Tetryzoline overdose

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CNS depression and hypothermia in paediatric patients: 3 case reports

Three paediatric patients developed CNS depression following accidental overdoses of tetryzoline. One child also developed hypothermia.

A 2-year-old boy presented at an emergency department (ED) after his parents were unable to wake him. On presentation, he had bradycardia, hypothermia and a Cheyne-Stokes respiratory pattern [time to reaction onset not stated]. He was admitted to a paediatric ICU (PICU) on oxygen. His urine tested positive for tetryzoline. Upon further examination of his history, it was discovered that a visiting relative may have left eye drops containing tetryzoline in the home. The empty bottle was later found [dosage not stated; route not clearly stated]. He had plasma tetryzoline concentrations of 51.4 ng/mL and 23.6 ng/mL at approximately 7 and 12 hours after ingestion, respectively. He received fluids and his condition rapidly improved.

A 2-year-old girl was discovered chewing on a bottle of 0.05% tetryzoline [Visine]. She had ingested an estimated 7.5mL dose (0.33 mg/kg tetryzoline). On presentation, she was asymptomatic; however, 90 minutes after ingestion, she developed lethargy, bradycardia and gasping respiration. She was admitted to a PICU and received oxygen. Urine analysis was positive for tetryzoline. She had a plasma tetryzoline concentration of 39.3 ng/mL at 2 hours postingestion. Her condition improved quickly and she was discharged within 24 hours.

A 20-month-old male infant was found with an empty 15mL bottle of Visine. He had ingested an estimated tetryzoline dose of 0.30 mg/kg. Within 15 minutes, he became tired and went to sleep. One hour later, he could not be roused and he was taken to the ED. On arrival, he had a Glasgow Coma Scale score of 10 with stimulation, bradycardia, hypertension, gasping respiration and constricted pupils. He was intubated for his CNS depression and received ventilation for 10 hours. His urine was positive for tetryzoline and he had a plasma tetryzoline concentration of 24 ng/mL at 3 hours postingestion. Following extubation, he made a quick recovery within 24 hours of ingestion.

Lowry JA, et al. Serum concentrations in three children with unintentional tetrahydrozoline overdose. Clinical Toxicology 49: 434-435, No. 5, Jun 2011. Available from: URL: http://dx.doi.org/10.3109/15563650.2011.586639