A Case of Euglycemic Diabetic Ketoacidosis After Distal Pancreatectomy

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The patient is a 68-year-old female with a past medical history of type 2 diabetes mellitus, pancreatic mass, hypertension, hyperlipidemia, and coronary artery disease who presented to the hospital for elective surgical resection of her pancreatic mass. She underwent robotic-assisted laparoscopic distal pancreatectomy, splenectomy, and gastric wedge resection. Her hospital course was complicated by post-operative bleeding with hemoperitoneum the day after her initial surgery. She returned to the operative room for exploratory laparotomy during which the source of bleeding was identified and repaired. She was transferred to the intensive-care unit for post-operative monitoring. On the fourth day of admission, the patient became markedly acidotic. Her labs revealed a bicarbonate level of 12 mmol/L and a pH of 7.24. Her anion gap was elevated to 17. Endocrinology was consulted for suspected euglycemic diabetic ketoacidosis. Beta-hydroxybutyrate was elevated to 5.10 mmol/L (0 - 0.29 mmol/L). The patient’s blood glucose was 159 mg/dL. Of note, the patient does take Empagliflozin at home. This medication has been associated with euglycemic diabetic ketoacidosis; however, she had not received this medication for five days prior to the onset of diabetic ketoacidosis. Glucosuria is expected to return to baseline after discontinuation of Empagliflozin within approximately three days. A urinalysis was checked at the time of consultation, and the patient did have a large amount of glucose in her urine which suggests that Empagliflozin was still acting to produce glucosuria. The patient was treated with intravenous insulin and fluids per the institution’s protocol for the management of diabetic ketoacidosis. Her acidosis rapidly improved, and she was transitioned to subcutaneous insulin to manage her diabetes prior to discharge. This is an interesting case of euglycemic diabetic ketoacidosis due to the multifactorial precipitants: the dwindling effect of Empagliflozin five days after discontinuation, the loss pancreatic beta cell mass after distal pancreatectomy, and the stress of multiple surgeries complicated by life-threatening post-operative bleeding.

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