODE); congenital diarrheal disorders; enteropathies; microvillus inclusion disease; syntaxin 3; whole exome sequencing

Abstract ID: A-0080

Intravenous Immunoglobulin in Human Parechovirus Neonatal Meningitis: A Case Report

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ABSTRACT

Background: Human Parechovirus (HPeV) is increasingly recognised as a significant viral pathogen in neonates and young infants, contributing to rising morbidity and mortality. It is an emerging cause of sepsis-like illness and meningitis in this population. Among the 19 identified serotypes, HPeV-1 and HPeV-6 are typically associated with mild respiratory and gastrointestinal symptoms, while HPeV-3 is more commonly linked to severe central nervous system involvement in neonates.
Case report: We report the case of a 9-day-old female neonate who presented with high-grade fever, vomiting, poor feeding, and reduced activity. She required extensive fluid resuscitation with multiple boluses and non-invasive ventilation (NIV) for respiratory support. Due to the clinical suspicion of bacterial meningitis, empirical broad-spectrum antibiotics were initiated. Laboratory findings revealed leukopaenia with a normal C-reactive protein (CRP). Lumbar puncture was performed, and cerebrospinal fluid (CSF) multiplex PCR testing detected Human Parechovirus (HPeV). She was diagnosed with HPeV meningitis and showed marked clinical improvement following treatment with intravenous immunoglobulin (IVIG).
Conclusion: HPeV, particularly HPeV-3, should be considered in diagnosing neonatal sepsis and meningitis, especially when the septic parameters and bacterial cultures are negative. Early recognition through molecular diagnostics is crucial for prompt diagnosis and to avoid unnecessary investigations and antibiotic use. This case also highlights the potential role of IVIG in the management of severe neonatal HPeV meningitis.

Keywords: HPeV-3; human parechovirus; intravenous immunoglobulin; neonatal meningitis; sepsis-like illness

Abstract ID: A-0081

Fibromatosis Colli in a Premature Infant: A Case Report of an Unusual Neonatal Neck Swelling

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ABSTRACT

Background: Fibromatosis Colli (FC), also known as sternocleidomastoid pseudotumor of infancy, is a rare, benign condition characterised by a localised fibroblastic proliferation within the sternocleidomastoid (SCM) muscle. It most commonly arises during the perinatal period, often related to birth trauma or intrauterine malpositioning of the foetal head during the third trimester or delivery. Clinically, FC presents as a firm, painless swelling in the neck within the first few weeks of life and is frequently associated with congenital muscular torticollis. Neck ultrasound is the preferred diagnostic tool, showing a fusiform enlargement of the SCM with preserved muscle striations. Management is typically conservative, focusing on physical therapy and observation. Most cases resolve spontaneously over several months, and surgical intervention is rarely required.

Case Report: We report a case of FC in a premature infant born at 30 weeks of gestation, who developed right-sided neck swelling and torticollis at 3 weeks of age in the Neonatal Intensive Care Unit (NICU). Clinical examination revealed a firm, non-tender mass at the middle aspect of the right sternocleidomastoid (SCM) muscle, without any signs of local or systemic infection. A neck ultrasound confirmed the diagnosis, demonstrating a fusiform enlargement of the right SCM muscle with preserved architecture, consistent with FC. The infant was managed conservatively, with physiotherapy and clinical observation. Over the subsequent months, the neck swelling gradually regressed, and the torticollis resolved completely, with no recurrence noted.

Conclusion: FC is a rare, benign condition that should be considered in the differential diagnosis of neonatal neck masses, particularly when associated with torticollis. Early recognition and confirmation with ultrasound can prevent unnecessary investigations and interventions. As demonstrated in this case, conservative management with physiotherapy is effective, and spontaneous resolution can be expected in most cases, even in premature infants.

Keywords: Fibromatosis colli; neonatal neck mass; premature infant; sternocleidomastoid muscle; torticollis

Abstract ID: A-0082

Congenital Nephrotic Syndrome Presenting as Non-Immune Hydrops Fetalis - A Case Report

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ABSTRACT

Background: Congenital nephrotic syndrome (CNS) is a rare neonatal kidney disorder, characterised by massive proteinuria, hypoalbuminemia, and oedema. Non-immune hydrops fetalis (NIHF) is a clinical condition arising from diverse aetiologies, including cardiac, infectious, renal, haematological, and genetic disorders. This case report discusses a neonate diagnosed with CNS presenting as NIHF.
Case report: A male infant was delivered at 36 weeks' gestation due to NIHF, with a birth weight of 3.4 kg. The maternal antenatal history included multinodular goiter and polyhydramnios. Ultrasound at 34 weeks revealed pleural effusion, pericardial effusion, ascites, and scalp oedema. Despite intrauterine pleural tapping being done twice, the neonate presented with significant bilateral pleural effusions and pericardial effusion upon NICU admission. Biochemical analysis of the pleural fluid was transudative in nature but interestingly with time, it became chylous in appearance. A comprehensive diagnostic workup, including imaging, laboratory tests, and urinalysis, was initiated. TORCH and Parvovirus testing were negative, and blood tests did not suggest haemolytic disease or blood group incompatibility. Persistent elevation in the urine protein-creatinine index (PCI) was noted: 0.65 on Day 1, 0.58 on Day 5, and 0.5 on Day 12, indicating significant proteinuria. These findings, coupled with oedema and hypoalbuminemia, supported a diagnosis of CNS. The neonate received intravenous albumin and diuretics (amiloride and furosemide), reducing fluid retention, resulting in significant clinical improvement. We observed a spontaneous recovery of serum albumin with declining proteinuria after about 2 weeks, but the latter was transient, and child required resumption of diuretics and ACE inhibitors by CGA 40 weeks. Subsequent genetic testing was sent and at the time of writing, results are still pending.
Conclusion: In this case, CNS presented with typical features: proteinuria, hypoalbuminemia, and oedema. This case underscores the importance of considering CNS in the differential aetiologies of NIHF.

