Bahrain Medical Bulletin, Vol. 32, No. 2, June 2010

Best Evidence from the Cochrane Library

Jaffar M Al Bareeq, DLO, RCP, RCS (London)* Zbys Fedorowicz, Msc, DPH BDS**

Migraine: Aspirin and an Antiemetic Is a Reasonable Option

A single dose of 900-1000 mg aspirin can substantially reduce migraine headache pain within two hours, for more than half of people who take it. It also reduces any associated nausea, vomiting, and sensitivity to light or sound (photophobia or phonophobia). Formulations of aspirin 900 mg together with 10 mg of the antiemetic metoclopramide are better than placebo at reducing symptoms of nausea and vomiting. These were the findings of a Cochrane Systematic Review using data from 13 studies with 4222 participants.

Tobacco Policies: Smoking Bans Reduce Exposure to Secondhand Smoke and Reduce Heart Attacks

In countries and states that have introduced policies that restrict smoking in public, people have less exposure to secondhand smoke. There is also a reduction in the number of people who have heart attacks, as well as an improvement in other indicators of health. These findings are reported in a Cochrane Systematic Review published in the April 2010 issue of The Cochrane Library. “The balance of evidence suggests that legislative smoking bans have achieved their primary objective of reducing exposure to secondhand smoke. The impact on active smoking is not yet conclusively demonstrated,” says Professor Kelleher.

Malaria: Poor Data on Key Mosquito Control Tool a Threat to Effective Malaria Prevention

Despite wide acclaim as a successful policy there is currently almost no quantitative evidence showing how well spraying the walls of people’s homes with mosquito-killing insecticide really works against malaria. This is the key finding of a Cochrane Systematic Review published in the April issue of The Cochrane Library. Given the World Health Organization’s 2007 decision to move towards world-wide malaria eradication, policy makers now also require good evidence on the combination of both IRS and ITNs. “Currently we have no evidence to show whether or not a combination would be justified both from the cost and the impact side and this needs to be urgently generated,” says Lengeler.

Asthma Challenges: The Place of Inhaled Long-acting Beta-agonists

When long-acting beta-agonists (LABA) were introduced in the early 1990s, they appeared to offer enormous promise. However, their place in the therapeutic pathway has become

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* Chief Editor
Bahrain Medical Bulletin-established 1979
Kingdom of Bahrain
** Director, Bahrain Branch of the UK Cochrane Centre
The Cochrane Collaboration
Kingdom of Bahrain
Email: zbysfedo@batelco.com.bh; jmab@batelco.com.bh

uncertain in recent times, as evidence has emerged suggesting an increased risk of severe harms and death. These concerns were raised initially by two large surveillance studies (SMART and SNS), which appeared to show an increase in deaths from asthma in adults taking LABAs regularly, compared with placebo (Castle 1993; Nelson 2006). The uncertainty caused by these findings is exemplified by variation between different international guidelines for both adults and children in relation to the management of patients whose asthma is poorly controlled despite regular inhaled corticosteroids. In addition, the concerns over safety led the US Food and Drug Administration (FDA) to publish an announcement in February 2010 explicitly aimed at health professionals and the public in relation to LABAs (FDA 2010). The FDA advised that LABAs should only be used in the following circumstances:

- in combination with “asthma controller” therapies such as inhaled corticosteroids;
- for the shortest duration of time possible, and long term only in people whose asthma cannot otherwise be controlled; and
- in fixed-combination products (incorporating controller therapies) for children and adolescents, to encourage compliance.

The updated review, covering 48 randomized controlled trials and 15,155 participants, demonstrates that in adults who are inadequately controlled on their regimen of inhaled corticosteroids, adding a LABA (salmeterol or formoterol) is modestly more effective at reducing exacerbations requiring systemic corticosteroids, than simply increasing the dose of inhaled corticosteroid. The review demonstrates that almost all the data in the included studies relate to adults. Therefore, any conclusions reached cannot be extrapolated to children.

In children, the evidence from randomized controlled trials is insufficient to base any judgment. A recent trial published in the *New England Journal of Medicine* appears to show that children vary in the extent of their response to the various therapeutic options (Lemanske 2010). While the addition of LABAs is superior to increasing the dose of inhaled corticosteroids or adding leukotriene receptor antagonists in most children, in a substantial group the reverse is true.