MATERNAL AND INFANT PREDICTORS OF GROWTH TRAJECTORIES IN SINGAPORE CHILDREN IN THE FIRST 18 MONTHS OF LIFE

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Background Childhood obesity, with overweight defined as BMI z-score >2 based on WHO standards, is a growing problem in Singapore. The proportion of overweight children aged 6–18 years in Singapore has increased from 11% in 2013 to 13% in 2017. This prevalence persists into childhood as 70% of children who were overweight when 7 years old remained overweight at 11 years of age. Rapid weight gain during infancy is an established risk factor for later obesity and excess body weight tracks from infancy into childhood and adulthood. However, little is known about the growth trajectories of infants in Singapore.

Objectives The objective of this study was to examine the longitudinal growth trajectories of infants in Singapore by tracking weight gain and Body Mass Index (BMI) (both absolute and BMI z-scores) in the first 18 months of life. Additionally, maternal and child predictors of infant weight and BMI were examined. Maternal predictors include number of months of breastfeeding, maternal age, and maternal education level while infant predictors include ethnicity and gender.

Methods We are presenting 3 case reports, 2 of whom aged 6 months and below.

Results 1st case: Inguinal swelling mimicking inguinal abscess

This was a case report of a 6-month-old girl who presented with multiple lymphadenopathies over the right inguinal, axillary and cervical region. She was otherwise asymptomatic. A detailed history revealed presence of the right inguinal swelling noted since 2 weeks old and progressively increasing in size. Detailed investigation for infection were all normal. She received few courses of antibiotics but symptoms persisted. The father works in road construction industry. Excision biopsy of the right inguinal lymph node showed positive staining of CD1a, confirming the diagnosis of LCH.

2nd case: Skin rashes mimicking eczematous rashes

This was a 5-month-old girl who was admitted for fever with petechiae rashes, while the blood investigations revealed pancytopenia. 3 weeks prior to admission, she developed skin rashes mimicking eczema over the genitalia and bilateral inguinal. Systemic examinations showed hepatosplenomegaly, ascites with multiple petechiae rashes over the groin and neck region. Full blood picture reported pancytopenia with leucoerythroblastic blood film and circulating blasts. Her mother works in company selling household cleaning detergent. Skin biopsy of the inguinal region confirmed the diagnosis of LCH.

3rd case: Scalp swelling mimicking scalp abscess

This was a 2-year-3-month old ‘Orang Asli’ (native people), whose stays in rubber estate in a remote area (regular exposure to pesticides), presented with multiple scalp swellings. Other systemic examination was unremarkable. Blood investigations and septic parameters were normal. Computed tomography (CT) brain showed multiple soft tissue mass with osteolytic bony destruction, involving outer and inner table of occipital, left parietal and left frontal bone. Excision biopsy of the scalp confirmed the diagnosis of LCH.

Conclusions LCH has a wide spectrum of clinical manifestations. Although it is a very rare disease, LCH should always be considered as differential diagnosis in children with generalised lymphadenopathy, scalp swelling or any disorder with multisystemic organs involvement. A thorough history to identify risk, physical examination and laboratory investigation are vital to aid in diagnosing patient.
in their later years. To date there has been no study on the effect of AN and AAN on BMD in young Asian adolescents.

**Objectives** In this retrospective study, we compare BMD and baseline characteristics in Adolescents from Singapore with AN and AAN, to find any difference in BMD Z-score between AN and AAN, and any predictive factors for low bone density in adolescents with EDs.

**Methods** We reviewed electronic medical records for all patients below the age of 18, who were treated for Eating Disorders at KK Women’s and Children’s Hospital between 2010 and 2020 (n=507).

**Results** 318 AN and 141 AAN cases were identified within the study period. Mean age of all cases is 14.08 ± 1.49 years with mean duration of illness being 8.06 ± 6.15 months. Females made up 92.8% of AN cases, compared to 84.4% of AAN cases (χ²(1)=7.739; p = 0.005). BMI% at presentation was significantly lower for AN than AAN (74.55 ± 7.27 versus 97.12 ± 9.95, t(210)= -2.14, p < 0.001). 29% of AAN patients were prenormally overweight (max IBW > 120%), compared to 4.6% of AN patients (χ²(1)= 42.97; p < 0.001). There were significantly higher BMD Z-scores in AAN compared to AN for both the spine (1.55±1.63 versus 0.29 ±1.67, t(179)= -4.22, p < 0.001) and femur (0.48±0.93 versus 0.23±1.19, t(194)= -3.63, p < 0.001) region. In our linear regression model, BMD Z-score was not associated with duration or magnitude of weight loss as well as duration of amenorrhea or overweight status.

**Conclusions** From the findings of our study, we conclude that Asian adolescents with AAN demonstrated higher BMD Z-scores for both spine and femur compared to their AN counterparts. There was no predictive factors for low bone density. These findings may be instructive in informing guidelines for the management of Asian adolescents with AN and AAN.

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**THE UTILITY OF C-REACTIVE PROTEIN FOR SCREENING AND DIAGNOSIS OF EARLY-ONSET INFECTION IN TERM NEONATES**

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**Background** Early onset sepsis (EOS) remains a significant cause of neonatal mortality and morbidity. About 10% of term neonates were exposed to antibiotics for EOS risk, despite a very low incidence (around 1%) in this group especially after the introduction of intrapartum antibiotic prophylaxis. One of the main reasons for over treating the neonates is the lack of ideal diagnostic biomarkers. C-reactive protein (CRP) and complete blood count (CBC) are most commonly used biomarkers for EOS, but the diagnostic performance of CRP was poorly understood with most studies on late onset sepsis. In the past 15 years, our neonatal unit has used CRP systematically in neonates with risk or signs of EOS, providing a good opportunity to analyze its diagnostic accuracy.

**Objectives** In this study, we aimed to evaluate the performance of CRP for early onset infection diagnosis in asymptomatic neonates and screening in asymptomatic high-risk neonates.

**Methods** This is a retrospective study done in a tertiary neonatal care center in Hong Kong. Term neonates born during the period of 01/01/2005–30/06/2018 with blood taken for CRP testing in the first 72 hours were included. Their CRP results were included into the analysis if blood were taken before antibiotic treatment. Subjects were divided into four