be a risk factors for severe illness and mortality between patients with SARS-CoV-2.

We present the case of a 39-year-old woman with medical history of uterine fibroma, who presented with complaints of general malaise, polyuria and polydipsia of one week evolution, associated with sore throat, subjective fever, dry cough, abdominal pain, nausea and vomiting. Physical examination remarkable for dry oral mucosa, decreased skin turgor, and prolonged capillary refills. Vital signs significant for hypertension, tachycardia, and tachypnea. Laboratory work up remarkable for glucose of 1321 mg/dL, HCO3- of 16 mEq/L, serum osmolality of 333 mosm/kg, serum ketones positive and HbA1C of 15%. ABG's showed pH of 7.33, PCO2 of 29.8 and a PAO2 of 158.5 mmHg for a high anion gap metabolic acidosis (AG of 15.3 mEq/L), non-anion gap metabolic acidosis with respiratory alkalosis. Chest X-ray revealed bilateral perihilar, peribronchial cuffing. SARS-CoV-2 PCR testing was positive. Clinical and laboratory workup met criteria for diagnosis of HHS and Diabetes Mellitus de Novo most likely secondary to SARS-CoV-2 infection. Patient was treated with aggressive IV hydration and insulin infusion with resolution of hyperglycemia, ketonemia and symptoms.

SARS-CoV-2 infection can precipitate acute metabolic complications in patients with diabetes or unknown diagnosis of diabetes. The effect of the virus could be direct effect on β-cell function. To our knowledge, there are only a few cases reported of HHS precipitated by SARS-CoV-2 infection therefore medical awareness is important for early diagnosis of possible triggering factors such as COVID-19 and early management of patients presenting with new onset hyperglycemic emergencies.

Diabetes Mellitus and Glucose Metabolism
DIABETES CASE REPORTS
An Unusual Case of Latent Autoimmune Diabetes in Adult and Pancreatic Neuroendocrine Tumor in a Patient Presenting With Diabetes
Neelam Baral, MD1, Sriram Gubbi, MD2, Ghadah Al-Naqeeb, MD2, Joseph G. Verbalis, MD2.
1Georgetown University, Washington, DC, USA, 2National Institutes of Health, Bethesda, MD, USA.

Introduction: Latent autoimmune diabetes in adults (LADA) and pancreatic neuroendocrine tumors (PNETs) are rare causes of adult-onset diabetes mellitus (DM). The existence of both LADA and a PNET in a single patient has not been previously reported.

Clinical Case: A 65-year-old female with history of type 2 DM diagnosed 15 months ago, on metformin 500mg twice a day presented with fatigue, dry mouth, polyuria, and blurry vision for one week and weight loss of 12 pounds over 3 months. Plasma glucose was 599 (nl 65–144 mg/dL) with an elevated anion gap (17; nl 5–15 mmol/L), low bicarbonate (19; nl 21–32 mmol/L) and elevated beta hydroxybutyrate (4.79; nl 0.02–0.27 mmol/L). Diabetic ketoacidosis was diagnosed, and intravenous fluids and insulin were administered. Work up revealed HbA1C of 14% (nl 4.2%-5.6%) which had increased from 7% noted three months ago. glutamic acid decarboxylase antibodies (GAD65 Ab) was >250 (0.0–0.5 IU/mL) and C peptide was 0.42 (0.81–3.85 ng/mL). A computed tomogram of the abdomen performed to evaluate the acute worsening of her HbA1C revealed a 1.4 x 1.3 cm poorly defined hypoechoic pancreatic head lesion, which on magnetic resonance imaging was 1.6 x 1.2 cm. Further evaluation showed normal levels of glucagon (127; nl <208 ng/L), somatostatin (26; nl <30 pg/mL) and vasoactive intestinal peptide (<13; nl 0–60 pg/mL), and an elevated chromogranin A (155; nl 0-95 ng/mL). An endoscopic ultrasound guided fine needle aspiration of pancreatic head mass revealed a well differentiated NET with Ki-67 proliferation index of <1%. She underwent pylorus preserving pancreaticoduodenectomy and histopathology showed a 2 cm grade one NET on pancreatic head with no involvement of the 23 tested lymph nodes. Immunohistochemistry was positive for chromogranin and synaptophysin and negative for insulin, somatostatin and gastrin, confirming diagnosis of well-differentiated pancreatic NET Stage Ib (T2N0M0). Whole body PET CT scan done 2 months following surgery did not reveal any focal radiotracer uptake to suggest metastasis. Given the presence of GAD65 Ab, age of onset of DM, and an initial non-requirement of insulin, the patient was diagnosed with LADA and insulin therapy was initiated.

