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180. Cases of QT interval prolongation reported to the toxIC (toxicology investigators consortium) Registry

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Introduction: Medications associated with QT interval prolongation are commonly prescribed. There is fear of significant adverse events among the public and healthcare providers due to these medications. Our objective is to describe the cohort of cases of QT interval prolongation reported to the ToxIC (Toxicology Investigators Consortium) Registry in order to better characterize the clinical effects in these patients.

Methods: All cases of QT interval prolongation reported to the ToxIC registry between January 1st, 2011 and February 1st, 2013 were extracted using the field specific search function. Only cases involving a single agent exposures were analyzed. Descriptive statistics were generated for demographic data, products involved, signs, treatments, and medical outcomes, as defined by the ToxIC registry.

Results: Over the 25-month study period there were 831 cases of QT interval prolongation. 346 of these cases were single agent exposures. The most common age range was 19–65 years (79.8%, n = 276). Most cases were reported in females (62.7%, n = 217). The most common agent identified was diphenhydramine (8.7%, n = 30). The vast majority of cases were intentional abuse or misuse (96.2%, n = 333). The most common associated clinical effects were CNS depression (55.2%, n = 191), tachycardia (24.2%, n = 84), respiratory depression (22.5%, n = 78), and hypotension (20.5%, n = 71). 85 (24.6%) received benzodiazepines, 62 (18.2%) received intravenous fluids, 50 (14.5%) received sodium bicarbonate, 12 (3.5%) received magnesium and 10 (2.9%) received antiarrhythmics. There was 1 death reported as a result of cardiac arrest.

Conclusions: Cases of QT interval prolongation reported to the ToxIC Registry are common. The majority of cases were in females intentionally abusing or misusing an agent. Most cases did not require treatment and the rate of significant morbidity or mortality was low. Further study is necessary to determine if these findings are generalizable to cohorts different from the kinds of patients reported to the ToxIC Registry.