

# toxtidbits

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

## Ondansetron and QT Interval Prolongation

Ondansetron is a selective 5-HT<sub>3</sub> receptor antagonist indicated for the prevention of chemotherapy-induced nausea and vomiting. It is available as 4mg and 8mg oral tablets and orally disintegrating tablets, a 4mg/5mL oral solution, and as a 2mg/mL injection. In 2011, the FDA warned health professionals that ondansetron may cause QT interval prolongation.

QT interval prolongation may lead to ventricular tachycardia, including Torsades de Pointes (TdP), a potentially fatal heart rhythm. Patients with underlying conditions such as long QT syndrome, hypokalemia and hypomagnesemia, and those taking other medications that cause QT prolongation are also at risk for the development of TdP.

An updated safety announcement issued by the FDA in June 2012 posted a summary of the preliminary results of a study on the effect of ondansetron (Zofran<sup>®</sup>) on QT interval prolongation. The study indicated that a single 32mg injection of ondansetron may cause QT interval prolongation, thus increasing the risk of the development of TdP.

The FDA has made the following recommendations for the labeling and use of ondansetron:

- Single 32 mg IV dose is no longer indicated
- Dosing regimen of 0.15mg/kg IV over 15 minutes every 4 hours for 3 doses in children and adults for chemotherapy-induced nausea and vomiting
- Maximum single IV dose should not exceed 16 mg
- Electrolyte abnormalities should be corrected prior to infusion

Postoperative nausea and vomiting doses have remained to be a single IV dose of 4mg in adults and children >40 kg, and 0.1mg/kg in children ≤40 kg. Oral dosing regimens have been left unchanged.

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### Did you know?

**The following medications also cause QT interval prolongation:**

- Amiodarone (Cordarone<sup>®</sup>, Pacerone<sup>®</sup>)
- Azithromycin (Zithromax<sup>®</sup>)
- Citalopram (Celexa<sup>®</sup>)
- Clarithromycin (Biaxin<sup>®</sup>)
- Erythromycin (E.E.S.<sup>®</sup>, Erythrocin<sup>®</sup>)
- Haloperidol (Haldol<sup>®</sup>)
- Methadone (Dolophine<sup>®</sup>)-  
Moxifloxacin (Avelox<sup>®</sup>)

For a complete list, visit  
<http://www.azcert.org/medical-pros/drug-lists/drug-lists.cfm>

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