Keywords: Congenital nephrotic syndrome; non-immune hydrops fetalis

Abstract ID: A-0083

A Case of Chondromesenchymal Hamartoma of the Chest Wall with Good Prognosis Postoperatively

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ABSTRACT

Background: Chondromesenchymal hamartoma of the chest wall (CHCW) is a rare, benign tumour that primarily affects neonates and infants. It originates from the rib and can lead to significant respiratory distress due to its mass effect on the developing lungs. Although benign, its presentation often mimics that of malignant lesions, complicating diagnosis. We present the case of a preterm neonate with chondromesenchymal hamartoma, who experienced a favourable postoperative prognosis.

Case Report: A preterm male infant, born at 31 weeks, had a good Apgar score and was delivered via spontaneous vertex delivery. Antenatally, the patient presented with polyhydramnios and premature rupture of membranes, with no documented structural anomalies detected. However, the infant was soon intubated due to respiratory distress. A right lung mass was identified on chest X-ray, prompting further investigation. A Contrast-Enhanced Computed Tomography of the Thorax, Abdomen, and Pelvis (CECT TAP) revealed a tumour originating from the right 2nd rib, presenting as a large solid-cystic mass, likely a mesenchymal hamartoma of the right chest wall. Initially, the patient was managed conservatively with monitoring for tumour progression. However, the mass began compressing the airway, leading to worsening respiratory function. Therefore, at 34 days of life, the patient underwent a right thoracotomy with excision of the tumour, which extended from the 2nd to the 5th ribs along the posteromedial aspect and into the intrathoracic region. Histopathological examination confirmed the diagnosis of chondromesenchymal hamartoma of the chest wall. Post operatively, patient required ventilation support for two months and was eventually able to wean off the ventilation support and discharged with room air.

Conclusion: CHCW is extremely rare tumour that till now only hundred cases were documented in literature. Observation and resection are two approaches typically applied for the management. Our case had posted a good outcome after a surgical intervention.

Keywords: Chondromesenchymal hamartoma; neonate

Abstract ID: A-0084

Early Neonatal Onset Multiple Acyl-CoA Dehydrogenase Deficiency with Congenital Anomalies: An Unexpected Rare Inherited Metabolic Disorder

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ABSTRACT

Background: Multiple acyl-CoA dehydrogenase deficiency (MADD), or glutaric aciduria type II, is a rare autosomal recessive disorder caused by mutations in ETFA, ETFB, or ETFDH genes. These mutations impair mitochondrial fatty acid and amino acid metabolism due to defective electron transfer flavoprotein (ETF) or ETF-ubiquinone oxidoreductase. There are 3 phenotypes of MADD: neonatal onset with or without congenital anomalies (Types I and II) and late-onset (Type III). Inherited metabolic disorders (IMDs) may be overlooked in neonates presenting with sepsis-like illness.
Case presentation: An early term, small-for-gestational-age female infant presented with sudden postnatal collapse at 18 hours of life associated with hypoglycaemia, respiratory distress, and encephalopathy. Blood gas analysis showed severe lactic acidosis with high anion gap. She was empirically treated for meningitis and investigated for IMDs. Her initial elevated ammonia level of 197 mmol/L resolved without any specific therapy. Urine organic acids and acylcarnitine profile were consistent with MADD. Treatment included high-dose riboflavin, coenzyme Q10, carnitine, and a carbohydrate-rich, fat- and protein-restricted formula. She was also diagnosed to have hypertrophic cardiomyopathy with diastolic dysfunction, lissencephaly with bilateral germinal matrix haemorrhage, and a prominent renal pelvicalyceal system. Her NICU stay was prolonged due to episodic metabolic decompensations, feeding intolerance, and recurrent culture-negative infections. She was discharged on room air at 1 month 21 days of life with perfusor feeds and oral medications.
Conclusion: Neonatal-onset MADD is a severe disease with a variable presentation. This case highlights the importance of maintaining a high index of suspicion for IMDs in neonates with unexplained collapse, lactic acidosis, or congenital anomalies. MADD is often a fatal metabolic disorder; however early referral to geneticist and prompt, aggressive treatment can significantly alter the course of many other IMDs.

