EP_A034

EUGLYCEMIC DIABETIC KETOACIDOSIS PRECIPITATED BY HYPERTRIGLYCERIDEMIA-INDUCED PANCREATITIS, LIVER ABSCESS AND SODIUM-GLUCOSE COTRANSPORTER-2 INHIBITOR USE IN A PATIENT WITH FAMILIAL HYPERTRIGLYCERIDEMIA

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INTRODUCTION/BACKGROUND

Euglycemic diabetic ketoacidosis (EDKA) has a worse outcome than typical DKA as it is relatively rare and remains a diagnostic challenge. Conditions such as sepsis, pancreatitis, use of sodium-glucose cotransporter-2 inhibitors (SGLT-2i), pregnancy and starvation are known to be associated with EDKA. We report a case of a patient with Type 2 Diabetes Mellitus (T2DM) and familial hypertriglyceridemia on SGLT-2i who presented with hypertriglyceridemia-induced pancreatitis (HTGP) concurrently with EDKA.

CASE

A 31-year-old female presented with epigastric pain, vomiting and lethargy. The clinical exam revealed tender epigastrium with no guarding and negative Murphy's. Serum amylase was 242 U/L (Imrie score 2, BISAP 1) and C-reactive protein (446 mg/L). The ultrasound of the abdomen revealed an ill-defined collection (2.3 x 3.2 cm) at segment V of the liver with findings suggestive of chronic pancreatitis. She had three prior admissions due to acute pancreatitis and once complicated by an infected pancreatic pseudocyst. She was diagnosed with T2DM and familial hypertriglyceridemia five years ago, with poorly controlled glucose and lipid profile (HbA1c 8.4%, triglycerides 33.4 mmol/L). She is on an SGLT2 inhibitor, amongst other medications, which she continued taking despite her illness. She developed EDKA in the ward (pH 7.43, PCO_2 20, HCO_3 14, serum ketone 3.6, lactate 0.8). She was started on DKA treatment, then continued with variable rate insulin sliding scale, fasting, statin, fibrates and intravenous antibiotics. Dietary and lifestyle advice were reinforced. She was discharged well after two weeks (triglyceride 4.2 mmol/L, C-reactive protein 2 mg/L) with resolved symptoms and liver lesions.

CONCLUSION

EDKA should be a well-recognised diagnosis in an era where there is growing use of SGLT2i, especially in patients with multiple precipitating factors. Physicians must have a high clinical suspicion in patients who are on SGLT-2i in acute illness. In addition, we need to consider that EDKA can precipitate HTGP and vice versa. In both conditions, early initiation of continuous intravenous insulin infusion can improve outcomes.

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A REVIEW OF CLINICAL PROFILE AND GLYCEMIC CONTROL OF PATIENTS WITH YOUNG-ONSET TYPE 2 DIABETES MELLITUS ON INTENSIVE INSULIN THERAPY

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INTRODUCTION/BACKGROUND

Young-onset type 2 diabetes mellitus (T2D) is a more aggressive subgroup of T2DM with rapid disease progression and rate of complications. Many patients progress to intensive insulin therapy early in the disease process due to decompensation and poor glycaemic control.

METHODOLOGY

We aimed to review the demographic profile, glycaemic control, and prevalence of complications in patients with young T2DM on intensive insulin therapy at the Endocrine Institute of Hospital Putrajaya. A retrospective audit was conducted using electronic medical records. Patients with T2DM between the age of 18-40 years on basal-bolus insulin therapy attending the outpatient diabetes clinic between January 2022 – March 2024 were included. Data about the demographic profile, insulin therapy, glycaemic control and complications were collected. A descriptive analysis using SPSS version 25.0 was performed.

RESULTS

The analysis involved a total of 72 cases, with a mean age of 33.7 years. Females comprised two-thirds (68.1%), with Malays being the majority (81.9%). The mean weight was 85.3 kg and the mean BMI was 32.1 kg/m^2. The mean duration of diabetes was 10.1 years. Among them, 62.5% have comorbidities such as hypertension and dyslipidaemia, and 48.6% are obese. The average duration of insulin therapy was 5.9 years. The mean HbA1c was 10.3% before insulin therapy and 9.5% on current intensive insulin therapy. Microvascular complications were prevalent (73.6%), with