

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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Preventing exacerbations in COPD

Exacerbations of chronic obstructive pulmonary disease (COPD) are acute episodes of clinical deterioration which may be secondary to either infective or non-infective causes. Symptoms may include increased breathlessness, cough and sputum production, sputum purulence and fever. Exacerbations become more frequent as COPD progresses and are associated with impaired health status, increased hospitalisation, disease progression and mortality. In elderly patients frequent exacerbations of severe COPD may contribute to a need for residential care.

The prevention of exacerbations is now recognised as a primary goal of COPD therapy. A number of treatments have been shown to reduce exacerbation rates, including mucolytic agents, long-acting beta agonists (LABAs), tiotropium, and inhaled corticosteroids (ICS) used either alone or in combination with a LABA. However there is no standard definition of a COPD exacerbation, and clinical trials have used many different criteria for counting, recording and analysing exacerbation rates. This makes it difficult to compare the relative efficacy of different medications.

A recently published multinational study is the first large head-to-head comparison of an ICS/LABA combination vs tiotropium for the prevention of exacerbations in severe COPD. 1323 patients with moderate-severe COPD (mean post-bronchodilator FEV₁ 39%) were randomised to receive either inhaled salmeterol-fluticasone 50/500mcg twice daily or tiotropium 18mcg once daily for two years. Both groups used short-acting beta agonist for relief therapy. Exacerbations were defined as those that required treatment with oral corticosteroids and/or antibiotics or required hospitalisation. Both groups had similar exacerbation rates (the primary endpoint) at two years. There were also no clinically important differences in lung function or health status as measured by the St George's Respiratory Questionnaire.

In an earlier Canadian study, researchers randomised 449 patients with moderate to severe COPD to 12 months treatment with either tiotropium 18mcg once daily plus placebo, tiotropium plus salmeterol 50mcg twice daily, or tiotropium plus fluticasone-salmeterol 500/50 mcg twice daily. The primary endpoint, the proportion of patients who experienced an exacerbation that required treatment with systemic steroids or antibiotics, did not differ between the three groups. Secondary outcomes such as lung function, disease-specific quality of life and hospitalisation rates were improved in the triple therapy group.

The reduction in exacerbation rates with ICS has been demonstrated only in patients with moderate to severe disease (FEV₁ < 50% predicted), and only with high doses (e.g. fluticasone 1000mcg daily, budesonide 800mcg daily). The possible benefits of high dose ICS on exacerbation rates and other outcomes should be balanced with potential adverse effects, including an increased risk of oral candidiasis, osteoporosis and possibly pneumonia.

All patients with COPD should receive annual influenza vaccination which reduces the relative risk of exacerbations, hospitalisation or death from respiratory disease or all causes by 50%.

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FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
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