Keywords: Inherited metabolic disorder; MADD; multiple acyl-CoA dehydrogenase deficiency

Abstract ID: A-0085

A Rare Case of Kaposiform Haemangioendothelioma in a Newborn: Diagnostic Challenges and Management

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ABSTRACT

Background: Kaposiform hemangioendothelioma (KHE) is a rare, locally aggressive vascular tumour that infiltrates the dermis and subcutaneous tissue. Although non-metastatic, its association with life-threatening complications such as the Kasabach-Merritt phenomenon (KMP) underscores the importance of early recognition and intervention.
Case presentation: We report a case of a 37-week gestation male newborn presenting with a violaceous, bluish, mobile swelling measuring 2 x 1.5 cm over the left posterior triangle of the neck. The mass was firm, compressible, non-tender, non-pulsatile and not warm. Initial ultrasound suggested lesion was consistent with a haemangioma. However, skin biopsy revealed histopathological features of KHE. MRI findings confirmed the lesion involving the cutaneous and subcutaneous layers with abutment of adjacent muscles. Despite its clinical resemblance to a congenital haemangioma, histopathological evaluation confirmed KHE.
Discussion: According to the 2018 ISSVA classification, KHE is categorised as a locally aggressive or borderline vascular tumour. KHE typically presents as a soft tissue mass with overlying skin changes that may appear as erythematous papules, plaques, or nodules, eventually progressing to an indurated, firm, and violaceous tumour. In cases associated with KMP, the lesions are warm, swollen, and extremely painful. KHE carries a significant risk of KMP, which can lead to severe thrombocytopenia, coagulopathy, and life-threatening bleeding. However, due to the rarity of KHE and limited case reports, it is possible that this patient has a less aggressive form, unlike previously reported cases. Although the lesions on this case report clinically resembled a congenital haemangioma, a skin biopsy confirmed the diagnosis of KHE. Therefore, early diagnosis, close monitoring, and prompt management are essential to improve outcomes and prevent serious complications.
Conclusion: This case emphasises the importance of considering KHE in the differential diagnosis of neonatal vascular lesions. Histological confirmation and vigilance for KMP are essential to guide effective management and reduce morbidity.

Keywords: Haemangioma; kaposiform haemangioendothelioma; Kasabach-Merritt phenomenon; neonate; vascular tumour

Abstract ID: A-0086

Congenital Haemangioma of the Chin: A Rare Presentation

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ABSTRACT

Introduction: Congenital haemangiomas (CHs) are rare, benign vascular tumours that develop entirely during foetal life and are fully formed at birth. This distinguishes them from infantile haemangiomas (IHs), which typically appear within the first few weeks of life.
Case description: A baby boy was delivered at 35 weeks and 4 days of gestation via emergency lower segment Caesarean section due to maternal preeclampsia. The 35-year-old mother had a history of type 2 diabetes mellitus, bronchial asthma, and a prolapsed intervertebral disc. The baby was born vigorous and admitted to the Neonatal Intensive Care Unit for transient tachypnoea of the newborn, requiring nasal prong oxygen. On examination, the baby was non-dysmorphic with unremarkable systemic findings. However, a pedunculated 4 x 3 cm mass was noted on the left side of the chin. It was firm, with visible surface vessels and a central area of yellowish-brown discoloration at the base. There were no signs of bleeding or infection. Differentials included teratoma and haemangioma. Ultrasound of the chin showed a well-defined, heterogeneous, pedunculated lesion measuring 2.7 x 3 cm, without calcification or cystic components, and with minimal peripheral vascularity on Doppler. Plastic surgery was consulted, and MRI of the brain and face was performed. Imaging revealed a subcutaneous soft tissue mass at the chin with a markedly hyperintense signal on STIR sequences, consistent with a vascular or blood-filled lesion, suggestive of a soft tissue venous malformation. The baby was discharged in stable condition. The lesion has gradually decreased in size, with no medical intervention apart from the mother's daily olive oil dressing.
Discussion: This case highlights an uncommon presentation of congenital haemangioma on the chin. While clinical features are often diagnostic, imaging serves as a valuable adjunct in atypical cases. Early multidisciplinary involvement is essential for accurate diagnosis, monitoring, and timely intervention planning.

Keywords: Chin; congenital; haemangioma; neonatal; vascular malformation

Abstract ID: A-0087

Audit on Neonatal Hypothermia: Prevalence and Risk Factors at Hospital Tunku Azizah Kuala Lumpur

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ABSTRACT

Introduction: Neonates who are hypothermic on admission are at increased risk of adverse outcomes. While most studies focus on premature and low birth weight infants, this study aims to determine the incidence of neonatal hypothermia on admission to the Neonatal Intensive Care Unit (NICU) at Hospital Tunku Azizah Kuala Lumpur (HTAKL), and to identify associated maternal, perinatal, and neonatal factors.

