UNLOCKING the key to ageing

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Women sought for primary prevention study on the benefits of aspirin.

THE Australian population is ageing, with the proportion of those over 65 years expected to double to around 25% over the next 40 years.

Life expectancy is also increasing, however more than 50% of those surviving into their late 80s are incapacitated by dementia or some other disabling condition. Therefore the question arises: Can healthy survival be extended through simple and safe interventions?

ASPREE (ASPirin in Reducing Events in the Elderly) is the largest primary prevention clinical trial conducted in Australia. The double-blind, randomised, placebo-controlled trial aims to establish whether or not aspirin prolongs disability-free survival.

The primary care setting increases recruitment efficiency and provides the single point where knowledge of a person's medical progress is amalgamated. Currently over 2600 GPs are registered co-investigators to ASPREE.

WHY ASPIRIN?

Aspirin inhibits the synthesis of prostaglandins (key mediators of pain and inflammation) and permanently blocks the production of thromboxane, another member of the prostanoid family, preventing aggregation and clumping of platelets, even in lower doses.

Clinical trials have established aspirin's anti-platelet action reduces the incidence of myocardial infarction and stroke in secondary prevention settings, outweighing major adverse effects, such as bleeding and anaemia. Primary prevention studies, largely undertaken in middle-aged men, found the benefit was minimal, being largely negated by the risk of haemorrhage.

Much of the interest in aspirin is now turning to those older than 70 years where the risk of cardiovascular disease is high. However, epidemiological studies have indicated that older people are at a greater risk of bleeding which may outweigh the benefits of aspirin.

Very few primary prevention studies have included older people. ASPREE, a collaboration led by Monash University in Australia and the Berman Centre for Outcomes and Clinical Research in the US, was funded to fill the knowledge gap.

In Australia, there are currently no evidence-based guidelines for aspirin and primary prevention in the elderly but many people assume it will be beneficial. The disappointing results of many other large prevention trials have demonstrated the danger of making assumptions in the absence of evidence.

STUDY METHODOLOGY

Participants who have not previously had a myocardial infarction or stroke are randomly assigned 100mg/day of enteric-coated aspirin or placebo and will be followed annually until 2018. Unlike many clinical trials, ASPREE will determine the effectiveness of aspirin to extend disability-free years of life rather than focus on a single disease. This includes survival free of dementia and free of permanent impairment of an "activity of daily living". Currently over 15,000 participants have enrolled in the trial with 13,500 of these in Australia and full recruitment (19,000) to be completed by 2014.

Additional testing, imaging and bio-sampling will determine whether specific groups of participants are more or less likely to benefit from aspirin therapy.

Special studies are being undertaken to examine cerebral micro-haemorrhages, age-related macula degeneration, depression, serious infection, sleep apnoea and osteoporosis. Another sub-study is providing data on lifestyle and psychosocial contributors to healthy ageing and dementia prevention.

CANCER OUTCOMES

Some early aspirin trials have shown after five or more years of follow-up, the incidence of some cancers became progressively less among participants randomised to aspirin. However the significance of this finding is unclear because the finding was incidental and unplanned. ASPREE includes cancer outcomes and therefore has a pivotal role in confirming or refuting a role for aspirin in cancer prevention.

Currently, it is not known if low-grade inflammation is a cause or consequence of the diseases of ageing. If ASPREE shows lower incidence of disease and disability among those with reduced inflammatory markers, it will suggest inflammation as a potential cause of these conditions. This will be a key finding and may lead to the prophylactic use of anti-inflammatory agents in older people.

**Professor McNeil is the principal investigator of ASPREE*

Join ASPREE

The ASPREE study is being undertaken in Adelaide, Mount Gambier, across all of Victoria, Tasmania, southern NSW, the ACT, the Sapphire Coast and Wollongong.

GP co-investigators are recognised in major research publications and may be eligible for 40 Cat 1 QI&CPD points or PRPD points for the 2014-2016 triennium.

To be a co-investigator, visit www.aspree.org, email aspreegp@monash.edu or ring 1800 728 745.

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