Synopsis

Aspirin and cardiovascular disease

Between 1988 and 2003, five large randomised trials on aspirin and cardiovascular disease were published. Meta-analyses of these trials have all agreed that aspirin significantly reduced the risk of both a first and a recurrent myocardial infarction (MI) by significant degrees. Nonsignificant reductions in the risk of MI and stroke were also observed. The most recent meta-analysis of all five trials was published recently in the *Archives of Internal Medicine*.[1]

This meta-analysis included 55 580 randomised participants (11 466 women) and showed that aspirin was associated with a statistically significant 32% reduction in the risk of a first MI and a significant 15% reduction in the risk of all important vascular events. For individuals whose risk of a first MI is 10% or greater, aspirin confers benefits which outweigh any risks associated with its use.

A review by Hung [2] is also very supportive of aspirin in both primary and secondary prevention of cardiovascular disease.

According to Hung, 'People without symptoms but at increased risk of a coronary heart disease event (> 1% annual risk) may reduce this risk by taking low-dose aspirin'. Secondary prevention, Hung says, is possible with aspirin, in patients with peripheral arterial disease, including patients with acute or previous history of ischaemic stroke or transient ischaemic attack, lower limb circulatory insufficiency, and those who undergo grafting or angioplasty of peripheral arterial vessels. He says aspirin also provides benefit in nearly all groups of patients with clinical manifestations of coronary heart disease. This includes patients with evolving acute MI or after recovery from MI, with unstable or stable angina, and those who undergo coronary artery bypass grafting or coronary angioplasty.

Studies on other aspects of low-dose aspirin are being conducted. An example is the ASPREE (Aspirin in Reducing Events in the Elderly) study which aims to investigate the primary prevention of major adverse cardiovascular events and vascular dementia in the elderly.[3] The balance of risks versus benefits of aspirin for the primary prevention of cardiovascular disease and vascular dementia has not been established in the elderly. The investigators stated the need for a study in family practice to investigate whether routine use of low-dose aspirin for the primary prevention of cardiovascular disease and vascular dementia in the elderly is beneficial or harmful. ASPREE is a placebo-controlled trial of low-dose aspirin for the primary prevention of major adverse cardiovascular events and vascular dementia. The study will follow 15 000 subjects aged 70 years or more for an average of 5 years. The potential benefit of antiplatelet agents must be balanced against the risk of bleeding, which is higher in older patients.

Mahe *et al*.,[4] writing in *Drugs and Aging*, advise caution when using aspirin in primary prevention in the elderly. They say that aspirin should only be given for primary and secondary prevention in the elderly after a comprehensive evaluation of an individual patient's thrombotic and haemorrhagic risk has been conducted.

Aspirin should only be used to prevent a cardiovascular event in association with an overall programme of lifestyle measures including healthy eating, cessation of smoking, control of blood pressure and regular physical activity.

What seems to be evident is that randomised controlled trials have satisfactorily proven that antiplatelet therapy (mainly with aspirin) is effective in reducing the risk of non-fatal MI, non-fatal stroke or vascular death among patients with established arterial disease.

A note of warning has, however, been issued from a meeting of the American College of Chest Physicians, held in Orlando, Florida in October. Emile Ferrari and his co-workers of the University Hospital Pasteur in Nice, France, said that they found that patients experienced acute coronary events, including heart attacks and unstable angina, less than a week after stopping aspirin therapy. The patients had ended their aspirin regimens for various reasons, including undergoing minor surgery or dental treatment. Some just stopped taking their pills on their own. Dr Ferrari warned, 'Our study serves as a reminder for all medical professionals who treat coronary patients that aspirin withdrawal should not be advised, and that alternative recommendations should be considered.'

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1. Eidelman RS *et al*. *Arch Intern Med* 2003; **163**: 2006-2010.
2. Hung J. *MJA* 2003; **179**(3): 147-152.
3. Nelson M *et al*. *Drugs and Aging* 2003; **20**(12): 897-903.
4. Mahe II *et al*. *Drugs and Aging* 2003; **20**(13): 999-1010.
5. **www.healthandage.com**