Methods: This retrospective study analysed newborns admitted to NICU HTAKL from May to December 2024. Admission temperature and maternal-neonatal risk factors were obtained from medical records. Hypothermia was defined as a temperature < 36.5°C. Descriptive statistics described hypothermia incidence. Chi-square/Fisher's exact tests assessed associations with categorical risk factors. Linear regression was used to evaluate continuous predictors of admission temperature.

Results: 231 infants were included. Mean birth weight was 2,289.7 ± 833.9 g, and mean admission temperature was 36.624 ± 0.520°C. Hypothermia occurred in 30.3% (70/231), with 53 infants classified as mildly hypothermic (36.0–36.4°C) and 17 as moderately hypothermic (32.0–35.9°C). Preterm birth ($p = 0.042$) and low birth weight ($p < 0.001$) were significantly associated with hypothermia. No significant associations were found with mode or place of delivery, resuscitator's professional level, or time of birth. Linear regression showed birth weight significantly predicted admission temperature ($\beta = 0.277$; $p < 0.001$); time of birth did not ($\beta = -0.020$; $p = 0.758$). The use of additional thermal protection (head caps, plastic wraps) did not significantly reduce hypothermia among preterm infants.

Conclusion: Hypothermia on NICU admission remains prevalent, particularly in preterm and low birth weight neonates. Birth weight significantly influenced admission temperature, highlighting this group's vulnerability. Despite the use of standardised thermal protection practices, hypothermia persists, suggesting that current measures may be insufficient and require reinforcement or further enhancement to ensure effective thermal care during the immediate postnatal period.

Keywords: Hypothermia; neonatal; risk factors

Abstract ID: A-0088

Femoral Facial Syndrome in a Neonate of a Diabetic Mother: A Case Report

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ABSTRACT

Introduction: Femoral facial syndrome (FFS) is a rare congenital disorder characterised by femoral hypoplasia and distinctive craniofacial anomalies. The condition is typically sporadic, with approximately one-third of cases associated with maternal diabetes. Early diagnosis and multidisciplinary care are crucial for optimising outcomes.
Case description: We report a term neonate born to a mother with poorly controlled pregestational diabetes, presenting with multiple congenital anomalies at birth. Clinical examination revealed bilateral femoral hypoplasia, cleft palate, micrognathia, vertebral anomalies, talipes equinovarus, and microtia. The infant also exhibited upslanting palpebral fissures and short limbs. Karyotype analysis was normal. Based on the constellation of clinical features and the maternal history, a diagnosis of FFS was made. Multidisciplinary referrals were initiated: plastic surgery for cleft palate repair, orthopaedics for lower limb deformities, and developmental teams for early intervention. Given the lumbosacral abnormalities, bowel and bladder function will be monitored to assess for neurogenic dysfunction. Genetic counseling was provided, emphasising the importance of preconception glycaemic control, particularly during the organogenesis period in early gestation.
Discussion: FFS is an exceedingly rare condition, with fewer than 70 cases reported in the literature as of 2021. The incidence is estimated at approximately 0.11 to 0.2 per 10,000 births. Prognosis varies depending on the severity of associated anomalies. While some cases result in perinatal mortality, others survive into adulthood, as evidenced by the first reported adult case of FFS. This case underscores the importance of early recognition, comprehensive management, and the potential for favourable outcomes with appropriate care.

Keywords: Diabetes; femoral facial syndrome

Abstract ID: A-0089

Unveiling the Surge: Culture-Proven Bacterial Conjunctivitis in a Tertiary Centre's Neonatal Intensive Care Unit

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ABSTRACT

Purpose: To determine the epidemiology and prevalence of ophthalmia neonatorum (ON), and to identify its causative organisms along with their antibiotic susceptibility patterns.
Methods: A retrospective study of neonates with culture-proven conjunctivitis from January 2023 to December 2024 was conducted. Clinical data, gram stain results, and antibiotic susceptibility were analysed using t-tests, chi-square, and logistic regression.
Results: Among 76 neonates with culture-proven conjunctivitis, 71.1% had Gram-negative infections, while 28.9% were Gram-positive. Gram-positive infections were diagnosed later than Gram-negative ones (mean age 27.2 vs. 17.8 days, $p = 0.049$), though no significant differences were found in other variables. Antibiotic resistance was significantly higher among Gram-negative organisms, with resistant infections presenting at an earlier age (mean 14.6 vs. 25.8 days, $p = 0.010$). However, resistance was not significantly associated with any categorical clinical variables, including ethnicity, gestational age, birth weight, delivery mode, Apgar score, maternal risk of sepsis, respiratory support, bed occupancy rate or timing of eye examination.
Conclusion: In conclusion, Gram-negative bacterial conjunctivitis was more prevalent than Gram-positive infections in neonates and was associated with earlier presentation and a higher rate of antibiotic resistance. However, resistance was not significantly associated with clinical variables. These findings highlight the importance of targeted surveillance and judicious antibiotic use in managing neonatal conjunctivitis.

