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100. Review of Recent Rodenticide Exposures

Olivia Burris¹, Edric Wong¹, Nicholas Dodson¹, Tony Rianprakaisang², On Behalf of the Toxicology Investigators Consortium (ToxIC)

¹ The University of Kansas Health System, Kansas City, KS, USA. ² University of Kansas Medical Center, Kansas City, KS, USA

Background: Rodenticides are a relatively uncommon exposure and encompass a wide variety of agents with varying toxicities.

Research Question: What are the agents of exposure, demographics, and clinical characteristics of patients exposed to rodenticides?

Methods: This is a retrospective review of all single-substance rodenticide exposures reported to the Toxicology Investigators Consortium Registry from January 2010 through May 2021.

Results: One hundred and four single-substance rodenticide exposures were identified. Of those, 65.4% were male. Exposures were intentional in 51.9% of cases. The most common agents identified were brodifacoum (52.9%) followed by bromethalin (10.6%), and 68.2% of cases involved exposure to a vitamin K antagonist. The most common route of exposure was oral (65.4%), and exposures were most often acute (73.1%). There were no reported deaths, and only two patients (1.9%) had a major vital sign abnormality, which included one case with hypotension (SBP < 80 mm Hg) and one with tachycardia (Pulse > 140). Vitamin K was the most common treatment given (23.1%); however, only one patient required anticoagulant reversal with factor repletion. Among nonpharmacologic support, six patients (5.8%) received IV fluid resuscitation, four (3.8%) were intubated or required ventilatory management, three (2.9%) received a transfusion, and one (1.0%) underwent therapeutic hypothermia. Decontamination with activated charcoal was used in three patients (5.3%), and no patient required any enhanced elimination therapies.

Conclusion: Vitamin K antagonists are the most common rodenticide exposure type. While treatment may be necessary, single-agent exposures appear to have good clinical outcomes with low morbidity and mortality.