

## Paediatrics E-Poster

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  $12.1 \pm 3.05$  years with  $11.96 \pm 2.9$  and  $12.16 \pm 3.07$  for females and males, respectively. The mean height, weight and BMI were  $143.6 \pm 23.6$  cm,  $70.46 \pm 22.75$  kg and  $30.3 \pm 6.9$  kg/m<sup>2</sup> for females and  $150.66 \pm 20.4$  cm,  $70.95 \pm 23.39$  kg and  $30.0 \pm 5.0$  kg/m<sup>2</sup> for males. At time point 1, the mean age for females was  $13.45 \pm 4.1$  years-old and  $14.2 \pm 3.1$  for males. The mean height and weight were  $150.0 \pm 19.3$  cm and  $76.8 \pm 21.5$  kg for females and  $163.4 \pm 19.6$  cm and  $83.7 \pm 26.1$  kg for males. The mean BMI were  $32.4 \pm 5.59$  kg/m<sup>2</sup> and  $31.3 \pm 6.1$  kg/m<sup>2</sup> 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<sup>2</sup>. Amongst those who gained weight, the BMI gain was  $2.165$  kg/m<sup>2</sup>. 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.

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

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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.