

Abstracts

Low-dose aspirin increases risk of major bleeding, but not in diabetes

Low-dose aspirin for primary prevention of cardiovascular events is generally considered a bad idea because the risks of bleeding seem to outweigh the benefits. However, things may be different for people with diabetes.



A claims study used data from more than 4 million residents of Perugia, Italy, over a period of six years. Of these, 186 425 people were taking low-dose aspirin. Propensity score matching was used to assign one control, without long-term low-dose aspirin use, to each participant taking aspirin. Propensity scoring took into account several potential confounders, including age, sex, diabetes, previous admission to hospital for cardiovascular disease, and use of various drugs. However, behavioural risk factors such as smoking, poor diet, excess alcohol consumption, obesity, and use of over-the-counter drugs (including aspirin) could not be considered in this study.

Overall, 5.58 (95% CI 5.39 - 5.77) hospital admissions for major bleeding in the gastrointestinal tract or brain occurred per 1 000 person years in users of aspirin; the incidence in non-users was 3.60 (3.48 - 3.72) per 1 000 person years (incidence rate ratio 1.55, 1.48 - 1.63). In other words, for 1 000 people treated over a year, two extra cases of major bleeding will occur – about the number of major cardiovascular events prevented in people with a 10-year risk of 10 - 20%.

In people with diabetes, however, no increased risk was seen (1.09, 0.97 - 1.22);

the risk of admission to hospital for major bleeding was increased by about one-third in all patients with diabetes, irrespective of aspirin use. This could be due to the high platelet reactivity seen in diabetes. The clinical implications that this might have remain to be explored.

Of note, the incidence of major bleeding found in this study is about 5 times higher than that reported in randomised trials.

De Berardis G, et al. JAMA 2012;307(21):2286-2294. doi:10.1001/jama.2012.5034.

CT scans increase risk of cancer in children and adolescents

Two to three computed tomography (CT) scans of the head may triple children's risk of brain cancer; five to ten such scans may triple the risk of leukaemia.

This was seen in a study of all people under 22 years of age who had a first CT scan within the NHS in England, Wales, or Scotland between 1985 and 2002. Linkage with the central NHS registry provided data for the incidence of cancer in these people over an average of 10 years, and up to 23 years, of follow-up.

During this time, 74 diagnoses of leukaemia and 135 diagnoses of brain cancer were recorded in more than 175 000 participants.



Excess relative risk per mGy was 0.036 (95% CI 0.005 - 0.120) and 0.023 (0.010 - 0.049) for leukaemia and brain tumours, respectively. For every 10 000 head CT scans performed in children under 10 years, one additional case of leukaemia and one additional brain tumour can be expected in the subsequent 10 years.

Up to a half of CT scans are done unnecessarily, writes the commentator. Because we now know that CT confers an increased, albeit small, risk of cancer, good clinical judgement is needed to justify performing each CT scan, using as low a dose as possible.

Pearce MS, et al. Lancet, Early Online Publication, 7 June 2012. doi:10.1016/S0140-6736(12)60815-6.

Any decrease in serum glucose pays for patients with pre-diabetes

Observational follow-up of participants in an earlier prevention of diabetes trial showed that those who had at least one normal serum glucose measurement during the trial had half the risk of developing diabetes over the 6-year follow-up compared