



DID YOU KNOW THAT...

...the Maryland Poison Center has been called about cases of intentionally ingesting or snorting Wellbutrin® (bupropion) tablets to get "high"?

Bupropion is a unique antidepressant that is also indicated for smoking cessation. Tachycardia and seizures are likely following the ingestion of higher than therapeutic doses of bupropion or snorting any amount of bupropion. Crushing the sustained release tablet will destroy the delivery mechanism and result in very high brain levels very quickly. The MPC is interested in hearing about all cases of bupropion abuse.

For poisoning emergencies, call:
1-800-222-1222

PLEASE SHARE!

Post and share this edition of Tox Tidbits with your colleagues. Send any comments or questions to: Tox Tidbits at 410-706-7184 (FAX), or Lbooze@rx.umaryland.edu.

Supported by Maryland Department of Health and Mental Hygiene

Constricted Pupils: Opioid or Olanzapine?

A 34 year old male with a history of schizophrenia was found unconscious and responsive only to pain following a suicide attempt three hours earlier with an unknown drug. Vital signs were BP 112 mmHg/palp., HR 148 bpm, RR 28/min. Pupils were reactive but pinpoint. A total of 2.0 mg of naloxone was given in the assumption that his CNS depression and constricted pupils were due to an opioid ingestion; however, there was no response. A search of the home resulted in the recovery of an empty bottle of Zyprexa® (olanzapine).

Olanzapine (Zyprexa®) is an atypical antipsychotic often prescribed for psychotic disorders (such as schizophrenia) and mania associated with bipolar disorder. It is structurally similar to clozapine, but unlike clozapine, is not associated with neutropenia or agranulocytosis. Olanzapine blocks serotonin (5HT₂) and dopamine (D₂) receptors, as well as histamine-1, alpha-1 adrenergic and muscarinic receptors. It is well absorbed orally and primarily metabolized by the liver. The half-life of olanzapine is 21-54 hours.

Anticholinergic symptoms may be the initial signs of toxicity in overdose (agitation, tachycardia, myoclonus). Central nervous system depression (lethargy, coma) follows and is the most common finding following overdose with olanzapine. Slurred speech, ataxia, and dizziness also commonly occur. Decreased respirations, extrapyramidal effects and seizures are possible. Pinpoint pupils, unresponsive to naloxone, are often reported. Tachycardia and hypotension are due to alpha adrenergic and muscarinic blockade. Unlike other antipsychotics, olanzapine has not been associated with QTc prolongation.

Deaths in adults have been reported with ingestions of ≥ 600 mg olanzapine. Children are especially at risk of toxicity with very small ingested amounts. Extreme drowsiness, slurred speech and staggering were reported in a 17 kg child who was given one 10 mg Zyprexa® tablet instead of Zyrtec®. The child slept for most of the six days following the ingestion, returning to baseline on the seventh day (Bond & Thompson, *J Tox-Clin Tox* 1998; 36:522).

Treatment of olanzapine overdoses consists of gastrointestinal decontamination with activated charcoal and supportive care. Norepinephrine or phenylephrine are indicated for hypotension, and benzodiazepines should be used for seizures. Methods of enhancing the elimination of the drug (forced diuresis, hemodialysis, hemoperfusion, exchange transfusion) are ineffective.