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224. Isolated Clonidine Ingestions in Pediatric Patients Reported to the Toxicology Investigators Consortium Core Registry

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Background: Clonidine is a centrally acting α_2 adrenergic receptor agonist often used to treat attention-deficit hyperactivity disorder. Because of its availability, it is often implicated in exploratory and in intentional overdoses in the pediatric population.

Hypothesis or Research Question: What are the demographics, clinical features, treatments, and outcomes of pediatric clonidine ingestions reported to the American College of Medical Toxicology's Toxicology Investigators Consortium (ToxIC) Core Registry?

Methods: This was a review of prospectively collected de-identified patient information reported to the ToxIC core registry by medical toxicologists providing bedside care for poisoned patients between January 1, 2012 and July 1, 2025. Pediatric patients, defined as those 18 years old with clonidine ingestions, whether intentional or unintentional, were included. Data regarding patient demographics, clinical features, antidote administration, other interventions, and outcomes were reviewed.

Results: There were 443 cases entered into ToxIC during the study period. The median age was 6 years (range 2-17 years). Females accounted for 222 (50.1%) patients. The median age of 251 (56.7%) unintentional ingestions was 3 years (range 2-17 years), with 95 (37.8%) female patients. The most common clinical manifestation was central nervous system (CNS) depression, which was observed in 200 (79.7%) cases. Bradycardia was reported in 95 (37.8%) patients. Hypotension was present in 62 (24.7%) cases. Bradypnea was seen in 6 (3.1%) patients. There was one patient with QRS widening but no cases on QT prolongation on electrocardiogram (ECG). There were no deaths. Naloxone was administered to 91 (36.3%) patients. Intravenous fluid resuscitation was required in 97 (38.6) cases. Endotracheal intubation with mechanical ventilation was performed in 34 (13.5%) cases. Vasopressors were administered to seven (2.8%) patients. Of the 192 cases that were considered intentional overdoses, the median age was 14 years (range 5-17 years). Females accounted for 127 (66.1%) cases. CNS depression was observed in 130 (67.7%) cases. Bradycardia was reported in 117 (60.9%) patients. Hypotension was present in 43 (22.4%) cases. Bradypnea was seen in 6 (3.1%) patients. There was one patient with QRS widening but no cases on QT prolongation on ECG. There were no deaths. Naloxone was administered to 50 (26.3%) patients. Intravenous fluid resuscitation was required in 84 (43.8%) cases. Endotracheal intubation with mechanical ventilation was performed in 15 (7.8%) cases.

Vasopressors were administered to 12 (6.3%) patients.

Conclusion: In this study, pediatric clonidine overdoses were characterized primarily by CNS depression and bradycardia. Hypotension was commonly observed and typically responded to intravenous fluids.

Toxic: This research was performed by the ACMT Toxicology Investigators Consortium