

RGH Pharmacy E-Bulletin

Volume 34 (4): May 25, 2009

A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

Editor: Assoc. Prof. Chris Alderman, University of South Australia – Director of Pharmacy, RGH

© Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia 5041

Metoclopramide and movement disorders

Patients receiving long-term metoclopramide treatment are at risk for tardive dyskinesia. Tardive dyskinesia is one of the clinical manifestations of drug-induced movement disorders along with akathisia, dystonia and parkinsonism. It is a hyperkinetic movement disorder characterized by involuntary, repetitive movements of the extremities, or lip smacking, grimacing, tongue protrusion, rapid eye movements or blinking, puckering and pursing of the lips, or impaired movement of the fingers. One study of 125 patients presenting for drug-induced movement disorders revealed 63% had tardive dyskinesia, 30% parkinsonism, 24% dystonia and 7% akathisia. Drugs that block dopamine receptors, such as antipsychotics, have been associated with these adverse effects, but the association with anti-emetics such as metoclopramide and prochlorperazine has been less well-recognised.

Tardive dyskinesia associated with anti-psychotic use has been reported to have an incidence of 1-5% with the highest rates in the elderly. The incidence associated with long-term use of metoclopramide is unknown. The development of metoclopramide-induced tardive dyskinesia is associated with cumulative drug exposure and one US study revealed metoclopramide use beyond 90 days in 20% of patients prescribed the medication.

Metoclopramide is prescribed for the treatment of nausea, vomiting, gastroparesis, and gastroesophageal reflux disease. Metoclopramide blocks dopamine-1 and dopamine-2 receptors centrally in the chemoreceptor trigger zone (antiemetic) and peripherally in myenteric neurons (prokinetic). Dopamine receptor-blocking drugs cause most cases of drug-induced tardive dyskinesia. The majority of drugs that cause tardive dyskinesia antagonize dopamine D2 receptors. Other classes of drugs have the potential to cause tardive dyskinesia, including antidepressants and calcium channel blockers.

Advanced age, female gender and total cumulative drug exposure are risk factors associated with the development of tardive dyskinesia. A recent retrospective study in a US speciality clinic has found a significant rise in referrals for metoclopramide-induced tardive dyskinesia.

In February 2009 the FDA in the USA required that metoclopramide-containing medications carry increased warning about long-term or high-dose use, specifying that such chronic use has been linked to tardive dyskinesia.

When a patient develops tardive dyskinesia, withdrawal of the implicated drug should be the first management strategy. Symptoms are not always reversible and there is no definitively effective treatment. The prolonged use of metoclopramide beyond three months requires patients to be monitored for the development of tardive dyskinesia.

Acknowledgment – This E-Bulletin is based on work by Dr Brian Simmons, DATIS, RGH.

FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
Information in this E-Bulletin is derived from critical analysis of available evidence – individual clinical circumstances should be considered when making treatment decisions. You are welcome to forward this E-bulletin by email to others you might feel would be interested, or to print the E-Bulletin for wider distribution. Reproduction of this material is permissible for purposes of individual study or research.