

importance of time in range in diabetes management • 13% of PCPs (P<.05) 3% of D/Es (P=.NS) improved at recognizing target blood glucose levels for time in range • 43% of PCPs and 36% of D/Es had a measurable increase in confidence in ability to explain results from an AGP to patients Continued educational gaps: • 60% of PCPs and 47% of D/Es failed to identify benefits of an AGP report • 35% of PCPs and 12% of D/Es failed to recognize importance of time in range in diabetes management This study demonstrates the success of online 30-minute video panel discussion CME on improving knowledge and confidence of PCPs and D/Es related to CGM and the AGP. Continued gaps were identified for future educational targets.

Diabetes Mellitus and Glucose Metabolism

TYPE 2 DIABETES

Patient-Specific Risk Factors and Clinical Correlates of Euglycemic Diabetic Ketoacidosis in Patients on Sodium-Glucose Co-Transporter-2 Inhibitors

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Background: Sodium-Glucose Co-Transporter-2 Inhibitors (SGLT-2i) association with euglycemic diabetic ketoacidosis (EDKA) has been well reported. The underlying mechanism is mainly enhanced lipolysis and ketone bodies' reabsorption. They also stimulate the pancreatic alpha cells and inhibit the beta cells, thereby causing an imbalance in glucagon/insulin levels, further contributing to lipolysis and ketogenesis. SGLT-2i were also found to cause EDKA in all types of diabetes, even uncovering undiagnosed Latent Autoimmune Diabetes of the Adult (LADA).

Methods: Numerous electronic databases were systematically searched to identify patient-specific risk factors and clinical characteristics of EDKA in patients on SGLT-2i. The patient's symptoms, clinical profile, laboratory results, and precipitants for EDKA were reviewed.

Results: A total of 96 case reports identifying 116 patients with EDKA was fully reviewed. EDKA was twice prevalent in females (66.3%) than males (33.6%); median age was 52.15 ± 13.47, BMI was 29.3 ± 7.0. Among the 116 DKA events in SGLT-2i 92 (79.3%) were associated with Type-2 DM, 15 (12.9%) were Type-1 DM, 8 (6.9%) in LADA. Common symptoms were nausea (48.7%), vomiting (47%), and abdominal pain (28.2%). Canagliflozin was the most common SGLT-2i (40.5%), followed by Empagliflozin (29.3%) and Dapagliflozin (25.9%). The most common precipitant was surgery (17.2%), followed by infection (14.7%),

fasting (11.2%), and Keto Diet (9.5%); others being reduced insulin use, alcoholism, and cancer. At presentation, average blood glucose was 196.8 ± 96.5, pH 7.1 ± 0.16, HCO₃ 8.7 ± 5.7 mmol/L, potassium 4.3 ± 1.03, anion-gap 24.2 ± 6.8 mmol/L, and the average HbA1C was 9.24 ± 2.08. Urine Ketones were positive in 81.89% of patients. 17 patients had pancreatic autoantibodies testing, and 7 were positive (41.2%) for glutamic acid decarboxylase-65 antibodies (anti-GAD-65). As a result, 7 patients were newly diagnosed with LADA who were previously misdiagnosed with type-2 DM. **Conclusion:** SGLT2i induced EDKA was found to be more predominant in females and type-2 DM. Diabetics should be educated on risk factors and consult physicians before commencing a dietary or exercise change. Physicians should be vigilant in diagnosing EDKA by thoughtful measurement of urine ketones and anti-GAD-65 testing can help diagnose underlying LADA.

Diabetes Mellitus and Glucose Metabolism

TYPE 2 DIABETES

Predictors of the Lack of Annual Fasting Blood Sugar Screening in US Adults

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Background: Diabetes mellitus is a major cause of morbidity and mortality. Many individuals remain undiagnosed. The purpose of this study was to identify predictors of the lack of annual fasting blood sugar (FBS) testing in a representative cohort of U.S. adults.

Methods: A total of 257,652 adults ≥18 years from the 2011–2018 National Health Interview Surveys (NHIS) were included. Participants were considered to have had FBS testing if they reported a fasting test for diabetes or high blood sugar in the past 12 months. Predictors of screening utilization were selected using the Anderson Model for Healthcare Utilization, including predisposing (age, sex, race/ethnicity), enabling (smoking, alcohol consumption, physical activity, insurance status, education, citizenship status, region of residence), need (BMI group, comorbidities, cardiovascular disease [CVD]), and healthcare-related factors (doctor visits, satisfactory care, affordability, delayed care). We used diabetes status-stratified multivariable logistic regression with a stepwise selection method to determine the most significant predictors. All analyses accounted for the survey design and weights to obtain nationally representative estimates.

Results: Among the 257,652 participants, 115,630 (48%) were male, 27,096 (9.4%) had diabetes, and 141,247 (56%) did not have a FBS test in the past 12 months. Among those with diabetes, 4,529 (16%) did not have a FBS test. Positive predictors of a lack of FBS testing included younger age, male sex, non-Hispanic Black race, ever smoker (≥100