Choosing the one-step IADPSG criteria's for GDM screening is associated with lower rates of LGA, neonatal hypoglycemia and NICU admissions, at the expense of increased prevalence in our population. The ongoing study will include a cost-benefit evaluation to assess if improved outcomes overbalance the increased prevalence inherent to lower diagnostic criteria.

Diabetes Mellitus and Glucose Metabolism

TYPE 1 DIABETES MELLITUS

Type 1 Diabetes Diagnosed in an 83 Year Old Man After Nivolumab Therapy

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SAT-686

Abstract

TITLE

Type 1 diabetes diagnosed in an 83 year old man after Nivolumab therapy

BACKGROUND

Immune checkpoint inhibitors are increasingly being used for a variety of cancers and are a promising treatment option. Immune related adverse effects are their major side effects, most common being hypophysitis and hypothyroidism. While diabetes and adrenalitis have only been rarely reported, these too are becoming more common. We present a case of type 1 diabetes associated with Nivolumab therapy diagnosed in an 83-year-old man.

CASE

An 83 year old male with past medical history of emphysema, coronary artery disease, hypertension, non-small cell lung cancer treated with lobectomy, hepatitis C cirrhosis with hepatocellular carcinoma with metastasis to lungs, who completed 10 cycles of Nivolumab presented to oncology clinic with complains of polyuria, polydipsia and a weight loss of 10 pounds over the last one week. Lab work showed a blood glucose of 743 with an anion gap of 18 and bicarb of 18. B-hydroxy butyrate was 3.19. He was admitted to our ICU for diabetic ketoacidosis. He did not have a history of diabetes mellitus. No family history of diabetes was reported. His Hemoglobin A1c was found to be 10.1. He had normal blood sugars before starting Nivolumab therapy. His C-peptide was found to be low at 0.61. Insulin antibody, Islet cell antibody, Zinc transporter antibody and GAD antibodies were negative. He was discharged on basal bolus Insulin regimen. He is being followed in our endocrinology clinic and continues to be insulin dependent.

CONCLUSION

Nivolumab is PD-1 (programmed cell death) inhibitor, which is used as cancer immunotherapy in multiple advanced cancers including hepatocellular carcinoma. Clinically significant endocrinopathies are documented in <5% of patients treated with PD-1 inhibitors. The cause of Diabetes by PD-1 inhibitors is not well defined but believed to be caused by destruction of pancreatic beta cells due to inhibition of autoimmunity by autoreactive T cells. Literature review showed only 42 published cases of PD-1 inhibitor induced type 1 diabetes. Average age at presentation was 62 years and about 69% patients were in DKA at diagnosis. In a recently published study involving 1163 patients who received PD-1 inhibitors, only 21 cases of diabetes were identified, 12 of those were with new onset DM and only 1 case was due to Nivolumab use.

Since this type of endocrinopathy is mainly reported in case reports, we will need more research for further understanding of the pathology so that we can keep a watch out for this adverse effect and prevent life- threatening complications.

Diabetes Mellitus and Glucose Metabolism

DIABETES TECHNOLOGY

An Academic Center Experience with the Eversense Continuous Glucose Monitoring System and Assessment of Intrapatient Variability with Repeated Same-Pocket Insertion

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SAT-638

Background:

The Eversense continuous glucose monitoring (ECGM) system is a 90-day implantable device approved for patients with diabetes. The manufacturer recommends alternating arms each subsequent insertion to ensure adequate healing. To date, the intra-patient sensor variability using the same subcutaneous pocket has not been evaluated. We aim to assess change in glucometrics upon continuous use and the use of the same insertion pocket.

Methods:

Retrospective study (October 2018-October 2019), that included all patients using the ECGM. Demographics, and glucometrics data: transmitter wear time (TWT), average glucose (AG [mg/dL]), coefficient of variation (CV), time in range (TIR), time below range (TBR) and time in serious hypoglycemia (SH) data were obtained. Paired T-test was used to compare means (±SD) of the initial 90 days of sensor data (P1) with data of subsequent device insertions, grouped by periods of data time: period 2, 3 and 4 (P2, P3, P4). Analysis was done as a group, by insertion period, and by cohorts: cohort 1: same subcutaneous pocket, cohort 2: alternating insertion site.

Results:

Nine female, 7 male patients, age 37±11 years old, weight 85±10 Kg. Fourteen with T1DM, one with T2DM and one from pancreatectomy. There were 7 patients in each cohort, 2 patients had only one device inserted resulting in only 1 period of 3-month data; 7 patients had 2 consecutive devices inserted i.e. 2 consecutive 3-month periods of data (P1 and P2), 4 had 3 consecutive devices inserted, three 3-month periods of data (P1, P2 and P3) and 3 had 4 consecutive devices inserted, i.e. four 3-month consecutive periods of data (P1, P2, P3 and P4).

Baseline, first insertion, initial 3-month period of data (P1) showed TWT 69.7±23 for the entire group, AG 175±30 mg/dL, CV 36.7±7.6, TIR 52.6±17, TBR 2.69±2.5, SH 1.5±2.3.