The diagnosis of hypoglycemia in adults without diabetes mellitus is a medical challenge. Insulin autoimmune syndrome (IAS), also known as Hirata’s Disease, is a rare condition characterized by episodes of spontaneous hypoglycemia secondary to hyperinsulinemia in the setting of positive insulin autoantibodies. 380 cases of IAS have been reported worldwide between 1970 and 2009 with majority of cases seen in patients of Asian descent. Here we present a case of a patient who presented with episodes of recurrent hypoglycemia secondary to IAS. 85 year old Asian female presented to the endocrinology office for recurrent episodes of presyncope which were associated with presumed hypoglycemia. Patient denied a history of gastric bypass surgery, diabetes, use of oral hypoglycemic agents, change in eating habits, fevers, weight loss, or night sweats. A continuous glucose monitor was placed during the visit due to patient having difficulties using a glucometer and on follow-up, multiple episodes of hypoglycemia were noted, dropping down to 50mg/dL throughout the day. Due to recurrent symptomatic hypoglycemic episodes, she was admitted to the hospital for a workup.

Point of care (POC) glucose on presentation to the ED was 166 mg/dL. 4 hours later in the ED, POC glucose was 42 mg/dL with serum confirmation of 44 mg/dL. Last meal was about 6 hours prior to this event and no dextrose containing solutions were used in the ER. Prior to correction of hypoglycemia, blood specimen sent for the following: c-peptide 3.4 ng/mL, beta-hydroxybutyrate 0.12 mmol/L, insulin level 285 µIU/mL, and proinsulin 93.7 pmol/L. Sulfonylurea screen was negative. CT pancreas with IV contrast showed no evidence of pancreatic mass suggestive of insulinoma. Due to recurrent episodes of hypoglycemia in the hospital, the patient was started on Diazoxide 50 mg every eight hours. An insulin antibody level sent from the initial specimen, eventually resulted and was elevated to above 50 U/mL. A comprehensive review of the patient’s medications was performed; none were new or were associated with autoantibody formation. Patient denied recent symptoms of viral illness or family history of hypoglycemia. Literature review revealed the possible benefits of acarbose over diazoxide in management of IAS; diazoxide was switched to acarbose 50 mg three times a day before meals. Outpatient follow-up showed drastic reduced frequency of hypoglycemia while on Acarbose. IAS is a rare but important etiology of hypoglycemia in adults without diabetes mellitus. IAS involves the formation of insulin autoantibody complexes, which binds to the insulin receptors and prevents insulin from binding to its receptors in the postprandial phase. Insulin is then released from the complexes irrespective of blood glucose concentrations, therefore inducing postprandial hypoglycemia. Prompt recognition and diagnosis of IAS can allow for appropriate treatment and avoidance of performing unnecessary imaging and invasive procedures.

Presentation: Sunday, June 12, 2022 12:30 p.m. - 2:30 p.m.