

RGH Pharmacy E-Bulletin

Volume 27 (3): August 13, 2007

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

Developments in smoking cessation

Although the rate of smoking has declined dramatically, a recent survey has shown that there is a slowing in the rate of decline. As cigarette smoking is a leading cause of morbidity and premature death, it is important to investigate and adopt new and effective ways to help smokers quit.

Nicotine replacement therapy (NRT)

The Australian Therapeutic Goods Administration (TGA) has recently approved a new indication for two nicotine replacement products (Nicorette Gum and Nicorette Inhaler). The use of the products enables smokers to “cut down then stop” (CDTS). New evidence shows that NRT given to smokers unable or unwilling to stop smoking is twice as effective as placebo in achieving sustained reduction in smoking. This would result in reduced inhalation of smoke and accompanying toxins. Smoking reduction, achieved using NRT, has been shown to increase rates of subsequent cessation. Given that approximately 50% of smokers are interested in reducing rather than ceasing smoking, the number of smokers that stop could significantly increase. The new indication is not designed as an alternative to complete cessation. Stopping completely remains the ultimate goal.

Varenicline

The TGA has also recently approved varenicline, which has been developed specifically to aid smoking cessation. Varenicline (Champix[®]) binds with high affinity and selectivity to the $\alpha_4\beta_2$ nicotinic acetylcholine receptor where it acts as a partial agonist. By having both stimulatory and antagonistic effects on the receptor, it is thought to work by decreasing the strength of the smoker's urge to smoke, and by relieving craving and withdrawal symptoms. In addition, if a person smokes while taking varenicline, the sense of satisfaction associated with smoking is decreased.

Evidence of two recent outcome trials indicates that varenicline is superior to placebo and to bupropion for achieving smoking cessation. The long term quit rates for varenicline were significantly higher than placebo for both studies. Effectiveness appears to be dose related.

The main adverse effect is nausea (30% varenicline vs 10% in placebo), and it is recommended that the drug be taken with a meal or a glass of water to minimise this effect. Titration of the dose up to 1mg twice daily for 12 weeks from initiation of treatment is also recommended. Headaches (15% vs 3%), insomnia (18% vs 13%) and abnormal dreams (13% vs 5%) were also observed. Unlike NRT and bupropion, varenicline does not reduce post-cessation weight gain.

Varenicline undergoes minimal metabolism and is 92% excreted unchanged in the urine. Caution should therefore be exercised for patients with renal impairment. Varenicline has not yet been tested in patients with psychiatric illness, and dose tapering is recommended at the end of the course to prevent irritability, increased urge to smoke, depression and insomnia.

To date no drug-drug interactions have been identified. Experience so far suggests that in general varenicline is very well tolerated, and when prescribed as part of a program of behavioural support the drug is a valuable addition to treatment aiding smoking cessation.

Acknowledgment – This E-Bulletin is based on work by Rosemary Allin, Senior Pharmacist, 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.