Paediatrics E-Poster

EP_P001

COMPARING BEHAVIOURAL PROBLEMS AMONG OBESE AND NON-OBESE CHILDREN IN HOSPITAL RAJA PEREMPUAN ZAINAB II, KOTA BHARU

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INTRODUCTION

Childhood obesity is an increasing public health concern, both globally and in Malaysia. Beyond physical health risks, it has been associated with behavioural and psychological issues such as anxiety, depression, aggression, and low self-esteem. However, this association remains underexplored in the Malaysian context. This study aims to compare behavioural problems between obese and non-obese children at Hospital Raja Perempuan Zainab II, Kota Bharu, and assess their competency characteristics.

METHODOLOGY

A comparative cross-sectional study was conducted from September to December 2024 at the general paediatric clinic and ward of Hospital Raja Perempuan Zainab II, Kota Bharu. Participants were children aged 6–12 years, categorized as obese (BMI ≥95th percentile) or non-obese (BMI <95th percentile) using CDC BMI-for-age percentiles. Behavioural problems were assessed using the validated Child Behavior Checklist (CBCL/6–18), which measures internalizing, externalizing, and total behavioural problems. T-scores classified behavioural concerns as normal, borderline, or clinical range.

RESULT

A total of 85 participants (44 obese, 41 non-obese) completed the study. We found significant associations between BMI status and hobby participation ($p = 0.016$), number of friends ($p = 0.001$), and school performance ($p = 0.010$). However, we did not find any statistically significant differences in behavioural domains, including internalizing ($p = 0.781$), externalizing ($p = 0.131$), social ($p = 0.344$), thought ($p = 0.108$), attention ($p = 0.341$), and total problems ($p = 0.085$).

CONCLUSION

We did not find any significant behavioural differences between groups. However, with a study power of 52%, the results may reflect a limited sample size rather than an absence of association. We recommend larger-scale studies with refined methodologies.

EP_P002

METABOLIC BONE DISEASE OF PREMATURITY – SURVEY OF CURRENT NEONATAL INTENSIVE CARE APPROACHES

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INTRODUCTION

Metabolic bone disease of prematurity (MBDP) requires both calcium and phosphate for prevention and treatment. However, clinicians often focus on phosphate and vitamin D supplementation, neglecting calcium deficiency in nutrition. This study evaluates MBDP management in the neonatal care unit in a quaternary hospital in Malaysia.

METHODOLOGY

We conducted a retrospective review of MBDP cases referred to paediatric endocrinologists at University Malaya Medical Centre from 2019 to 2025. We extracted data from electronic medical records and monitoring charts, and we obtained input from pharmacists and dietitians regarding mineral supplementation in enteral and parenteral nutrition.

RESULT

The study involved 22 subjects, primarily infants with extremely low birth weight (ELBW), with a median birth weight of 705 grams (interquartile range: 600-833 grams). All infants were born before 32 weeks of gestation, and most were born before 28 weeks. The mean age at referral was 66.3 ± 33.43 days. Upon referral, all subjects exhibited low phosphate and high alkaline phosphatase levels. Only 15 subjects had their parathyroid hormone (PTH) levels checked, and PTH testing was conducted more frequently after referrals to endocrinology. Fifteen subjects showed radiological evidence of MBDP, and six of them had fractures. Routine screening revealed hypophosphatemia, hyperphosphatasia, and normocalcemia at least one month prior to referral. Most subjects were presumed to be treated with oral phosphate and vitamin D supplements; however,

many later showed elevated PTH levels, suggesting secondary hyperparathyroidism. None of the subjects were found to be vitamin D deficient. Prolonged fasting was identified as a significant risk factor for severe MBDP. Most subjects received low calcium levels alongside relatively high phosphate in parenteral nutrition. Less than 25% of the infants received Human Milk Fortifier (HMF) despite being primarily breastfed. Only two subjects received calcium supplements.

CONCLUSION

The study highlights gaps in understanding mineral supplementation in MBDP and the underutilization of PTH screening. Routine phosphate supplementation without addressing calcium deficiency worsens secondary hyperparathyroidism and MBDP. The study recommends routine HMF usage, earlier PTH screening, and standardized guidelines to improve MBDP management.

EP_P003

HEALTH SCREENING ANALYSIS OF HIGH-RISK PRIMARY SCHOOL STUDENTS OF SK SEKSYEN 7, BANGI

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INTRODUCTION

Childhood obesity and metabolic disorders are growing concerns globally. This study examines the health status of primary school children in SK Seksyen 7, Bangi.

METHODOLOGY

We conducted a cross-sectional study on 116 high-risk primary school students (aged 10 to 12 years old). Anthropometric measurements (weight, height, BMI, waist circumference) and physiological parameters (blood pressure, blood glucose) were recorded. We also performed BMI classification and assessed their metabolic risk.

RESULT

Among the students, 78% were classified as obese, 13% were overweight, and only 9% had a normal body mass index (BMI). The glycemic results indicated that 97% of the students had normal glucose levels, while 3% were prediabetic. Additionally, only 20% of the students had a normal waist circumference measurement.

CONCLUSION

The findings highlight the importance of routine health screenings to detect early endocrine disorders in children. Early intervention strategies, including lifestyle modifications, are essential to prevent future metabolic complications.

EP_P004

VALIDATION OF DATA QUALITY IN THE MALAYSIAN PATIENT REGISTRY INFORMATION SYSTEM FOR TYPE I PAEDIATRIC DIABETES CASES

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INTRODUCTION

Type 1 Diabetes Mellitus (T1DM) is a significant chronic condition in children, yet Malaysia lacks comprehensive population-based data on its prevalence and clinical features. To address this, the Patient Registry Information System – Non-Communicable Disease (PRIS-NCD) was developed within the Malaysian Health Data Warehouse (MyHDW) to enable longitudinal data collection. This study aimed to evaluate the validity of PRIS-NCD data following pilot implementation in a national paediatric referral centre.

METHODOLOGY

One hundred twenty paediatric patients with T1DM under follow-up in Hospital Putrajaya were retrospectively notified into the PRIS-NCD registry. We assessed data validity by comparing 47 variables between registry entries and abstracted electronic medical records (EMR). The analysis focused on exact agreement rates and missing data percentages to determine concordance and completeness.

RESULT

Of 120 cases, 115 were included in the analysis. The mean exact agreement between the registry and EMR data was 95.4% at diagnosis and 94.7% at follow-up. Most variables showed agreement rates exceeding 90%, except for BMI at diagnosis (86.8%), insulin test at diagnosis (88.6%), and microalbuminuria at follow-up (68.3%). Missing data were generally low in both datasets, with registry data showing slightly fewer missing values compared to EMR data despite being a secondary source.