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081. Clinical Features of Benzonatate Poisoning Cases Reported in the Toxicology Investigator's Consortium Registry

Matthew K Matlock, David B. Liss; On behalf of the Toxicology Investigators Consortium (ToxIC)

Washington University in Saint Louis School of Medicine, Saint Louis, MI.

Background: The popularity of benzonatate as a prescription cough medicine has been increasing significantly over the last 20 years and it is now one of the most common prescription cough medications provided by primary care physicians. Unfortunately, benzonatate is metabolized to a local-anesthetic analog that can cause severe symptoms in overdoses or when accidentally ingested.

Research Question: We sought to characterize the severity, clinical presentations, course, and interventions employed in benzonatate overdoses in cases submitted to the Toxicology Investigator's Consortium (ToxIC) database and identify factors associated with clinical outcome.

Methods: We obtained data from the ToxIC registry to carry out a descriptive study of benzonatate poisoning cases managed by medical toxicologists between 2012 and 2022. Cases were included if benzonatate was listed as an agent. We used fisher exact tests where appropriate to test for associations.

Results: There were 59 cases in the ToxIC database that met our inclusion criteria. Most cases of benzonatate ingestion were attempts at self-harm (39/59), and occurred among teenagers aged 13-18 (33/59). Over one third of cases were admitted to the ICU. The most common presenting signs included depressed mental status (21/59), and arrhythmia (17/59). Seizures occurred in 4 patients, 12 patients required ventilator management, four patients required CPR and three died. QTc or QRS prolongation was common, occurring in 9 patients and was associated with ICU admission (OR=5.1, p=0.05). Pharmacological intervention was heterogeneous, and often driven by co-ingestions. Sodium bicarbonate was the most common directed therapy, and use was strongly associated with QRS or QTc prolongation (OR=30, p=0.0005). No patients received Intralipid.

Conclusion: Benzonatate poisoning is associated with a high rate of severe presentations including three deaths. Many cases required ICU admission, ventilatory management, or CPR. Sodium bicarbonate was employed for treatment, but despite its theoretical value, Intralipid use was not reported.