Keywords: Antibiotic resistance; epidemiology; incidence; ophthalmia neonatorum; prevalence

Abstract ID: A-0090

Increase of Bed Occupancy Rate at District Hospital After Implementation of Shuttle Jaundice Service

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ABSTRACT

Background: In many healthcare systems, neonatal jaundice is a common condition that often results in referral to tertiary hospitals. This practice can lead to underutilisation of district hospital resources and increased pressure on higher-level facilities. Prior to intervention, our district hospital showed a consistently low bed occupancy rate (BOR) for neonatal care.
Objective: To evaluate the impact of implementing shuttle jaundice services on BOR in a district hospital and its effect on workload distribution across the healthcare system
Methods: A retrospective analysis was conducted using admission data of neonates from 2022 to 2024. The shuttle jaundice service, which allows neonates with jaundice to receive phototherapy and monitoring at the district level, was introduced during this period. BOR was calculated annually to assess trends before and after the service implementation.
Results: The introduction of the shuttle jaundice service led to a notable increase in the district hospital's BOR for neonatal cases. The hospital successfully managed more cases locally, reducing unnecessary referrals to tertiary hospitals. This shift not only optimised the use of district-level resources but also alleviated some of the caseload burden on tertiary care centers
Conclusion: The shuttle jaundice service proved to be an effective strategy to increase BOR in district hospitals. By managing neonatal jaundice cases closer to the community, the service improved the operational efficiency of district hospitals and contributed to reducing the workload of tertiary institutions. These findings highlight the potential benefits of decentralising specific clinical services to strengthen the healthcare delivery network.

Keywords: Bed occupancy rate; jaundice

Abstract ID: A-0091

Severe Neonatal Anaemia Secondary to Fetomaternal Haemorrhage: A Case Report

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ABSTRACT

Background: Fetomaternal haemorrhage (FMH) refers to the transfer of foetal blood into the maternal circulation due to a disruption in the placental barrier. This condition is associated with significant foetal morbidity and mortality. In cases of massive FMH, severe foetal anaemia can occur, adversely affecting both foetal and neonatal outcomes. Haemoglobin (Hb) levels are a critical prognostic indicator, with values below 5.0 g/dL strongly associated with poor outcomes and increased risk of foetal death.

Case report: We report a case of a term newborn who was born with marked clinical pallor and required immediate intubation at birth due to poor respiratory effort. Notably, there were no significant antenatal or intrapartum complications. The initial complete blood count (CBC) revealed severe anaemia with a Hb level of 3.4 g/dL and a haematocrit (HCT) below 15%, accompanied by metabolic acidosis on blood gas analysis. A Kleihauer test was performed and returned positive, with an estimated 202 mL of foetal red cells identified in the maternal circulation, confirming the diagnosis of FMH. The infant was managed with two successive transfusions of packed red blood cells at 15 mL/kg per cycle. Following treatment, the baby was successfully extubated and discharged in stable condition on day 6 of life, with scheduled follow-up.

Conclusion: Massive FMH can cause severe neonatal anaemia, negatively impact neonatal outcomes, and significantly increase the risk of mortality. Prompt recognition of FMH as the cause of neonatal anaemia, especially during resuscitation, is critical for initiating timely interventions and improving the outcomes and survival rates.

Keywords: Fetomaternal haemorrhage; foetal anaemia; foetal red cells; haemoglobin; Kleihauer test

Abstract ID: A-0092

Campomelic Dysplasia - A Rare Form of Skeletal Dysplasia

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ABSTRACT

Background: Campomelic dysplasia is a rare and severe congenital skeletal disorder that primarily affects the development of bones and cartilage.

Case report: We report a term infant born via spontaneous vaginal delivery who was admitted to our NICU. Antenatally, skeletal dysplasia was suspected based on detailed ultrasound findings of short femurs, though no other significant abnormalities were noted. Postnatally, clinical and radiological features consistent with campomelic dysplasia were observed, including micrognathia, ambiguous genitalia, hypoplastic scapulae, presence of eleven pairs of ribs, bowed femurs and tibias, hypoplastic cervical vertebrae, vertical narrow ilia, and hypoplastic thoracic vertebral pedicles. The case was reviewed in consultation with a geneticist and radiologist for further evaluation and confirmation.
Campomelic dysplasia often results in severe respiratory insufficiency in the neonatal period due to tracheobronchomalacia and hypoplasia of the thoracic cage. In this case, the infant was discharged home on non-invasive ventilation but unfortunately succumbed to severe respiratory failure at three months of age.
Discussion: Campomelic dysplasia is caused by mutations in the SOX9 gene. While most cases are sporadic, inheritance in an autosomal dominant pattern has also been described. Management is supportive, and prognosis remains poor, with most affected infants not surviving beyond the first year of life.

