OR30-03

Objective: There is limited data regarding the use of diabetes technology such as continuous glucose monitor (CGM) and continuous subcutaneous insulin infusion (CSII) among patients with type 1 diabetes (T1D) in a minority serving and safety-net hospital. We examined racial differences in the use of CGM and CSII in this setting.

Methods: A retrospective review of 227 patients ≥ 18 years of age with T1D seen in the Endocrinology clinic at a safety-net hospital from October 2016 and September 2017 was completed. Statistical analysis assessed the likelihood of diabetes technology use among different races.

Results: The mean age was 39, 59% male, mean duration of diabetes was 21 years, 30% overweight, 22% obesity, 80% English speaking, and 50% had government insurance. In terms of the distribution of race/ethnicity, 43% were Caucasian, 25% African American (AA), 15% Hispanic, 15% defined as other, and 2% Asian. Mean HbA1c ± standard deviation (SD) of any technology (either CGM or CSII or both) and non-technology users were 8.27 ± 1.58 and 9.49 ± 2.04, respectively. Patients who had government health insurance were found to have lower odds of using technology (odds ratio [OR], 0.43; 95% confidential interval [CI], 0.25 - 0.74) compared to patients who had private health insurance. Overall, 26% of the patients used CSII with 43% of this population Caucasian, 10.5% AA and 14.2% Hispanic. The overall CGM use was 30% with 47% of users Caucasian, 14% AA and 22% Hispanic. In a multivariable logistic regression model that adjusted for insurance and language, AA or other were found to have statistically significant lower odds of using technology (AA OR 0.25 [95% CI 0.11 - 0.53] and other OR 0.33 [95% CI 0.12 - 0.89]) compared to the Caucasian group.

Conclusion: Our study showed that the use of technology in the Caucasian group was statistically significantly higher than in the non-Caucasian groups except for the Asian group. After adjusting for insurance and language, AA and other demonstrated statistically lower rates of technology use. Racial differences in diabetes technology use were observed in our study as well as the association between technology use and lowered HbA1c. Given diabetes technology is a useful tool in reducing HbA1c and hypoglycemia, the barriers to accessing diabetes technology in non-Caucasian individuals should be addressed to decrease health disparities.

Bone and Mineral Metabolism

BONE AND MINERAL CASE REPORTS II

Cutaneous Skeletal Hypophosphatemic Syndrome (Cshs) Caused by Somatic HRAS p.G13R Mutation: Long Follow-Up of Two Brazilian Women

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MON-333

BACKGROUND CSHS refers to the association of epidermal nevus syndrome (ENS), skeletal dysplasia, and hypophosphatemic osteomalacia (OM) mediated by FGF23 resulting from post zygotic mutations in RAS signaling pathway, with known by relationship with human cancers. **CLINICAL CASE** Patient 1 presented ENS since birth at right hemibody. At 1.6-yr-old, she underwent treatment for a left inguinal rhabdomyosarcoma. At 3-yr-old, she had an atraumatic right femur fracture associated with muscle weakness, and laboratory data and X-rays suggesting OM. Phosphate and calcitriol were initiated, but with poor adherence, and no improvement; skeletal deformities got worse and the girl became wheelchair user at 13-yr-old. Skeletal CT scan at age 17 showed dysplastic lesions with lytic changes at right dimidium (skull, jaw, ribs, pelvis and femur) with systemic OM signs confirmed by bone biopsy. The progressive enlargement of the jaw lesion required surgical removal after 2 years; histopathology revealed giant cell tumor. Patient 2 also had congenital ENS on the right dimidium with complaint of bone pain and muscle weakness since 2-yr-old. She evolved with bone fractures and deformities at 4-yr-old, becoming wheelchair user after 2 years. Iliac crest biopsy confirmed OM, already suspected based on laboratorial and X-rays findings at age 7. She had few improvements with phosphate and calcitriol treatment also due to low compliance. During follow-up, symptomatic nephrolithiasis occurred and, in regions affected by EN, multiple basal cell carcinomas (BCCs) emerged requiring excisions. Skeletal CT scan at age 36 showed dysplastic lesions at right hemibody (skull, ribs, pelvis, and limbs) with diffuse bone rarefaction and signs of OM. Sanger sequencing of DNA from EN and jaw tumor samples of patient 1 and from EN and BCC samples of patient 2 disclosed heterozygous HRAS p.G13R mutation, and this mutation was absent in leukocytes DNA from both patients confirming CSHS mosaicism. Owing to the CSHS associated increase risk of cancer, screening with thyroid and breast ultrasound, mammography, CT of skull, chest, abdomen, and pelvis ruled out presence of tumors in patient 1. Patient 2 is waiting for similar screening. Nowadays, patient 1 is 25-yr-old and patient 2 is 36-yr-old; both women have maintenance of OM, characterized by persistent hypophosphatemia with elevated bone formation makers despite treatment with phosphate and calcitriol. **CONCLUSION** CHSC is a very rare syndrome with less than 10 cases with molecular characterization in literature. Although Collins et al suggest an age-dependent improvement in mineral abnormalities, we reported two women without OM recovery probably because of extensive bone dysplasia. These cases also reinforce association of CSHS with neoplasms, including first descriptions of patients with rhabdomyosarcoma and giant cell tumor of jaw and the longest follow-ups described until.

Adrenal

ADRENAL CASE REPORTS II

Clinical and Anatomopathological Characteristics of Two Atypical Aldosterone-Producing Adenomas

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