ABSTRACTS

STATINS AND COLORECTAL CANCER

Statins seem to becoming increasingly important in many different areas of medicine, as this study published recently in the *New England Journal of Medicine* shows. Statins are inhibitors of 3-hydroxy-3-methylglutaryl coenzyme A reductase and effective lipid-lowering agents. Statins inhibit the growth of colon-cancer cell lines, and secondary analyses of some, but not all, clinical trials suggest that they reduce the risk of colorectal cancer.

The authors report on the Molecular Epidemiology of Colorectal Cancer study which is a population-based, case-control study of patients diagnosed with colorectal cancer in northern Israel between 1998 and 2004. Controls were matched according to age, sex, clinic, and ethnic group. They used a structured interview to determine the use of statins in the two groups and verified self-reported statin use by examining prescription records in a subgroup of patients for whom prescription records were available.

They found that in analyses including 1 953 patients with colorectal cancer and 2 015 controls, the use of statins for at least 5 years, against not using statins, was associated with a significantly reduced relative risk of colorectal cancer. This association remained significant after adjustment for the use or non-use of aspirin or other non-steroidal anti-inflammatory drugs; the presence or absence of physical activity, hypercholesterolaemia, and a family history of colorectal cancer; ethnic group; and level of vegetable consumption. The use of fibric-acid derivatives was not associated with a significantly reduced risk of colorectal cancer. Self-reported statin use was confirmed for 276 of the 286 participants who reported using statins and whose records were available.

The conclusion was that the use of statins was associated with a 47% relative reduction in the risk of colorectal cancer after adjustment for other known risk factors. Because the absolute risk reduction is probably low, further investigation of the overall benefits of statins in preventing colorectal cancer is needed.

Poynter JN, *et al. NEJM* 2005; **352:** 2184-2192.

CHILDHOOD MORTALITY AND HIV

The authors of this paper in *The Lancet* point out that every year between 570 000 and 740 000 children become newly infected with HIV-1. Many of these infections are thought to be through mother-to-child transmission (MTCT). An estimated 420 000 - 580 000 of these children die every year. Almost all paediatric HIV infections occur in sub-Saharan Africa. Without antiretroviral treatment, most HIV-infected children die before their fifth birthday, making HIV an important component of childhood mortality rates. However, as the authors also point out, factors underlying these deaths are not well described. Marie-Louise Newell and colleagues, for the Ghent International AIDS Society (IAS) working group on HIV infection in women and children, estimated mortality in African children born to HIV-infected mothers and analysed selected risk factors. They used individual data from 7 randomised MTCT intervention trials.

Early HIV infection was defined as a positive HIV-PCR test before 4 weeks of age; and late infection by a negative PCR test at or after 4 weeks of age, followed by a positive test. The team investigated the effect of maternal health, infant HIV infection, feeding practices and age at acquisition of infection on mortality. They found that 11% of 3 468 children died. By the age of 1, an estimated 35.2% infected and 4.9% uninfected children, respectively, will have died. Mortality varied by geographical region and was associated with maternal death, CD4 cell counts of less than 200/µl, and infant HIV infection. Mortality was not associated with either ever breastfeeding or never breastfeeding in either group of children. In infected children, mortality was significantly lower for those with late infection than for those with early infection.

The authors conclude that their findings highlight the need for timely antiretroviral intervention, for support for HIV-infected women and children in developing countries, and for assessment of prophylactic programmes to prevent MTCT.

Newell M-L, *et al. Lancet* 2004; **364:** 1236-1243.

GLOBAL BURDEN OF HYPERTENSION

Hypertension is a common problem and, as the authors of this article in *The Lancet* point out, reliable information about the prevalence of hypertension in different areas of the world is essential for national governments and international health organisations to develop policies to prevent and control the condition. The authors pooled data from different regions of the world to estimate the overall prevalence and absolute burden of hypertension in 2000 and estimated the global burden in 2025.

To do this, they searched the published literature from 1 January 1980 to 31 December 2002 using MEDLINE. They also did a manual search of bibliographies of the articles they retrieved. They included studies that reported sex-specific and age-specific prevalence of hypertension in representative population samples.

They found that, overall, 26.4% of the adult population in 2000 had hypertension, split equally between men and women, and 29.2% were projected to have developed hypertension by 2025. The estimated total number of adults with hypertension in 2000 was 972 million; 333 million in economically developed countries and 639 million in economically developing countries. The number of adults with hypertension was predicted to increase by about 60% to a total of 1.56 billion by 2025.

Hypertension is known to be an important world-wide public health problem because of its high frequency and the incidence of related cardiovascular and kidney disease. It is the leading risk factor for mortality and is ranked third as a cause of disability-adjusted life-years. The authors found a particularly high prevalence of hypertension reported in Latin America and the Caribbean, with the lowest prevalence being in Asia and its islands. They also found that hypertension is a greater population burden in economically developing rather than in economically developed countries. Onset of cardiovascular disease is generally at a lower age in less developed countries, contributing to this burden.

Europe, North America, Australia and New Zealand have been successful in interventions to decrease the burden of cardiovascular disease and have substantially decreased age-adjusted cardiovascular mortality. The authors conclude that the sheer scale of the incidence of hypertension worldwide needs not only an increase in awareness, treatment and control of the condition, but also concerted efforts to target primary prevention. They point out that changes in lifestyle of the general population would result in a lower prevalence of hypertension.

Kearney PM, *et al. Lancet* 2005; **365:** 217-223.

Bridget Farham