CONCLUSION

Children with T1DM are at risk of early onset dyslipidemia. Poor diabetes control and obesity are contributing factors. Current practice is to optimise diabetic control instead of using statins as initial treatment. Long term outcome on early statin use may influence the current practice.

PP-84

Eating Disorder in Adolescents with T1DM: A Concern on the Rise

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INTRODUCTION

Type 1 Diabetes (T1DM) is a chronic illness which affects the young. Managing diabetes is all about balancing the need for insulin with food. Adolescents with T1DM are at risk of having more eating disorder as compared to general population. This study aims to learn about the nutritional status and risk of eating disorder in adolescent with T1DM.

METHODOLOGY

Adolescents with T1DM were invited to participate in the study. The study was done over eight weeks, during diabetes clinic visits at University Malaya Medical Centre. Nutritional status will be determined by anthropometric measurements which includes body mass index and body fat percentage (PBF). BMI<-2SDS is considered underweight and>85Th centile for age is overweight. Eating disorder was identified using Diabetes Eating Problem Survey-Revised (DEPS-R) questionnaire. Data on diabetes control (HBA1c) and other histories were obtained from medical records.

RESULTS

There were 43 respondents, 61% were boys. Eighteen percent were Malays, 16% Indians and 9% Chinese. There were 13 adolescents between 10-12 years-old, 19 (12-15 years-old) and 11 (16-18 years old). Mean duration of having T1DM were 4.9±3.5 years and their mean HbA1c at study period were 10.3±2.7%. A total of 16% were found to be underweight and 14% were overweight and obese. There were more cases of underweight (27%) in adolescents between 16-18 years old. Boys were found to have higher PBF than girls. There were 35% adolescents who are at risk of eating disorder. Between BMI and Hba1c, BMI was found to have higher correlation to have eating disorder p=0.07 rs=0.3.

CONCLUSION

Adolescents with T1DM were found to have a high risk of having eating disorder. Screening should start early and formal assessment would assist with early diagnosis. Early referral to child psychologist may be necessary.

PP-85

Diabetes Nephropathy among Adolescents with Type I Diabetes Mellitus

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INTRODUCTION

Diabetic nephropathy (DN) is a common cause of mortality and morbidity of young T1DM adult patients. This study is to assess the prevalence of DN in T1DM among adolescents, and its association with duration of diabetes and control.

METHODOLOGY

This is a multicenter retrospective study in paediatric department University Malaya Medical Centre (UMMC) and paediatric department University Teknologi MARA (UiTM), involving children between 10 to 20 years old. Data collection on patient background, control and treatment were obtained. Patients are considered to have DN if the urine albumin/creatinine ratio is >3.5 mg/mmol (girls) >2.5 mg/mmol (boys) in 2 out of 3 samples within 6 months.

RESULTS

109 patients (40% boys) were eligible in the study. Mean age is 15.1±2.7 years old (10.6-20.3). The mean age of diagnosis is 8.8±3.5 years old. The prevalence of DN is 10.1%. Amongst patients with DN, the mean duration of diabetes is 5.9±2.5 years, and the mean HbA1C at year of DN diagnosis was 11.3±2.3%. Only one patient was diagnosed with DN <11 years old. This is due to initial poorly controlled DM. One patient had hypertension at the point of DN diagnosis. The odds of having DN is higher with poorly controlled T1DM (OR 6.9 if HbA1c>9% vs OR 0.76 if HbA1c 7.5-8.9%).

CONCLUSION
This study has shown children with T1DM may exhibit earlier changes of DN. Poor control is a known contributing factor. Consistent screening and early treatment should be routinely done.

PP-86

Hyperthyroidism in Children – A Malaysian Tertiary Centre Experience

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INTRODUCTION
Graves' Disease (GD) and Hashimoto thyroiditis (HT) are the most common cause of acquired hyperthyroidism in children. Use of Anti-thyroid drugs (ATD's) should be monitored and should aim for disease remission within 2 years. Radioactive iodine therapy or thyroidectomy is considered if remission is not achieved. We aim to study progress with ATD, thyrotoxicosis control and remission rate.

METHODOLOGY
This retrospective study is conducted in paediatric endocrine clinic, involving children who are diagnosed with acquired hyperthyroidism from 2006-2019. Subclinical hypothyroidism is considered if TSH is elevated with normal T4 levels. Complete remission is achieved when both clinical and biochemical parameters are euthyroid for 6 months after cessation of ATD.

RESULTS
Total of 20 patients (75% girls) were studied. Average age at diagnosis was 9.75±4.30 years old. All had carbimazole as ATD. Mean dose at diagnosis was 0.50±0.35 mg/kg/day, and propranolol 0.21±0.30 mg/kg/day. It took 2.68±2.29 months for the initial thyrotoxicosis symptoms to resolve. Mean duration on ATD was 34.40±20.96 months. Throughout treatment, 45% (n=9) had subclinical hypothyroidism (11 events), 35% (n=7) biochemical hypothyroidism (9 events) and 10% (n=2) clinical hypothyroidism (2 events). None had complete remission on ATD. One (5%) developed agranulocytosis which resolves with cessation of therapy. No hepatotoxicity reported. On average, every patient would have 1.4 episodes of relapse clinical thyrotoxicosis throughout duration of ATD. There is no significant difference between age of diagnosis and frequency of relapses (p=0.394). Two (10%) patients had thyroidectomy after an average of 41.5 months on ATD.

CONCLUSION
Whilst clinical thyrotoxicosis state can be managed with adequate dosing of carbimazole, we should consider proposing and executing definitive treatment earlier as per latest guidelines to minimise long term complications associated with hyperthyroidism.

PP-87

Lipid Profiles in Children and Adolescents with Type 2 Diabetes Mellitus

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INTRODUCTION
The incidence of Type 2 Diabetes Mellitus (T2DM) in children has increased significantly over the last two decades. T2DM is associated with high morbidity and mortality secondary to cardiovascular disease. This association has significant pathologic implications in paediatrics where earlier onset and accelerated progression of atherosclerosis has a profound impact on mortality and quality of life.

METHODOLOGY
The objective of this study was to evaluate dyslipidaemia in a paediatric population with T2DM. The electronic medical records (EMR) of patients under the age of 18 years (n=34) with T2DM and who were under the follow-up of the Paediatric Endocrine Unit, Hospital Putrajaya were reviewed.

RESULTS
The mean age of the population was 14.5 (2.5) years with median duration of diabetes 3[1.4–4.35] years. Mean age of onset of diabetes was 11 (1.8) years with the youngest age of onset at 8 years old. The patients were 61.8% female and 38.2% male. Mean BMI z-score was 2.1±0.05 and mean HBA1c was 9.6 (2.7). On complication screening 14.7% had hypertension, 26.5% had microalbuminuria, 55.8% of patients had an elevated LDL level and 35.3% had an elevated triglyceride level. BMI z scores were positively associated with elevated LDL and triglyceride level. Patients with a HbA1c >8% had a significantly higher total cholesterol, LDL and triglyceride level ($p<0.05$).

CONCLUSION
Increased HbA1C and BMI were associated with adverse lipid profiles in children and adolescents with T2DM. Therefore, poor glycaemic control and obesity represent two major modifiable factors to reduce cardiovascular risk in children with T2DM.