mutations in phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha, which induce hyperactivation of phosphatidylinositol 3-kinase (PI3K) contributing to resistance to endocrine therapy. The use of PI3K inhibitor (alpelisib) in combination with fulvestrant has been approved for the treatment of postmenopausal women with HR+/HER2-, PIK3CA- mutated advanced breast cancer. Hyperglycemia is the most common side effect of Alpelisib.

CASE
We describe a 54-year-old female with diabetes who developed uncontrolled hyperglycaemia after initiation of Alpelisib despite taking Vildagliptin and basal-bolus insulin (total daily dose: 52 units per day). Before alpelisib initiation, this patient had good glycaemic control with HbA1c of 6.7% while on Metformin 500 mg BD. Her oncologist discontinued Metformin and started the patient on Vildagliptin 50 mg OD due to renal impairment. Her blood glucose levels (monitored by a continuous glucose monitoring device) significantly worsened once alpelisib was started. On day 1 of treatment, her sugar increased to more than 10 mmol/L, thus basal-bolus insulin was started. Despite basal-bolus insulin (S/C Glulisine 12 units TDS, S/C Insulatard 16 units ON), her glucose remained in the range of 10 to 17 mmol/L. Empagliflozin was started on day 8 of Alpelisib treatment. With Empagliflozin, blood glucose levels improved, ranging between 6 to 10 mmol/L, and we were able to discontinue insulin therapy.

CONCLUSION
We report the successful management of alpelisib-induced hyperglycaemia with the use of SGLT-2 inhibitor.

EP_A013

SEVERE HYPERTRIGLYCERIDEMIA IN A NEWLY DIAGNOSED TYPE 1 DIABETES PATIENT WITH DIABETIC KETOACIDOSIS

https://doi.org/10.15605/jafes.038.S2.31

Sherlyn Lai Hui Ern and Eunice Lau Yi Chwen
Hospital Sibu, Sarawak, Malaysia

INTRODUCTION/BACKGROUND
Elevated triglycerides are often noticed during periods of insulin deficiency. Severe hypertriglyceridemia (Triglyceride >10 mmol/L) is an uncommon complication of diabetic ketoacidosis (DKA) and is associated with an increased risk of acute pancreatitis.

CASE
A 14-year-old female student with a history of COVID-19, one month prior, presented with a one-day history of severe abdominal pain and breathlessness. This was preceded by a 2-month history of weight loss of 5 kg. She had severe metabolic acidosis and was intubated due to respiratory distress.

Laboratory results showed blood glucose of 19.8 mmol/L, serum ketones of 6.2 mmol/L, pH 6.99 and serum bicarbonate of 5.6 mmol/L. Serum amylase and urine diastase were normal. Her plasma had a "milky" appearance, and her total cholesterol level was 41 mmol/L with a triglyceride (TG) of 199 mmol/L. She was managed in the intensive care unit with fluid resuscitation, dietary restriction, fenofibrate and high-dose insulin infusion of up to 0.2 U/kg/hour. She responded well with TG levels reduced to 7.37 mmol/L on day 2 of admission. Subsequently, she was transitioned to subcutaneous insulin. Her HbA1c reduced from 15.8% to 7.3% over four months, and her TG improved to 0.5 mmol/L. Her anti-islet cell, anti-GAD and anti-insulin IA2 autoantibodies were strongly positive. Thyroid function test and screening for diabetic complications were negative.

CONCLUSION
Severe hypertriglyceridemia can be effectively managed in the acute situation with high-dose insulin to bring down the triglyceride level. Optimal glycaemic control also plays an important role in maintaining suppressed triglyceride levels.

EP_A014

EUGLYCAEMIC DIABETIC KETOACIDOSIS AS A CAUSE OF REFRACTORY METABOLIC ACIDOSIS IN A PREGNANT PATIENT

https://doi.org/10.15605/jafes.038.S2.32

Siti Sanaa WA, Masliza Hanuni MA, Firdaus MK
Endocrinology Division, Medical Department, Hospital Sultanah Nur Zahirah, Kuala Terengganu, Malaysia

INTRODUCTION/BACKGROUND
Euglycemic diabetic ketoacidosis (DKA) in pregnancy is a rare obstetric emergency that may lead to substantial morbidity and mortality to both the mother and foetus. Prompt recognition is challenging due to misleading euglycemic state. The risk for euglycaemic DKA increases during the second half of pregnancy due to the higher levels of hormones with anti-insulin effects, increase in insulin demand, combined with exhausted glycogen stores.

