shortness of breath and acute hearing loss without tinnitus, after being treated for pneumonia and otitis media with a course of levofloxacin for 7 days. On presentation, patient was tachypneic and tachycardic. Physical examination was significant for mild erythema of the right tympanic membrane without bulging, fluid level, mastoid tenderness, or discharge. Laboratory values were significant for hyperglycemia with blood glucose of 628 mg/dL(n 70–99 mg/dL), A1c 15.9% (n 4.8–5.6%), bicarbonate 8 mmol/L (21–31 mmol/L), anion gap 37 mmol/L (9–16 mmol/L), beta-hydroxybutyrate 11.7 mmol/L (0.02–0.27 mmol/L). Venous gas was suggestive of metabolic acidosis, urinalysis was positive for moderate ketones and glucose >500 mg/dL. The patient was diagnosed with diabetic ketoacidosis and was started on an insulin drip. An audiogram revealed profound bilateral sensorineural hearing loss. A Computerized tomography (CT) scan of the bilateral temporal bones was negative for abnormalities, and a magnetic resonance imaging (MRI) of the brain was negative for morphologic abnormalities of 7th and 8th cranial nerves. Infectious and rheumatologic etiologies were excluded with normal syphilis FTA-ABs, Lyme PCR, Rheumatoid factor, ANCA, and ANA. The patient received one dose of empiric prednisone. His hearing improved after 2 days with normalization of blood glucose to a range of 100–200 mg/dL. A repeat audiogram and auditory brainstem response showed significant improvement with normal bilateral hearing.

Discussion: SNHL in DM typically presents in a gradual progression with bilateral involvement, affecting higher frequencies. In patients with DM, studies show that chronicity (greater than 10 years) is strongly associated with SNHL. Other variables include older age and HbA1c greater than 8%. This is the first case to demonstrate acute bilateral SNHL, associated with uncontrolled type 2 diabetes mellitus, which resolved after blood glucose control. In the appropriate context, clinicians should consider significant hyperglycemia as a possible etiology of acute hearing loss.

Diabetes Mellitus and Glucose Metabolism

DIABETES CASE REPORTS

Alpelisib Induced Hyperglycemic Ketoacidosis; Broadening the Adverse Effect Profile of an Emerging Cancer Therapy

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Introduction: Alpelisib (PIQRAY) is a Phosphatidylinositol 3-Kinase Inhibitor (PIP-3K) recently approved by the united states food and drug administration (FDA) for hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative, phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha (PIK3CA)-mutated, advanced, or metastatic breast cancer in post-menopausal women or men with an adjuvant to Fulvestrant. Hyperglycemia is a well-known side effect of Alpelisib. However, hyperglycemic ketoacidosis is a rare and life-threatening side effect.

Case Presentation: A 63-year-old Caucasian woman with ER/PR+, HER2- metastatic breast cancer presented to the emergency room (ER) with polydipsia, polyuria, dryness of the mouth and skin, along with a 12-pound weight loss over a period of three weeks. Alpelisib was initiated three months prior to her presentation with Hba1c: 6.4% and random BG: 89 mg/dl at the time. Her initial lab work in the ER revealed blood glucose of 474 mg/dl, sodium 129 mmol/L, potassium 5.1 mmol/L, and an anion gap of 15 with a Co2 of 19 mmol/L, HCO3 of 20 mmol/L, and a blood ketones level of 2.6. Her urinalysis revealed glucosuria and ketonuria. She was admitted to the general medical floor and Alpelisib was held. In light of her insulin naivety and no history of diabetes mellitus, it was decided to treat her with subcutaneous insulin with hourly titration based on monitoring of serum glucose and electrolytes with IV hydration. She required a total of 31 units of regular insulin along with 15 units of long-acting insulin. Her ketosis resolved within 12 hours of admission. Endocrinology was consulted and she was discharged on long-acting insulin 15. On follow-up, Alpelisib was resumed, metformin added along with long-acting insulin. Despite anti-diabetic therapy, due to persistent hyperglycemia (fasting blood glucose >300 mg/dl), Alpelisib was discontinued 3 weeks after presentation.

Conclusion: Alpelisib-induced hyperglycemic ketoacidosis is an uncommonly reported adverse event with only 3 reported cases to the best of our knowledge. While there are guidelines available to manage Alpelisib induced hyperglycemia, there are no specific recommendations for patients presenting with hyperglycemia and ketoacidosis in terms of admission to intensive care unit (ICU) or general medical floor (GMF), use of the type, route, and dosage of insulin and continuation of insulin for the persistent elevation of FBG despite interruption of Alpelisib. Alternative approaches for the treatment of breast cancer should be considered with continual hyperglycemia despite appropriate management. Multidisciplinary discussion involving the oncologist as well as an endocrinologist can be useful for the management of persistent elevation of FPG even after substantial Alpelisib free days.

Diabetes Mellitus and Glucose Metabolism

DIABETES CASE REPORTS

Alpelisib-Induced Diabetic Ketoacidosis

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Introduction: Alpelisib is a alpha-specific phosphoinositide 3-kinase inhibitor (PI3K) recently approved for patients with advanced or metastatic breast cancer with hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative, and activating mutations in the PIK3CA gene. PI3K is involved in the insulin receptor signaling pathway that leads to glucose uptake. Hyperglycemia is a frequent adverse effect of Alpisilib but diabetic ketoacidosis (DKA) is considered a rare occurrence. Case ReportA 53 year-old woman with metastatic breast cancer presented with 5 days of worsening polydipsia,