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Ziprasidone

Ziprasidone is a second generation anti-psychotic currently marketed under the brand name Geodon®. Ziprasidone is available in 20, 40, 60 and 80 mg capsules as well as a reconstitutable injectable form of 20 mg/1.2 mL. The oral capsule form, or ziprasidone hydrochloride, is indicated for bipolar I disorder and schizophrenia, and the intramuscular injectable form, or ziprasidone mesylate, is indicated for acute agitation in schizophrenia. Ziprasidone is a serotonin (5HT)-2A/dopamine (D2) antagonist as well as a 5HT-1A agonist. It also antagonizes alpha-1 adrenergic and histamine receptors and inhibits norepinephrine reuptake.

Ziprasidone overdoses rarely result in severe toxicity. Patients under the age of 12 can be observed at home if the ingested dose is 80 mg or less. The toxic dose in adults is at least 100 mg, or five times the patient's current single dose. Signs and symptoms of toxicity can range from mild sedation, vomiting, diarrhea, and miosis to hypotension, hypertension, tachycardia, dysrhythmias and coma. Ziprasidone is associated with dose-related QTc prolongation. Among all atypical antipsychotics ziprasidone is associated with the greatest degree of QTc prolongation. Ventricular fibrillation and Torsades de Points (TdP) are known risks when QTc prolongation occurs; however, there is no evidence that ziprasidone is associated with TdP. Most reported cases of ziprasidone overdose describe an onset of symptoms occurring within a few hours of ingestion, but QTc prolongation may not be evident until 12 hours afterwards. Based on adverse effects reported following therapeutic use, the patient should also be observed for increased liver enzymes (AST, ALT) and extrapyramidal symptoms.

Should an acute overdose of ziprasidone occur, activated charcoal may be administered if the ingestion is recent. IV fluids and vasopressors (e.g. norepinephrine, phenylephrine) should be used to correct hypotension resulting from alpha-blockade; sympathomimetics with beta agonist activity such as epinephrine and dopamine should not be used because of hypotension potentiation. Dystonic reactions are treated with benztropine or diphenhydramine. Although unlikely to occur, patients with QTc prolongation should be monitored for progression to TdP, especially if other QTc-prolonging drugs are co-ingested. Cardioversion, repeat infusions of magnesium sulfate, overdrive pacing and treatment of electrolyte abnormalities should be considered if TdP occurs. Hemodialysis is not effective in ziprasidone overdoses due to its high level of protein binding and large volume of distribution.

Suhit Patel
Student Pharmacist
University of Maryland School of Pharmacy

DID YOU KNOW THAT… *there have been recent reports in Europe of heroin contaminated with anthrax?*

The first case of an anthrax infection in a heroin user in Europe was confirmed in December 2009. Since then, there have been 30 reported cases with 11 deaths. The source of the anthrax is unknown. There are three types of anthrax infections: cutaneous (dermal), gastrointestinal and inhalational, which is the most serious form. The cases in Europe have been identified as cutaneous anthrax, a form that is rarely fatal if treated. According to the Drug Enforcement Agency, there have been no cases of anthrax infections from contaminated heroin in the United States so far.

Maryland Poison Center
University of Maryland School of Pharmacy