

increased risk for developing LCH. We presented 3 cases, 2 of whom aged 6 months and below.

**Objectives** To provide a wider perspective in diagnosing LCH.

**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-5-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.

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

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10.1136/bmjpo-2021-RCPC.H.208

**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** Retrospective data on infants attending a government-subsidised primary care clinic between July 2019 to August 2020 was collected. Maternal characteristics (maternal age at birth and maternal education level at the child's 18-month visit) and infant characteristics (birth weight, birth height, infant gender and infant ethnicity) were recorded from electronic medical records. Weight and BMI were measured at birth, 1, 3, 6, 9, 12 and 18 months. The type of feeding (breastfeeding or formula feeding or soft diet or a mix of any of the 3) was reported at each visit. Mixed Model Repeated Measures analysis was performed to compare weight and BMI within each gender, ethnicity and number of months of breastfeeding.

**Results** 7125 infants attended the clinic during the study period. 50.5% of the participants were male. The majority of infants were Chinese at 68.7%, 22.8% were Malay and 5.1% were Indian. We observed a peak in BMI at 6 months of age, with a mean of 17.5 kg/m<sup>2</sup>. BMI then declined thereafter to 16.9 kg/m<sup>2</sup> at 12 months. We identified gender and ethnic differences in weight and BMI trajectories. Males had a higher mean weight and BMI than females across all time points. Chinese infants generally had a higher mean weight and BMI as compared to Malay and Indian infants. Indian infants exhibited the lowest BMI across all time points. With regards to feeding, 86.8% of the children were breastfed at 1 month of age and the prevalence declined to 54.8% by 6 months. Breastfeeding duration was identified as an important predictor of weight and BMI as a longer duration of breastfeeding was associated with a lower weight and BMI. Longer duration of breastfeeding was associated with a lower weight and BMI even when compared to those within the same gender and race.

**Conclusions** This study shows that gender, ethnicity and breastfeeding duration are early life predictors of rapid weight gain. Importantly, breastfeeding is a potentially modifiable predictor that may form the basis of targeted prevention efforts to reduce the risk of obesity.

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#### BONE DENSITY IN ASIAN ADOLESCENTS WITH ANOREXIA NERVOSA AND ATYPICAL ANOREXIA NERVOSA

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10.1136/bmjpo-2021-RCPC.H.209

**Background** Bone Mineral Density is frequently measured during the assessment and management of adolescents with Eating Disorders (EDs) such as Anorexia Nervosa (AN) and Atypical AN(AAN), which negatively affects the physical and mental developments of children at a vital phase of growth. Compromised bone accrual in adolescents has significant long-term implications on their peak bone mass and overall bone health