CASE
We report a case of a 33-year-old female G3P2 at 33 weeks AOG, admitted for fever, cough, vomiting and poor oral intake for three days. Antenatally, she had GDM and was well-controlled on metformin. On arrival she was

tachycardic with HR of 106 bpm, and tachypnoeic with RR 28/min, requiring 5 L oxygen. There were coarse crepitations over the right lower and mid-lung field.

Her laboratory results showed TWBC of 6.5 x 10^9/L, hypokalaemia (3.0 mmol/l) and mild metabolic acidosis (pH 7.43, HCO_3 18.8 mmol/l). CXR revealed consolidation over the right lower zone. CTPA excluded pulmonary embolism. Her clinical condition deteriorated with serial blood gases in the ward showing worsening and persistent metabolic acidosis (pH 7.284, HCO_3 12.9 mmol/l, pCO_2 20.5, lactate 1.1 mmol/l) with an anion gap of 12. Her glucose readings were within the normal range, 5.3-5.9 mmol/L. We arrived at a diagnosis of euglycaemic DKA only when the urine ketone came back as ++ and blood ketone was 3.5 mmol/L. From here, IV Dextrose 10% boluses were given with 104 ml/hour maintenance over 24 hours. Concurrently, she was started on fixed-dose insulin infusion which was intensified accordingly. Ketoacidosis resolved and she was discharged well with SC levemir 8 units ON.

CONCLUSION

Our case highlights that it is imperative for the treating physician to have a high index of suspicion of this condition, so as to not delay lifesaving management.

EP_A015

COMPARISON DIABETIC KETOACIDOSIS (DKA) ADMISSION AMONG TYPE 2 DIABETIC MELLITUS (T2DM) PATIENTS DURING PRE RAMADAN AND RAMADAN: ASSOCIATED FACTORS, OUTCOME AND SEVERITY

https://doi.org/10.15605/jafes.038.S2.33

Fakruradzi Z,[1] Wan Mohd Izani WM,[2] Najib Majdi Y,[3] Masliza Hanuni MA[1]

[1]*Medical Department Hospital Sultanah Nur Zahirah Kuala Terengganu, Malaysia*

[2]*Medical Department Hospital Universiti Sains Malaysia, Kubang Kerian Kelantan, Malaysia*

[3]*Biostatistics Department Hospital Universiti Sains Malaysia, Kubang Kerian Kelantan, Malaysia*

INTRODUCTION

Risk for DKA was increased during Ramadan in patients with advanced micro- and macrovascular complications and renal insufficiency. Associated factors are non-compliance to insulin and infections. DKA admission in Ramadan leads to prolonged hospital stay and is associated with higher mortality.

METHODOLOGY

This is a retrospective study conducted in a tertiary hospital in Terengganu. All DKA admissions during Ramadan and 3 months pre-Ramadan from January 2015 to December 2019 were identified. Patients with T2DM who fasted during Ramadan were included in this study. Associated factors, outcomes (length of hospital stay and mortality) and severity of DKA in Ramadan and pre-Ramadan periods were compared. This study obtained ethical approval from 2 local ethical committees.

RESULT

There were 117 patients included in the study. The majority of admissions were males (54.2% pre-Ramadan, 61.8% Ramadan). The mean age was 47 years (pre-Ramadan) and 40 years (Ramadan). A majority had pre-existing T2DM pre-Ramadan (96.4%) and during Ramadan (97.1%), with most patients on insulin treatment: 66.3% and 94.1%, respectively. Mean HbA1c was 12.4% for pre-Ramadan and 12.0% for Ramadan. A majority had poor compliance with treatment at 83.1% and 100% in pre-Ramadan and Ramadan, respectively. Diabetes-related complications were present in 59% (pre-Ramadan) and 85.3% (Ramadan) of patients. Insulin treatment and diabetes-related complications were significantly associated with DKA during Ramadan (adjusted odd ratio [OR] 8.00, [2.16 – 52.48], *p* 0.007) (adjusted [OR] 3.97, [1.45 – 12.89], *p* 0.012), respectively. No significant difference was observed in length of stay (5 days vs. 4 days) and mortality rate (7.7% vs. 8.8%). The severity of DKA pre-Ramadan was similar (30.1% mild, 38.6% moderate, 31.3% severe). During Ramadan, the majority of patients were admitted as moderately severe (76.5%).

CONCLUSION

Insulin treatment and diabetes-related complications were associated with DKA admission in Ramadan. There was no observed difference in length of hospital stay and mortality between groups. Majority of patients presented with moderately severe DKA during Ramadan.