

# RGH Pharmacy E-Bulletin

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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.

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## Revised guidelines for colchicine dosing in acute gout.

Gout is the most common form of inflammatory arthritis. In acute gout, uric acid crystals are deposited in affected joints causing an inflammatory reaction with pain, swelling and joint damage. Current treatment options for acute gout include non-steroidal anti-inflammatory drugs (NSAIDs), intra-articular or systemic corticosteroids and colchicine. Colchicine exerts its effect by reducing the inflammatory reaction to deposited urate crystals. Traditionally the recommended dose has been 1 mg, followed by 0.5 mg every six hours, up to 6 mg per course, until pain relief or adverse effects such as nausea, vomiting and diarrhoea occur. This has to be adjusted for renal impairment. Colchicine can interact with many common drugs increasing the risk of toxicity, while more serious adverse effects such as myelosuppression, thrombocytopenia, myopathy, peripheral neuropathy, multi-organ failure and even death have been reported with colchicine toxicity. Although colchicine has been used for decades, few randomised, controlled trials have been conducted to look at its dose-related safety and efficacy in acute gout.

### \*Efficacy and gastrointestinal toxicity for high and low -dose colchicine:

Colchicine Dose	High-dose 4.8 mg total N = 52	Low-dose 1.8 mg total N = 74	Placebo 0 mg total N = 59
Patients achieving 50% reduction in pain	32.7 %	37.8 %	15.5 %
Patients experiencing gastrointestinal adverse effects	76.9 %	25.7 %	20.3 %

*\*Adapted from National Prescribing Service Limited – Colchicine for acute gout 14 May 2010*

A recently published multi-centre, randomised, placebo-controlled study looked at high versus low-dose colchicine for acute gout flares. In this study the low-dose colchicine consisted of 1.2 mg immediately, followed by 0.6 mg after one hour while the high-dose colchicine consisted of 1.2 mg immediately, followed by 0.6 mg every hour for six hours (colchicine is available in 0.6 mg tablets in the USA while 0.5 mg tablets are available in Australia). Patients were deemed to be 'responders' if they achieved the primary end point of a greater than 50% pain reduction at 24 hours without rescue medication (such as NSAIDs). Both high and low-dose colchicine regimens had significantly more responders than placebo, as shown in the table above. When comparing adverse effects and safety, the low-dose group had all mild to moderate adverse effects while the high-dose group reported some severe adverse effects. Overall rates of adverse effects were 76.9% for the high-dose, 36.5% for the low-dose and 27.1% for placebo, while rates of gastrointestinal adverse effects are also in the above table. The most commonly reported adverse effects were diarrhoea and nausea, while vomiting was reported in the high-dose group. The authors of the study concluded that the results of their trial have provided evidence for low-dose colchicine therapy in acute gout flares. Dose recommendations for colchicine have been revised in the Australian Medicines Handbook<sup>®</sup> to a dose of 1 mg followed by 0.5 mg one hour later and a maximum dose of 1.5 mg per course.

This E-Bulletin is based on work by Ellise Liew, Clinical Pharmacist, RGH

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