the most common presenting complaint. The median age of referral to our unit was 9.5 years (IQR: 4.8 – 12.1). 83% (n = 25) had received recombinant growth hormone treatment (rhGH), and the median age at initiation of rhGH therapy was 11.1 years (IQR: 7.0 – 13.3). The median age of pubertal induction was 14.6 years (IQR: 13.1 – 15.3).

In contrast, during the second decade, from 2016 to 2025, patients were diagnosed earlier, with a median age of 2.6 years (IQR: 0.2 – 10.6). Notably, 54.7% (n = 23) were diagnosed antenatally or during infancy due to typical TS features. However, the median age at referral was 7.7 years (IQR: 4.0 – 11.6). During this period, 45.2% (n = 19) began rhGH treatment, with the median age for initiation at 9.0 years (IQR: 5.7 - 11.3). The median age for pubertal induction was 13.8 years (IQR: 13.6 – 14.8).

All the patients underwent complete screening for associated abnormalities.

CONCLUSION

Referrals to a paediatric endocrinologist for Turner Syndrome are often delayed due to a lack of awareness of its various endocrinopathies. Early recognition of its salient features and prompt referral allows for timely intervention and management, predominantly growth hormone and sex hormone treatment, ultimately improving quality of life.

EP_P007

PREVALENCE AND FACTORS ASSOCIATED WITH THYROID DYSFUNCTION AMONG PREMATURE BABIES IN A SELECTED TERTIARY CENTRE IN MALAYSIA

https://doi.org/10.15605/jafes.040.S1.237

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INTRODUCTION

Premature babies have a higher risk of developing thyroid dysfunctions due to immaturity of hypothalamic-pituitary-thyroid (HPT) axis. Rescreening of thyroid function is recommended in Malaysia among preterm babies ≤34 weeks gestation since 2022 to improve detection of thyroid dysfunction with delayed TSH rise. This study aims to analyse the prevalence and factors associated with thyroid dysfunction in preterm babies ≤34 weeks gestation and to evaluate its progression and outcome.

METHODOLOGY

A retrospective study was performed among premature babies ≤34 weeks of gestation born between January 2019 until August 2024 in a selected NICU in Malaysia. Infants who had at least one repeated thyroid function test (TFT) after birth were included in the study. Data on the demographic factors and clinical characteristics were collected from the medical records. The TFT of the study population and its progression were analysed.

RESULT

There were 14% (46/320) infants with thyroid dysfunction. The majority of infants with thyroid dysfunction had subclinical hypothyroidism 84.7% (39/46), followed by thyroid hypothyroxinemia of prematurity (THOP) 8.7% (4/46) and primary hypothyroidism 6.5% (3/46). Out of the 46 patients with thyroid dysfunction, 18/46 (39.1%) were detected at <2 weeks of life, 20/46 (43.5%) were detected at 2-4 weeks old and 8/46 (17.4%) were detected after 4 weeks old. In the evaluation of factors associated with thyroid dysfunction, only small for gestational age (SGA) was significantly associated with thyroid dysfunction compared to infants without SGA (28.2% vs 14.2%, $p = 0.017$). Only 15/46 (32.6%) of infants with thyroid dysfunction required levothyroxine replacement, all of whom had primary and subclinical hypothyroidism. All infants with THOP had spontaneous resolution of thyroid dysfunction without treatment.

CONCLUSION

The prevalence of thyroid dysfunction in preterm babies ≤34 weeks was 14%. The majority were detected between 2-4 weeks old. SGA was significantly associated with thyroid dysfunction in this study population.

EP_P008

EVALUATING OUTCOMES OF CHILDHOOD OBESITY MANAGEMENT: A 2-YEAR FOLLOW-UP STUDY

https://doi.org/10.15605/jafes.040.S1.238

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INTRODUCTION

Childhood obesity (CO) clinic has served as screening and intervention center. Weight management programs in

children have not been fully established. This report is to understand the outcome after 2 years of follow-up in the same clinic.

