ICTAL ASYSTOLE CAPTURED ON CONTINUOUS TELEMETRY AND VIDEO ELECTROENCEPHALOGRAPHY

Poster Contributions
Poster Hall B1
Monday, March 16, 2015, 9:45 a.m.-10:30 a.m.

Session Title: FIT Clinical Decision Making: Arrhythmias and Pericardial Disease
Abstract Category: Arrhythmias and Clinical EP
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Background: Ictal asystole (IA) is a rare condition where asystole occurs during seizures, leading to syncope. The mechanism may be due to increased vagal tone and related to sudden unexplained death in epilepsy (SUDEP). Good epileptic control is essential, but pacemaker implantation can be considered.

Case: A 43 year old woman was hospitalized for continuous video EEG. Past medical history was significant for simple partial seizures with no associated syncope, diagnosed at age 16 and treated with carbamazepine. One year ago she began experiencing syncope. A tilt table test was unremarkable and ambulatory event monitor only revealed one 3.7 sec sinus pause. While hospitalized, telemetry noted 45 sec of asystole, and the patient was found turning her head with tonic posturing.

Decision Making: Baseline ECG showed NSR 73 bpm, QTc of 451 ms. EEG and ECG monitoring correlated NSR at the onset of temporal lobe seizure activity. As seizure generalized, the sinus rate slowed, asystole ensued, followed by junctional bradycardia and then NSR (Fig 1). Electrolytes were normal. Echocardiogram showed normal structure and function. Findings are consistent with IA. Given the length of the sinus pause, a permanent pacemaker was implanted. Volume support and beta blocker were initiated along with antiepileptic medications.

Conclusion: This case demonstrates the importance of temporal history and diagnostic testing in elucidating the cause and influencing the treatment of syncope in patients with seizures.