

Surreptitious Diuretic Abuse in a Patient with Severe Hypokalemia and Long QT Syndrome

Claire Carr, MS3, LSU School of Medicine- New Orleans, Kyle Hoppens, MD, LSUHSC

The patient in question was a 45 year old female with past medical history of long QT syndrome who presented to the emergency department with a chief complaint of chest pain and shortness of breath for 3 days.

The patient was in her usual state of health until 3 days prior to admission, when she began experiencing a pressure-like chest pain associated with progressively worsening dyspnea. At baseline, the patient does not experience dyspnea and walks one mile every day without difficulty. Her new-onset dyspnea was present both with exertion and at rest. Her symptoms continued to progress and prompted her to present to the E.D. On physical exam, the patient had bilateral lower extremity edema. Heart and lung sounds were normal and the physical exam was otherwise unremarkable. The patient endorsed frequent swelling of her hands, feet and face, for which she was prescribed PRN furosemide. She reported taking 80 mg of furosemide over the past 48 hours. Pertinent lab findings included extreme hypokalemia, hypochloremia, and metabolic alkalosis. Her ECG in the E.D. demonstrated QT prolongation. Subsequent tracings had a normal QT interval. CXR and TTE both demonstrated normal findings, with normal ejection fraction. The patient was treated with IV fluids and electrolyte repletion. At time of discharge, potassium and chloride levels had returned to low-normal and the patient endorsed continued chest tightness but no further dyspnea. She continued to endorse swelling, which was not appreciated on physical exam. Upon contacting the patient's pharmacy, it was discovered that the patient had received numerous refills of furosemide in the last 30 days. We suspect that this patient had been surreptitiously abusing her diuretic prescription to combat perceived edema, and that her long QT syndrome was in fact medication-induced.

A brief search of related literature indicates that a patient presenting with hypokalemia, hypochloremia, and metabolic alkalosis with no history of vomiting or other explanation should be investigated for surreptitious vomiting, laxative, or diuretic use (Mascolo, Chu, & Mehler, 2011). Diuretic abuse is commonly found among patients suffering from eating disorders or body dysmorphism. Patients who are abusing diuretics, similar to patients with other compensatory mechanisms, are unlikely to be forthcoming about the amount of medication they are ingesting (Mitchell, Pomeroy, Seppala, & Huber, 1988). Diuretic abuse can be associated with serious complications, including prolonged QT interval leading to cardiac arrhythmias and central pontine myelinolysis (Copeland, 1989).