

Features of Insulin Autoimmune Syndrome After Simultaneous Diabetic Ketoacidosis and Thyroid Storm in a 49 year old Filipino Woman

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A 49 year old woman came in at the emergency department due to 1 day history of vomiting, undocumented fever, severe dyspnea and generalized body weakness. She is a known diabetic on insulin since she was 33 years old and was just recently diagnosed with Grave's disease 3 months prior on Methimazole. She had erratic compliance to medications and no regular follow-up with her private physician. She was seen in respiratory distress, altered mentation and agitation. Preliminary evaluation revealed tachycardia of 140s, acidemia with pH of 7.1, a critically high capillary blood glucose and features of dehydration. She was managed as a case of diabetic ketoacidosis (DKA) simultaneously with thyroid storm (TS) having a Burch and Wartofsky score of 60. After a day in the ICU, DKA and TS were resolving and the insulin drip was shifted to once daily glargine and premeal glulisine as diet was resumed. However, the patient started to have spontaneous daily morning hypoglycemia from 70mg/dL to below 10mg/dL initially thought to be caused by exogenous insulin, nonetheless became persistent despite significant reduction in insulin doses and more frequent meals. This was accompanied by hyperglycemia in the evening which ranged between 300 and 500 mg/dL. This case was a diagnostic and therapeutic dilemma. Although insulin autoimmune syndrome was entertained with elevated insulin antibodies, the patient still had hypoglycemic episodes even with hydrocortisone. She was shifted from methimazole to PTU which decreased frequency of morning hypoglycemia however still had erratic glucose levels throughout the day.