CONCLUSION

The high number of DKA cases is mainly caused by sepsis and non-compliance to medication, which are critical areas to address to prevent DKA occurrences. While infections may be inevitable, it is essential to counsel diabetes patients on the importance of strict adherence to their medications to avoid serious complications.

EP_A029

A CLINICAL AUDIT ON STATIN THERAPY AMONG TYPE 2 DIABETES MELLITUS PATIENTS ATTENDING PUSAT PERUBATAN ANGKATAN TENTERA (PPAT), SUNGAI BESI, MALAYSIA

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INTRODUCTION/BACKGROUND

Type 2 Diabetes Mellitus (T2DM) patients are at higher risk of developing atherosclerotic cardiovascular disease (ASCVD), which leads to increased morbidity, mortality and use of healthcare resources. Therefore, the primary prevention of ASCVD can be achieved by prescribing the appropriate doses of statin therapy depending on the patient's risk. This is a clinical audit on the use of statin therapy among type 2 Diabetes Mellitus patients at PPAT, Sungai Besi.

METHODOLOGY

This clinical audit aims to improve the quality of care of adult patients with T2DM in preventing ASCVD by utilizing the T2DM Clinical Practice Guidelines (CPG) 2020. A retrospective clinical audit was conducted using a convenient sampling method that involved 32 medical records from PPAT, Sungai Besi. Adults aged above 40 years with T2DM diagnosed for more than six months, and under active follow-up, were included. The criteria were based on the T2DM Clinical Practice Guidelines (CPG) 2020, with standards set at 90% and 50% based on literature reviews.

RESULT

A total of 32 medical records were audited. Most subjects were male (53%), with a median age of 54 years. 90.63% of T2DM adults were on statin therapy. The usage of statin therapy in T2DM patients above 40 years old is satisfactory and achieved the standard of 90%. However, only 20.69% were on high-intensity statin therapy and did not achieve the standard of 50%.

CONCLUSION

These issues need to be addressed by training healthcare providers. Enhancing clinic protocols to address relevant issues is imperative to enhance overall diabetes care, particularly ensuring appropriate utilization of statin therapy in T2DM patients who are either at high risk or very high risk of ASCVD.

EP_A030

UNVEILING EARLY CARDIOVASCULAR DISEASE PREDICTION IN TYPE 2 DIABETES: POTENTIAL ROLE OF CARDIOMETABOLIC BIOMARKERS

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INTRODUCTION/BACKGROUND.

Type 2 diabetes individuals are at higher risk of developing cardiovascular disease compared to the general population. Cardiovascular disease remains the leading cause of death in type 2 diabetes despite vigilant monitoring. Early detection of type 2 diabetes patients predisposed to cardiovascular complications is important to reduce the disease burden.

METHODOLOGY

This study aimed to investigate the potential role of cardiometabolic biomarkers in cardiovascular risk prediction among type 2 diabetes patients. A case-control

study consisting of type 2 diabetes with cardiovascular disease outcome, type 2 diabetes without cardiovascular complications and healthy control group was conducted in 221 participants. We employed a machine learning algorithm to develop a cardiovascular risk prediction model.

RESULTS
A combination of sociodemographic, anthropometry and routine biochemical data was assessed using ensemble classifier as the base model for predicting cardiovascular risk (84.8% accuracy, 76.5% positive predictive value in high-risk). The predictive ability was improved when serum ferritin, vitamin D and NT-proBNP (89.4% accuracy, 83.3% positive predictive value in high-risk) were added to the model.

CONCLUSION
As cardiometabolic biomarkers may potentially improve cardiovascular prediction, further analysis can be performed to validate their clinical utility in diverse type 2 diabetes individuals.

EP_A031

UNVEILING A RARE PRESENTATION: LARGE RENAL ABSCESS IN A TEENAGER WITH NEWLY DIAGNOSED DIABETES

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INTRODUCTION/BACKGROUND
Type 2 diabetes mellitus (T2D), once considered a pre-dominantly adult-onset disease, has witnessed a concerning surge in prevalence among adolescents worldwide emerging as a significant public health challenge. Studies have suggested that young-onset T2D might represent with more severe and rapidly progressive disorder than adults. We illuminate the clinical journey of a teenage patient who presented with a renal abscess as a rare complication concurrent with the diagnosis of diabetes.

CASE
A 13-year-old Indian female, with no known medical illness, presented with fever and osmotic symptoms for 1 month. Otherwise, she had no other infective symptoms. Upon presentation, she was hemodynamically stable and systemic examinations were unremarkable. Her BMI was 20 kg/m^2, with weight of 45 kg and height of 150 cm. She had acanthosis nigricans, capillary blood sugar of 13.2 mmol/L, serum ketone of 0.4 mmol/L, and no metabolic acidosis. Her investigations showed total white cells of 18.2x103/uL, c-reactive protein 146.9 mg/L and HbA1c 13.1%. Because of persistent fever, an ultrasound of the abdomen was done which revealed a right upper pole renal nephronia (3.1 x 2.5 x 1.8 cm) and a large left lower pole renal abscess (5.4 x 8.5 x 10.1 cm). The renal abscess was removed with pigtail drainage and the abscess culture & sensitivity grew Klebsiella pneumonia, sensitive to amoxicillin-clavulanate. After 6 weeks of adequate antibiotics and intensive insulin therapy, repeated imaging showed a resolved renal abscess. Her pancreatic auto-antibodies panel was positive for anti-Islet cell [42.9 IU/ml, (reference range <28)], and negative for anti-IA2 and anti-GAD. Distinguishing between the types of diabetes can be challenging in this age group. As she had clinical features of insulin resistance, high c-peptide level (1764 pmol/L) and parental history of T2D, she was diagnosed as young T2D with positive pancreatic autoantibody. During subsequent follow-up, her glycaemic treatment was de-intensified to basal insulin and metformin. In addition to dietary and lifestyle modification, her HbA1c improved to 6.0% with good glycaemic control.

CONCLUSION
There is an increasing prevalence of T2D in adolescents. However, renal abscess remains a rare presentation in teenagers with newly diagnosed diabetes. Successful management involved timely diagnosis, implementation of imaging, source control, adequate antibiotics and optimal glycaemic control.

EP_A032

DIABETES CONTROL AMONG ELDERLY DIABETIC PATIENTS IN KUANTAN, MALAYSIA

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INTRODUCTION/BACKGROUND
The transformation of the aging population in Malaysia carries a significant healthcare burden in chronic diseases like Type 2 Diabetes Mellitus (T2D).