toxtidbits
the maryland poison center's monthly update. news. advances. information.
1-800-222-1222
December 2010

# Citalopram and Escitalopram

Selective serotonin reuptake inhibitors (SSRIs) were first marketed in 1987 for the treatment of depression as an alternative to the older and more toxic tricyclic antidepressants. The SSRIs are relatively safe in overdoses, usually causing somnolence, nausea, and vomiting. However, they have been known to cause seizures, ECG abnormalities and serotonin syndrome*. Out of this class, citalopram and escitalopram are frequently prescribed due to their favorable drug interaction profile.

Citalopram, (Celexa®) is a racemic mixture containing both the R and S isomers, while escitalopram (Lexapro®) contains only the more active S-enantiomer. Prolongations of the QT-interval and seizures have been reported with citalopram overdoses. Escitalopram is thought to be less toxic based on initial reports; however, toxicity data are more limited. In a retrospective review of single substance overdoses reported to six U.S. poison centers between January 1, 2002 and December 31, 2005, the most common clinical effects of these two antidepressants varied *(J Emer Med 2010;39(1):44-48).* The most common symptoms of escitalopram overdoses included tachycardia, drowsiness, hypertension, nausea and vomiting. Common citalopram overdose symptoms were tremors, seizures, hyperthermia, hyperreflexia and myoclonus. Conduction disturbances occurred in 1.7% of the escitalopram overdoses and 3.7% of the citalopram overdoses. The discrepancy in the toxicities of these two medications seems to arise from the presence of the R-enantiomer in citalopram. Since escitalopram only contains the active S-isomer, it can be deduced that patients who overdose on it can be spared the more severe toxicities.

Activated charcoal is the method of choice for GI decontamination if performed within 1-2 hours of ingestion. The Maryland Poison Center recommends seizure management using benzodiazepines and cardiac monitoring for QTc prolongation for at least 12 hours after the ingestion.

*Andrea Shaw*
*PharmD Candidate, Class of 2011*
*University of Maryland School of Pharmacy*

**For more information on the diagnosis and treatment of serotonin syndrome, see the September 2010 issue of ToxTidbits at www.mdpoison.com.*

***DID YOU KNOW THAT…*** *on November 19, 2010, Xanodyne Pharmaceuticals announced that Darvon® and Darvocet® will be withdrawn from the market at the request of the FDA?*

Recent data show that propoxyphene puts patients at increased risk of cardiac toxicities (prolonged PR interval, widened QRS complex and prolonged QT interval), even at therapeutic doses. The FDA believes the risks outweigh the potential benefits of the drug and is encouraging generic manufacturers to voluntarily remove their products as well.

Maryland Poison Center
University of Maryland School of Pharmacy

Post and share this edition of **toxtidbits** with your colleagues. Send any comments or questions to: **toxtidbits**, 410.706.7184 (fax) or Lbooze@rx.umaryland.edu.

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