METHODOLOGY

Children who were newly referred to the clinic from 2020-2023 (4 years) were identified. Patient demographic and anthropometric (weight, height, BMI, blood pressure and waist circumference) data at point 0 (first visit) and point 1 (2 years from the first clinic visit) were collected.

RESULT

A total of 78 new patients were included. Majority, 51 (65%). were males. A total of 27 (35%) did not come back for their second follow-up. Another 22 (28%) defaulted 2 years before. Only 29 (37%) completed follow-up for 2 years. At time point 0, the overall mean age was 12.1 ± 3.05 years with 11.96 ± 2.9 and 12.16 ± 3.07 for females and males, respectively. The mean height, weight and BMI were 143.6 ± 23.6 cm, 70.46 ± 22.75 kg and 30.3 ± 6.9 kg/m^2 for females and 150.66 ± 20.4cm, 70.95 ± 23.39 kg and 30.0 ± 5.0 kg/m^2 for males. At time point 1, the mean age for females was 13.45 ± 4.1 years-old and 14.2 ± 3.1 for males. The mean height and weight were 150.0 ± 19.3 cm and 76.8 ± 21.5 kg for females and 163.4 ± 19.6 cm and 83.7 ± 26.1 kg for males. The mean BMI were 32.4 ± 5.59 kg/m^2 and 31.3 ± 6.1kg/m^2 for females and males, respectively. Amongst those completed 2 years follow-up, 6/29 (20.6%) had weight loss and their mean weight and BMI losses were -6.8 kg and 2.745 kg/m^2. Amongst those who gained weight, the BMI gain was 2.165 kg/m^2. Six developed hypertension and 4 were diagnosed with pre-diabetes while under follow-up.

CONCLUSION

The expectation of weight loss while attending CO clinic may be overestimated. In the real-world data, the majority would fail to lose weight further and may develop other complications instead. Weight loss programs dedicated for children are needed to help these high-risk populations.

EP_P009

THYROID FUNCTION ABNORMALITIES IN PRETERM INFANTS: A COHORT STUDY IN A CHILDREN'S HOSPITAL

https://doi.org/10.15605/jafes.040.S1.239

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INTRODUCTION

Congenital hypothyroidism (CH) is a significant condition included in our national newborn screening programs based on raised cord thyroid stimulating hormone (TSH). However, in preterm infants, initial screening may miss elevated TSH. Hence, re-screening is recommended in most CH screening guidelines. This study aims to evaluate thyroid function abnormalities in preterm infants taken during re-screening.

METHODOLOGY

This is a retrospective study. All preterm infants admitted to our neonatal intensive care unit (NICU) between June 1, 2024 to February 1, 2025, with at least one thyroid function test (TFT) done will be included. Clinical parameters were extracted from the department's electronic medical record, and TFTs were retrieved from electronic laboratory records. The TFTs, including TSH and free thyroxine (fT4), were performed according to our NICU protocol, whereby:

- Infants <32 weeks: initial TFT at 4 weeks postnatally, repeated fortnightly.
- Infants ≥32 weeks: initial TFT at 36 weeks corrected age, repeated biweekly.

RESULT

There were 5,561 live births during the study period, of which 190 were preterm. A total of 120 preterm infants (55% male and 44% female) had at least one TFT done, of which 25 infants (20.8%) had abnormal TFTs. Transient hyperthyrotropinemia was the most common abnormality (15.8%), followed by transient hypothyroxinemia (3.3%). One case of primary hypothyroidism (1.7%) was diagnosed at the postnatal age of 40 weeks and required thyroxine treatment, giving rise to CH incidence of 1:120 in this cohort.

CONCLUSION

The majority of preterm infants with abnormal thyroid function had transient conditions and did not warrant treatment. Our CH incidence among preterm infants is high, which may be due to a smaller cohort. Our findings support the ongoing re-screening for CH in preterm infants. However, TFTs should be interpreted with caution to avoid over-treatment of transient thyroid dysfunction.