Keywords: Campomelic dysplasia; genetic disorder; skeletal dysplasia

Abstract ID: A-0093

Not Just the Usual Community Acquired Pneumonia: Congenital Tuberculosis

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ABSTRACT

Background: Tuberculosis (TB) remains a major global infectious disease. Congenital TB (cTB), though rare, carries a high mortality rate of up to 50%. Diagnosis is often delayed, especially when mothers are asymptomatic, leading to late treatment and rapid disease progression. Early recognition and intervention are critical. In Malaysia and the Southeast Asian region, data on cTB is lacking; hence, we report this case to raise awareness.
Case description: An ex-premature 34 weeker, Malay, infant boy was admitted at 2 months old with respiratory distress following 2-weeks of cough and fever. His condition rapidly declined necessitating intubation and mechanical ventilation. Despite broad-spectrum antibiotics and high ventilator settings, his condition worsened. No pathogen was detected from tracheal aspirate respiratory multiplex panel and culture. Chest radiographs revealed progressive lungs consolidation with cavitations. Abdominal ultrasonography showed multiple splenic micro-abscesses. One month into admission, the infant's mother had a sudden death after having symptoms of cough and lethargy two weeks prior. Post-mortem revealed changes consistent with TB infection in her lungs, brain and uterus. The infant was subsequently tested and found positive for TB. Given his primary pulmonary symptoms, splenic involvement, and maternal genital TB, a diagnosis of congenital TB was made. Anti-TB therapy was initiated. Unfortunately, the infant developed TB-related immune reconstitution inflammatory syndrome and succumbed to the illness.
Conclusion: Congenital tuberculosis, although rare, is associated with high mortality. In countries like Malaysia with intermediate TB burden, clinician should consider cTB in infants with severe pneumonia unresponsive to conventional treatment. As maternal symptoms may be absent or mild, detailed maternal history is crucial. This case highlights the importance of early detection and awareness of cTB to improve clinical outcomes.

Keywords: Congenital tuberculosis; maternal genital TB

Abstract ID: A-0094

Clinical Features and Outcomes of Neonatal Listeria monocytogenes Sepsis: A Case Series

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ABSTRACT

Background: Listeria monocytogenes is a rare but serious foodborne pathogen that can be transmitted vertically from mother to foetus and is a significant cause of neonatal sepsis and meningitis, with a global mortality rate of up to 20–30%. This case series aims to describe the clinical features, management, and outcomes of neonates with culture-confirmed Listeria monocytogenes sepsis to guide clinical practice.

Case report: A retrospective review was conducted on six neonates with blood culture-confirmed listeriosis admitted to Hospital Melaka between 2022 and January 2025. Data collected included birth history, clinical features, microbiological results, antibiotic regimens, laboratory parameters, and outcomes. Six neonates had positive blood culture for Listeria monocytogenes and elevated C-reactive protein. Four were delivered via emergency lower segment caesarean section – three due to foetal distress and two via spontaneous vaginal delivery. One neonate was born at term; the remaining five were preterm, with gestational ages ranging from 25 to 35 weeks. Meconium-stained liquor was observed in three preterm deliveries. Intravenous antibiotics were administered for durations ranging from 14 to 21 days. Although cerebrospinal fluid (CSF) cultures were negative, biochemical findings were suggestive of meningitis, with elevated protein and decreased glucose levels observed in four cases but one case had normal CSF glucose. One preterm at 25 weeks of gestation succumbed on day seven of life despite treatment. The remaining five neonates were discharged without apparent neurological sequelae.

Conclusion: Neonatal listeria monocytogenes sepsis, while responsive to appropriate antimicrobial therapy, carries significant mortality risk in extremely preterm infants. In this series, meconium-stained amniotic fluid and foetal distress emerged as potential risk factors. Further studies are needed to explore preventive strategies, such as maternal screening, and to assess long-term neurodevelopmental outcomes in survivors.

Keywords: Listeriosis

Abstract ID: A-0095

A Novel Coexistence of Chromosome 1q43q44 Deletion and 10p15.3p14 Duplication in a Neonate: A Case Report

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ABSTRACT

Background: The microdeletion of 1q43q44 is a recognised condition characterised by intellectual disability, speech delay, seizures, microcephaly, corpus callosum abnormalities, and distinctive facial features. Approximately more than 150 patients were reported so far and usually it is described as sole cytogenetic abnormalities. Although co-occurrence with other chromosomal abnormalities has occasionally been described, to the best of the authors' knowledge, the coexistence of a 1q43q44 deletion with a 10p15.3p14 duplication in a neonate has not been previously reported.

Case Report: We present a case of a term female infant who was noted dysmorphic at birth associated with global developmental delay, corpus callosum dysgenesis, laryngomalacia and gastroesophageal reflux disease. The dysmorphic features were microcephaly, down-turned mouth, thin lips, wide anterior fontanelle, thin hair, low hairline, webbed neck, small chin, high arched palate, wide spaced nipples and right inguinal hernia. She appears older compared to peers with wrinkles over face. Her laryngomalacia was treated with supraglottoplasty and gastrostomy along with infusion feeding. Her conventional karyotyping was normal, 46 XX. Chromosomal microarray analysis (CMA) was carried out and revealed coexistence of 1q43q44 deletion with 10p15.3p14 duplication.

Conclusion: Coexistence of 1q43q44 deletion with 10p15.3p14 duplication is considered novel. The opportunity to highlight this case report allows clinician to be more vigilant of the importance of CMA and its clinical utility especially in diagnosing dysmorphic child. The use of CMA allows delineation of the presence of submicroscopic deletion or duplication such as what was found from this case, its size, genotype/phenotype correlation and further clinical management and genetic counselling.

