

toxtidbits

THE MARYLAND POISON CENTER'S MONTHLY UPDATE.
NEWS. ADVANCES. INFORMATION

Baclofen Overdoses

Baclofen is a centrally acting skeletal muscle relaxant currently available in oral formulations and intrathecal solutions. Baclofen is an agonist at gamma-aminobutyric acid B (GABA_B) receptors. It is used primarily to treat severe muscle spasms, secondary to conditions such as multiple sclerosis and spinal cord injuries. The mechanism of action has not been fully established. It has been proposed that baclofen inhibits the influx of calcium at the spinal cord preventing the transmission of excitatory synaptic reflexes. Baclofen is primarily renally excreted; therefore, patients with renal impairment are at risk for developing toxicity at therapeutic doses.

Overdoses of baclofen may occur due pediatric ingestions, intentional ingestions by adults or due to complications and malfunctions with intrathecal pumps and spinal catheter systems. Overdoses of baclofen may result in CNS depression, lethargy, somnolence, hallucinations, agitation, mydriasis, nausea and vomiting. Severe toxicity is associated with bradycardia, hypotension or hypertension, respiratory failure, hypothermia, seizures, coma and death. Rarely, status epilepticus, rhabdomyolysis, and conduction disturbances may occur.

Treatment of baclofen overdose consists of supportive care (e.g. IV fluids, endotracheal intubation, mechanical ventilation). The use of activated charcoal may be warranted in acute ingestions. Benzodiazepines may be required for agitation and/or seizures. Hypotensive patients may require the use of vasopressors. Specific recommendations for emptying pump reservoirs following intrathecal overdoses can be obtained by contacting a poison center. There are case reports of mild to moderate overdoses being treated with physostigmine with a slight benefit, but evidence to support its use is controversial. Clinical effects of baclofen overdose may last four to eight hours. Hemodialysis increases the clearance of baclofen and shortens the duration of toxicity in patients with or without impaired renal function. Urine toxicology screens do not routinely test for baclofen and serum concentrations are not readily available or useful.

Miah Jung
PharmD Candidate, Class of 2012
University of Maryland School of Pharmacy



March 18-24, 2012

Did you know?

Abrupt discontinuation of intrathecal baclofen can result in serious and life-threatening withdraw symptoms.

Inadvertent withdrawal can occur due to complications and malfunction with the pump and spinal catheter system, including low volume in the pump reservoir and low battery life. Altered mental status, hypertension, hyperthermia, hallucinations, muscle rigidity, and rarely rhabdomyolysis, multiple organ system failure and death can appear within hours to a few days following interruption of baclofen therapy.

*Subscribe to ToxTidbits
and read past issues
www.mdpoison.com*