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FIT Clinical Decision Making

SUDDEN UNEXPECTED DEATH IN EPILEPSY AND LONG QT SYNDROME

Moderated Poster Contributions
Spotlight on Special Categories Moderated Poster Theater, Poster Hall, Hall C
Sunday, March 19, 2017, 1:00 p.m.-1:10 p.m.

Session Title: FIT Clinical Decision-Making: Arrhythmias and Clinical Electrophysiology
Abstract Category: Arrhythmias and Clinical EP
Presentation Number: 1321M-07

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Background: Approximately 28% of patients with confirmed long QT syndrome (LQTS) present with a seizure phenotype. Sudden unexpected death in epilepsy (SUDEP) is the most common cause of death in patients with intractable epilepsy and conveys a mortality risk 24 times greater than the general population.

Case: 42-year-old female with a past medical history of seizures refractory to antiepileptic drugs was referred to cardiology for evaluation of palpitations without syncope. The patient had prior coronary angiography which revealed no significant coronary disease. Her baseline ECG revealed normal sinus rhythm, rare PVCs and a variable QTc interval of 460-508 msec. The patient was treated with a beta-blocker and an outpatient event monitor was placed. During sleep, the patient had a witnessed grand mal seizure for which she received CPR. She was wearing the event monitor at the time of her seizure revealing a six-minute episode of polymorphic ventricular tachycardia. Genetic testing was positive for LQT-1.

Decision-Making: Identifying patients at risk for SUDEP includes careful assessment for cardiac arrhythmias. The decision for cardiac monitoring and genetic testing was critical to establishing the diagnosis. SUDEP high risk features include age 20-40 and intractable epilepsy.

Conclusions: LQTS may present with a seizure phenotype. SUDEP conveys a high mortality and may be due to an inherited cardiac channelopathy. Clinical awareness and appropriate arrhythmia evaluation are critical to diagnosis.