RGH Pharmacy E-Bulletin

Volume 42 (6): May 30, 2011

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

Optimal duration of statin therapy

For many years HMG-CoA reductase inhibitors (commonly referred to as "statins") have been the mainstay of pharmacological lipid lowering therapy across many patient groups. Hypercholesterolemia is an important and modifiable risk factor for cardiovascular disease, and as such elevated cholesterol that have not responded to lifestyle modifications alone should be addressed with lipid lowering medications. Statins are generally well tolerated with predictable efficacy and side effects. However, limited data exists regarding when and if it is appropriate to cease treatment with statin drugs.

According to the Australian Cardiovascular Therapeutic Guidelines, target lipid concentrations are as detailed below:

LDL-cholesterol	<2.5 mmol/L (<2.0 mmol/L for high-risk patients with existing cardiovascular disease)
Total cholesterol	<4.0 mmol/L
HDL-C	>1.0 mmol/L
Triglycerides	<1.5 mmol/L

The initial goal of statin therapy is to reach these target levels, however the ultimate goal of treating hypercholesterolemia is to reduce the risk of coronary artery disease (CAD), MI, stroke and other cardiovascular related morbidity and mortality. Treatment with a statin medication maybe warranted even after target cholesterol levels are reached, to maintain satisfactory lipid levels and continue to reduce the risks of CAD.

Studies suggest initial benefits in terms of risk reduction of CAD can be realised one to two years after initiation of statin treatment, and these benefits continue and increase as duration of treatment extends. Most studies have shown reduced risk of CAD with up to five years of treatment but there is no reason to believe this benefit wouldn't persist beyond this timeframe.

Published literature suggests that the percentage risk reduction of CAD increases as the duration of therapy extends. After 1-2 years, a risk reduction of 29% can be achieved, after 3-4 years this reduction can increase to 36% and after 5-6 years a risk reduction of up to 58% can be achieved. Thus, those at higher baseline risk of cardiovascular events will derive the greatest benefits from longer term statin therapy.

It has also been suggested that statins have cardiovascular benefits which extend beyond their lipid lowering properties, so even when satisfactory lipid levels are reached, there is still benefit to be gained from ongoing statin treatment. Some of these additional benefits of statins are thought to include a reduction in C-reactive protein, anti-inflammatory properties and atherosclerotic plaque stabilising properties.

The five statins currently available in Australia are simvastatin, fluvastatin, pravastatin, rosuvastatin, and atorvastatin. All of these drugs have prolonged duration of action and thus are dosed once daily. Provided that patients do not experience adverse effects (the most common of which are myalgia and other muscle related issues) it appears reasonable to continue statins as part of long term cardiovascular event prophylaxis.

Acknowledgment – This E-Bulletin is based on work by Nerida Grosser, Pharmacy Intern, RGH

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