Keywords: 1q43q44 deletion; 10p15.3p14 duplication; chromosomal microarray analysis (CMA)

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Silent to Critical: Complex Congenital Pulmonary Malformation Presenting with Bilateral Chylothorax in a Neonate

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ABSTRACT

Background: Complex Congenital Pulmonary Malformation represents an uncommon spectrum of lung anomalies that can manifest from prenatal life through childhood, and rarely into adulthood. These congenital lung anomalies encompass diverse conditions ranging from clinically silent, incidentally detected lesions to those presenting with characteristic clinical and radiological features in the neonatal period. Several of these anomalies carry significant clinical implications and may result in fatal outcomes without prompt diagnosis and appropriate management.

Case report: A 3.4 kg term male infant was delivered via emergency caesarean section at 39 weeks due to breech presentation and oligohydramnios. He was born vigorous with good Apgar scores. He developed respiratory distress at 5 minutes of life, necessitating NICU admission for high-flow nasal cannula (HFNC) support. His respiratory status deteriorated at 20 hours of life, requiring escalation to non-invasive positive pressure ventilation (NIPPV) and subsequent intubation at 24 hours with initial management for congenital pneumonia. After a period of improvement, he deteriorated again on day 9, requiring re-intubation with conventional ventilation. Chest imaging revealed a possible left lung anomaly, leading to contrast-enhanced CT (CECT) of the thorax on day 10, which demonstrated left-sided bronchopulmonary sequestration (BPS), bilateral pulmonary hypoplasia, and absent segmental bronchus. By day 12, frequent desaturations necessitated transition to high-frequency oscillatory ventilation (HFOV). A repeat chest X-ray revealed bilateral pleural effusions requiring chest drain insertion, with subsequent pleural fluid analysis confirming bilateral chylothorax.

Conclusion: Complex congenital pulmonary malformation complicated by bilateral chylothorax presents a significant diagnostic and management challenge in neonates. The accumulation of chyle in the pleural space further compromises already abnormal lung development and ventilation, creating a complex clinical scenario requiring multidisciplinary expertise. This case highlights the importance of comprehensive imaging evaluation in neonates with persistent, unexplained respiratory distress to identify rare pulmonary malformations and their potentially life-threatening complications.

Keywords: Complex congenital pulmonary malformation

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A Twin Within: Fetus-in-Fetu Masquerading as a Suprarenal Mass in a Neonate

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ABSTRACT

Background: Fetus-in-fetu (FIF) is a rare congenital anomaly, often presenting as a retroperitoneal mass in neonates. It can be mistaken for more common pathologies such as neuroblastoma, nephroblastoma or teratoma on imaging, making preoperative diagnosis challenging.
Case presentation: We report the case of a male neonate, born at term via emergency caesarean section for foetal distress. Antenatal ultrasound showed right renal cyst. He presented on day 10 of life with poor feeding, cyanosis, and apnoeic episode. Examination revealed abdominal distension and mass. He was critically ill with signs of septic shock, including hypotension, hypoglycaemia, hyperkalaemia, metabolic acidosis, and acute kidney injury. He required mechanical ventilation for three days and covered empirically with broad spectrum antibiotic due to persistent fever. Cultures were negative and inflammatory markers remained low. Initial ultrasound and Computed Tomography abdomen revealed a large heterogeneous suprarenal mass with cystic components, calcifications, and mass effect, raising concern for neuroblastoma or nephroblastoma. He subsequently developed systemic hypertension probably due to retroperitoneal mass effect which effectively managed with oral nifedipine. After stabilisation, he underwent exploratory laparotomy on day 23 of life. Intraoperatively, the mass was located between the right kidney and adrenal gland, displacing both structures but sparing them. It had external skin-like covering, a sac-like structure resembling an umbilical cord, limb buds, and rudimentary tissue consistent with neural tube elements.
Conclusion: Fetus-in-fetu, though rare, should be considered in neonates with complex retroperitoneal masses. Early multidisciplinary assessment and timely surgical intervention are key to preventing serious complications and ensuring favourable outcomes.

Keywords: Fetus-in-fetu

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Cor Triatriatum Dexter: A Rare Cause of Persistent Cyanosis in The Newborn

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ABSTRACT

Introduction: Cor triatriatum dexter (CTD) is a rare cause of cyanotic heart disorder in neonate. We report a successful management of CTD.
Case report: A 39-week gestation newborn with birth weight of 3045g who required NpO2 upon admission to special care nursery (SCN) for congenital pneumonia, turned cyanosed at 12 hours of life and required intubation for persistent cyanosis with oxygen saturation between 80-84% on 100% oxygen. Echocardiography confirmed the diagnosis of CTD and large PDA. She had the CTD membrane resected via an uncomplicated open-heart surgery at day 37 of life.
Discussion: CTD is an extremely rare congenital heart defect in which a persistence embryonic right sinus venosus valve divides the right atrium (RA) into smooth and trabeculated chamber. Clinical manifestation varies depending of the degree of partitioning of RA and amount of blood flow across the membrane. Surgical resection of CTD is the treatment of choice with usually excellent short and long-term outcomes
Conclusion: We report this case to highlight CTD as a rare cause of central cyanosis in newborn. Diagnosis can be made by a detail and comprehensive echocardiography with a high index of suspicion.

