# PAEDIATRIC

## PP-82

### Transient Congenital Hypothyroidism: Cut off Value for Diagnosis and Time to Normalization of Thyroid Function

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**Siti Hazlini AH,[1] Suhaimi H,[1] Najib Majdi Y[2]**
[1]*Department of Paediatric, Hospital Universiti Sains Malaysia*
[2]*Department of Biostatistics and Research Methodology, School of Medical Science, Universiti Sains Malaysia*

**INTRODUCTION**
Congenital hypothyroidism is one of the most commonly known cause of preventable mental retardation but detection at birth is difficult. As a continuum of this, screening programme was developed worldwide, which identified not only permanent hypothyroidism, but also group of disorders which was unidentified before due to unapparent clinical course namely transient congenital hypothyroidism (elevated thyroid stimulating hormone (TSH), decreased free thyroxine (FT4)) and transient congenital hyperthyrotropinaemia (elevated TSH, normal FT4). This study intended to look into cut off value for earlier discrimination between transient and permanent hypothyroidism, to determine median time for thyroid function to normalize upon cessation of treatment in transient group and its affecting factors.

**METHODOLOGY**
55 cases of congenital hypothyroidism were identified from retrospective record reviews. 37 cases were with permanent hypothyroidism and 18 cases were with transient hypothyroidism. The optimal cut off value of initial TSH and FT4 level were analyzed using receiver operating characteristics (ROC) curve analysis for both groups. Kaplan-Meier survival analysis was conducted to estimate median time for thyroid function to normalize within the transient hypothyroidism group. Both Simple and Multiple Cox Regression analysis were used to determine factors affecting the median time.

**RESULTS**
The cut off value for initial free T4 was 13.45 pmol/L with area under ROC curve of 70.5% (sensitivity 72.2%, specificity 64.7%). The median time obtained was 12 weeks and both the initial TSH and initial free T4 (p value <0.05) were the significant affecting factors identified.

**CONCLUSION**
The initial free T4 has a predictive value to differentiate between transient and permanent hypothyroid. It takes 12 weeks for thyroid function to normalize once treatment ceased and both initial TSH and initial free T4 affects the median time.

## PP-83

### Dyslipidaemia in Children with Type 1 Diabetes Mellitus (T1DM)

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**Yik Liang T,[1] Muhammad Yazid J,[2] Mazidah N,[2] Nurshadia S,[2] Azriyanti AZ[2]**
[1]*Newcastle University Medicine Malaysia, Johor, Malaysia*
[2]*Paediatric Endocrine and Diabetes unit, Department of Paediatrics, Faculty of Medicine, University Malaya, Kuala Lumpur, Malaysia*

**INTRODUCTION**
Children with T1DM are at risk of early microvascular and macrovascular complications. Poor glycaemic control and insulin resistance status in adolescents are known risk factors. This audit studies the prevalence of dyslipidemia in children with T1DM seen in UMMC.

**METHODOLOGY**
This is a retrospective data collection involving all children with T1DM under UMMC follow-up between 2016-2018. Children between 11-18 years old were included. Demographics on onset of diabetes, diabetes control and lipid profiles were analysed. Optimal HbA1c is <7.5% and dyslipidemia are defined if total cholesterol (TC)>5.2 mmol/L, triglycerides (TG)>1.7 mmol/L and high LDL level is >2.6 mmol/L which requires interventions on metabolic control and lifestyle. Statin should be commenced in children aged≥11 years if LDL is >3.4 mmol/L [ISPAD].

**RESULTS**
65 (33%male) children were eligible for the audit. Only 56 (86%) children had dyslipidemia screening. There were 28% Malay, 17% Chinese and 17% Indian children. The current mean age was 14.3±1.9 years old. 7.7% were underweight and 26.1% were overweight/obese. Mean age at diagnosis was 8.7±3.0 years old. Mean diabetes duration was 5.7±3.2 years. Mean HbA1c was 9.9±2.4% with 89% of them having sub-optimal control. Thirty-eight (68%) had dyslipidemia; 38% had abnormal TC levels, 23% had abnormal TG levels and 57% had abnormal LDL levels. 39% of children had LDL between 2.6-3.4 mmol/L and 18% had LDL>3.4 mmol/L. Only 2 were treated with statins. The odds of having dyslipidemia is highest in most poorly controlled T1DM (OR8.6 in HbA1c>11.1%, OR3.7 in 9-11%, OR1.5 if HbA1c 7.5-9%) and 2.31 in those who are overweight/obese. However, despite having good control (HbA1c<7.5%), 5.5% of T1DM children have dyslipidemia.