

Drug-induced long QT associated cardiac arrhythmias among adult patients in a community hospital

Ahmed Elshazly

Atlantic Care Regional Hospital, USA

Introduction: Cardiac arrhythmias among hospitalized patients are a common problem in the hospitals. Big part is associated with drug-inducing long QT (DILQT). DILQT are widely used in inpatient and outpatient settings. Our research project aimed to assess the monitoring of QTc-interval as a primary preventive mechanism for DILQT-associated cardiac arrhythmias among hospitalized patients in a community hospital.

Methods: This retrospective study included data obtained from patients who had a diagnosis of cardiac arrest, ventricular tachycardia, and/or syncope while hospitalized between January 1, 2013 and December 31, 2016. Descriptive analysis was performed to assess the proportions of patients who were on two or more of QT interval prolonging medications and had the aforementioned outcomes.

Results: The numbers of patients who had a diagnosis of cardiac arrest, ventricular tachycardia, and/or syncope were 3,583 in 2013, 3,828 in 2014, 4,105 in 2015, and 4,376 in 2016. Of those, approximately 256 (7.1%) in 2013, 241 (6.3%) in 2014, 268 (6.5%) in 2015, and 263 (6.0%) in 2016 were on two or more of QT interval prolonging medications.

It was noted that patients on two or more DILQT had higher proportions of ventricular tachycardia compared cardiac arrest or syncope in all the years. Less than 10% of the patients on two or more QT prolonging medications received an EKG on admission or anytime during their admission in all the years.

Conclusion: This study, which provides the preliminary data for a quality improvement study, shows that there are missed opportunities to prevent DILQT-associated cardiac arrhythmias among hospitalized patients on two or more QT interval prolonging medications. Power chart pop-up message will fire when prescriber will order DILQT while the patient is on one or more of DILQT advising the prescriber to check QTc of the patient. Another study to compare the arrhythmia incidence after the intervention application.

Speaker Biography

Ahmed Elshazly MD has graduated from medical school during 2012. He then was a research fellow for 2 years at Albert Einstein College of Medicine, Mayo Clinic and West Virginia University. He is currently pursuing Internal Medicine residency at Atlantic Care Regional Hospital, Atlantic City, NJ.

e: aelshazly5@gmail.com



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