Keywords: Cor triatriatum dexter (CTD)

Abstract ID: A-0101

Hypoglycemia in Neonates Related to Maternal Obesity: A Two-Case Clinical Insight

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ABSTRACT

Introduction: Neonatal hypoglycaemia remains a common metabolic disturbance with significant implications for neurodevelopment, particularly in the immediate postnatal period. Several studies have shown that Maternal Obesity is significantly associated with increased risk of neonatal hypoglycaemia in the presence of other potential risk factors such as Gestational Diabetes, Macrosomia baby, even Caesarean baby. This statement shows that, hypoglycaemia in the early neonatal period not only happens in mother with gestational diabetes during pregnancy, but also to non- diabetic mother. The potential link between maternal obesity and neonatal hypoglycemia warrants focused clinical examination to better inform perinatal care.

Case description: Two cases observed in early 2025 were analysed: Case 1: A full-term neonate (38+4 weeks) born to a non-diabetic, obese mother (BMI 31) presented with asymptomatic hypoglycaemia. Baby birth weight is 3.45 kg. Initially baby was with mom, but less than 24 hours of age, baby developed hypoglycaemia with dextrostox (DXT) of 2.0 mmol/L. Immediate intervention done. The baby received intravenous fluids and orogastric tube (OGT) feeding. Gradual glycaemic improvement occurred with sustained oral feeding. The infant was discharged after 6 days with normal glucose levels.

Case 2: A late preterm neonate (37 weeks) born to an obese mother (BMI 31.7) with gestational diabetes mellitus (on insulin) and chronic hypertension. Delivery occurred via elective lower segment Caesarean section (LSCS) due to intrauterine growth restriction (IUGR). The neonate was classified as an infant of a diabetic mother (IDM). Baby birth weight is 2.07 kg. Initial DXT was 3.3 mmol/L. The neonate was started on IV fluids and top-up feeds via OGT. Glucose levels remained stable, and the baby transitioned to full feeds without complications. Discharged after 4 days.

Data collected included gestational age, birth weight, maternal history, initial and follow-up glucose readings (via blood glucose monitoring machine), and feeding practices. Both neonates were closely monitored and managed per hospital protocol for hypoglycaemia.

Discussion: Both cases illustrate different presentations of neonatal hypoglycaemia in the context of maternal obesity. The presence of maternal obesity alone may predispose to neonatal hypoglycaemia, while additional maternal comorbidities such as GDM and hypertension appear to influence neonatal birth weight and glucose stability. Early detection, supportive feeding, and glucose monitoring were key to favourable outcomes. These findings emphasise the importance of targeted surveillance for neonates born to obese mothers, regardless of maternal diabetic status.

Keywords: Gestational diabetes mellitus; infant of diabetic mother; maternal obesity; neonatal hypoglycemia

Abstract ID: A-0102

Risk Factors Contributing to Clavicular Fracture and Brachial Plexus Injury Among Term Neonates in a Tertiary Centre: A 3-Year Retrospective Audit

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ABSTRACT

Introduction: Neonatal clavicle fractures and brachial plexus injuries, though often self-limiting, can cause significant parental anxiety and may necessitate prolonged paediatric follow-up. Identifying risk factors is crucial to guide preventive strategies and optimise intrapartum care.

Objectives: To evaluate the incidence and associated risk factors of neonatal clavicular fractures and brachial plexus injuries from 2022 to 2024 in a tertiary Malaysian hospital,in this study in Hospital Tengku Ampuan Afzan (Referring centre from whole Pahang)

Methods: This retrospective audit reviewed all term singleton vaginal and caesarean deliveries from January 2022 to December 2024. Data were extracted from delivery notes, paediatric records, and radiologic findings. Risk factors assessed included maternal BMI, diabetes status, mode of delivery, labour progression, and neonatal birthweight.

Results: Out of 18,149 term singleton deliveries, 10 neonates had clavicle fractures (0.055/1000), 8 had brachial plexus injuries (0.44/1000), with 6 overlapping cases. Precipitated labour was the most common contributing factor (83% for clavicle fractures, 87.5% for brachial plexus injuries). Maternal obesity (BMI >30) and diabetes were significantly associated with brachial plexus injuries (75% and 25%, respectively), while instrumental deliveries were more linked to clavicle fractures (40%). Macrosomia was absent; most affected neonates weighed 3–4 kg.

Conclusions: Rapid labour progression emerged as the leading modifiable risk factor for both injuries. Contrary to traditional assumptions, average-weight neonates and non-macrosomic deliveries were significantly affected. Early antenatal risk stratification, cautious use of instrumental delivery, and preparedness for shoulder dystocia are essential preventive strategies. Prognosis remains excellent with appropriate early management and follow-up.

Keywords: Clavixular fractures; newborn