past admissions and lack of continuity of care delayed the diagnosis.
Conclusion: IAS should be considered especially in those who have no clear etiology of hypoglycemia in order to avoid unnecessary diagnostic and therapeutic procedures. Gold standard test for definitive diagnosis is IAA. As IAS is frequently self-remitting, supportive management is usually recommended. In severe cases, pharmacotherapies that reduce insulin secretion and immunosuppressants are occasionally necessary. But there is still no study that compares different treatment measures.

Diabetes Mellitus and Glucose Metabolism

DIABETES CASE REPORTS

A Case of Concomitant COVID-19 Infection-Induced Acute Respiratory Distress Syndrome and Diabetic Ketoacidosis: Another Challenge in Fluid Management

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Background: Coronavirus Disease 2019 (COVID-19) has been announced as a pandemic worldwide. The respiratory tract is a target organ-system which can result in serious complications like acute respiratory distress syndrome (ARDS). Management of this condition is more challenging in diabetes who developed diabetic ketoacidosis (DKA).
Clinical Case: We report a case of a 59-year-old male who presented with 4 days of productive cough with blood-tinged sputum, shortness of breath, and chills. Patient had decreased oral intake and had not been compliant with his medication. He had underlying disease significant for type 2 diabetes, essential hypertension, obesity (BMI 32 kg/m2), history of pancreatitis and diabetic ketoacidosis. His diabetes medications included insulin degludec 126 units with insulin lispro sliding scale, dulaglutide, metformin, and sitagliptin. On examination, the patient was lethargic. Initial vital signs included a temperature of 36.8°C, respiratory rate 24/min, heart rate 65 bpm, BP 140/67 mmHg, and oxygen saturation 91% on room air. Lung auscultation revealed bilateral widespread crackles. Laboratory was significant for glucose 387 mg/dL (70–139), pH 7.25 (7.35-7.28), anion gap 15.8 mEq/L (6–14) and concurrent normal gap acidosis, urine ketones 15 mg/dL (negative), and LDH 325 U/L (140–171). An initial chest x-ray showed bilateral peripheral pulmonary infiltrates. Workup was negative for influenza, pneumococcus, and legionella. The patient was subsequently intubated on the first day for worsening hypoxia due to severe ARDS (PaO2/FiO2 ratio of 71). He was concomitantly treated for DKA and hypotension with intravenous insulin, initially started at 12 units/hour with subsequent titration down to average of 5 units/hour, fluid resuscitation (approximate 34 ml/kg actual body weight) and, potassium repletion on the first day. On the same day, his hypoxia worsened with an increase in pulmonary infiltrates, so we stopped intravenous fluids and initiated norepinephrine for 24 hours. His mechanical ventilation settings followed ARDS guidelines. Positive COVID-19 was detected from real-time RT-PCR. After maintaining a negative fluid balance, we were able to extubate in 72 hours. Intravenous insulin was continued for 46 hours then was switched to subcutaneous basal-bolus regimen. He was discharged with insulin degludec 100 units with insulin lispro sliding scale, metformin, and sitagliptin. Dulaglutide was held.
Conclusion: Type 2 diabetes are rarely affected by DKA but can be found in up to 27% of the cases. There are reports of ARDS as a serious complication in severe DKA in adults and children, yet no data for concomitant DKA and ARDS has been published. We propose that the management of DKA in COVID-19 patients with ARDS may be similar to the paradigm utilized for other volume restriction in patients with congestive heart failure and end-stage renal failure.

Diabetes Mellitus and Glucose Metabolism

DIABETES CASE REPORTS

A Case of Diabetic Keto Acidosis From Alpelisib

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Introduction: Alpelisib is a phosphatidylinositol-3-kinase (PI3K) inhibitor, approved for the treatment of hormone receptor positive, human epidermal growth factor receptor-2 negative, PIK3CA-mutated metastatic breast cancer. While hyperglycemia is a known side effect of this drug, diabetes ketoacidosis (DKA) is rare. Only one case was previously reported in the literature to our knowledge. Here, we report a patient with prediabetes who presented with DKA after initiation of Alpelisib. **Case Presentation:** A 48 y.o. woman with metastatic left breast cancer was started on Alpelisib 300mg/day. HbA1C prior to the initiation of Alpelisib was in the prediabetes range at 5.7% with a fasting glucose of 106 mg/dL. Three weeks later, she presented to the ER with abdominal pain, nausea and vomiting. Vitals were notable for sinus tachycardia of 130 bpm. Exam was notable for diminished lung sounds over left lower chest. Labs revealed elevated serum glucose of 302 mg/dL, anion gap metabolic acidosis (anion gap 19, bicarbonate 10) and elevated beta hydroxy butyrate of 7.58 (normal < 0.27 mmol/L) consistent with DKA. Intravenous insulin infusion per DKA protocol was initiated and Alpelisib was held. She was bridged and subsequently transitioned to insulin glargine with insulin lispro sliding scale. Her C-peptide was 1.47 ng/mL (normal 0.90 - 4.30 ng/mL) with negative anti-GAD antibody. She developed multiple episodes of symptomatic hypoglycemia despite reduced insulin doses, requiring eventual discontinuation of insulin, followed by stabilization of blood glucose levels. Subsequent hospital course was complicated by acute respiratory failure from malignant pleural effusion due to which hospice care was initiated. **Discussion:** Hyperglycemia, diarrhea, nausea and rash are common side effects of PI3K inhibitors. Insulin binds to insulin receptor substrate which activates PI3K, which in turn activates protein kinase B resulting in the translocation of the glucose