Conclusion: We report a unique case of a patient with LADA who was incidentally found to have a non-functioning pancreatic NET. Although functional PNETs such as glucagonoma and somatostatinoma cause hyperglycemia, DM associated with non-functioning NETs is rare, but has been reported with gastrointestinal NETs (1). Our patient likely developed uncontrolled hyperglycemia from LADA but was incidentally found to have a PNET which may have contributed to the worsening of hyperglycemia. This highlights the importance of thorough evaluation for the causes for acute worsening of hyperglycemia.

Diabetes Mellitus and Glucose Metabolism
DIABETES CASE REPORTS
Anaphylactic Reaction to Dulaglutide: A Glucagon Like Peptide- 1 Receptor Agonist
Hamza Quadri, MD1, Basma Ataallah, MD2, Gregory Haggerty, PhD2.
1NORTHWELL HEALTH, INC., Port Jefferson, NY, USA, 2NORTHWELL HEALTH, Port Jefferson, NY, USA.

Introduction: The development of Glucagon like peptide-1 (GLP-1) receptor agonists represents an important advancement in the management of type 2 diabetes. The long-acting GLP-1 receptor agonist improve glycemic control, promote weight loss. Anaphylaxis to GLP-1 receptor agonists and mainly Dulaglutide is a rare but serious side effect. We report a patient with Type 2 DM who was recently started on Dulaglutide and started to experience systemic hypersensitivity reactions that required discontinuing the medication and inpatient hospitalization. Case: A 53-Year-old Caucasian female with past medical history of type 2 DM on Metformin presented to the ED with sudden onset of sporadic itchy rash on the lip and chin associated with lip swelling within one hour of her first
Diabetes Mellitus and Glucose Metabolism

**DIABETES CASE REPORTS**

**Application of the S (AD) SAD System as a Prognostic and Evaluation Tool for the Multidisciplinary Approach to Diagnosis and Management Latent Autoimmune Diabetes in Adults: A Case Report**

Dita Gemiana, MD, Andi Alfian, MD, Dicky Levenus Tahapary, MD, PhD, Andihika Rachman, Dr, MD.
University of Indonesia, Jakarta, Indonesia.

**Introduction:** Latent Autoimmune Diabetes in Adults (LADA) is used to describe a form of autoimmune diabetes that has a later onset and a slower progression toward an absolute insulin requirement. The presence of pancreatic autoantibodies especially to Glutamic acid decarboxylase (GAD65) is the best single marker required to diagnose LADA. **Case Illustration.** A 35-year-old male came to emergency room with complaints of shortness of breath since twodays before admission. Tightness was not affected by activities or changes in position. The patient also had complaints of vomiting since 3 days before admission. There was a weight loss of 10 kg in the last 1 month and complaint urinated frequently. There is no family history of diabetes and autoimmunity. The patient’s blood sugar level was 422 mg/dL, blood ketone was 5.6 mmol/L, and the blood gas analysis showed metabolic acidosis. The c-peptide level was 0.35 ng/mL (1.1 - 4.4 ng/mL). Patients was positive for glutamic acid decarboxylase (GAD) autoantibodies. Patients was diagnose injection of Dulaglutide. She denied difficulty breathing, rash or pruritus on any other part of the body. She denied any food allergies. The patient used two tablets of Oral Diphenhydramine 25 mg with minimal improvement in her symptoms which warrant her to come to the ED. On arrival, she was Afebrile with a HR 97 beats/minute, a BP of 105/58 mm of Hg and a RR of 17 breaths/minute. The rash was blotchy, non-tender, more evident on the upper lip as compared to the lower lip. Lab results showed WBC count of 11 k/uL with basophils of 2% and HbA1c 8.6%. She was treated for her allergic reaction with Intramuscular injection of Epinephrine 0.3mg. Intravenous Dexamethasone 3mg, Intravenous Diphenhydramine 25mg. She was then transferred to the observation unit for monitoring. Her home metformin 500mg two times a day was continued. After 48 hours, the patient’s symptoms were improved and she was discharged home. She was advised to follow up with her PCP and endocrinologist and stop Dulaglutide. **Discussion:** GLP-1 receptor agonists are commonly used currently in the management of DM due to their beneficial effect in controlling blood glucose as compared to other diabetic medications. Rarely, a potentially life-threatening reaction, such as anaphylactic reactions have been documented with GLP-1 receptor agonist. Systemic allergic reaction to GLP-1 Agonist Exenatide has been reported in the literature. Our patient had anaphylactic reaction after using Dulaglutide. The mechanism of action of anaphylaxis in GLP-1 receptor agonists is thought to be related to IgE mediated and the immune response was demonstrated by basophil activation.