Aspirin appears to help lower risk of stroke for patients with peripheral artery disease

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An analysis of previous studies indicates that among patients with peripheral artery disease, aspirin use is associated with a statistically nonsignificant decrease in the risk of a group of combined cardiovascular events (nonfatal heart attack, nonfatal stroke, and cardiovascular death), but is associated with a significant reduction in the risk of one of these events, nonfatal stroke, although the findings may be limited by the lack of a large study population, according to an article in the May 13 issue of *JAMA*.

Although aspirin is effective in the prevention of cardiovascular events in patients with symptomatic coronary heart disease and cerebrovascular disease, its effect in patients with peripheral artery disease (PAD) has been uncertain, according to background information in the article. Despite limited supporting data, some current guidelines recommend aspirin use for patients with PAD (partial or total blockage of an artery, usually one leading to a leg or arm, with symptoms including fatigue, cramping and pain from walking; and when the arm is in motion, discomfort, heaviness, tiredness and cramping).

To assess the effect of aspirin on cardiovascular event rates in patients with PAD, Jeffrey S. Berger, M.D., M.S., of the University of Pennsylvania, Philadelphia, and colleagues conducted a meta-analysis to evaluate available evidence from randomized controlled trials of aspirin therapy, with or without dipyridamole (an antiplatelet agent), that reported cardiovascular event rates (the primary events for this analysis were nonfatal myocardial infarction [MI; heart attack], nonfatal stroke,

and cardiovascular death). The researchers identified 18 trials, which included 5,269 patients, of whom 2,823 were randomized to aspirin therapy (of these, 1,516 received aspirin monotherapy) and 2,446 were randomized to placebo or control.

The researchers found that a total of 251 (8.9 percent) cardiovascular events occurred among the patients receiving any aspirin therapy compared with 269 (11.0 percent) events among the control patients, a 12 percent reduction in cardiovascular event rates, which was not statistically significant. Results for associations of aspirin therapy with the individual components of the primary events indicated that the risk of nonfatal stroke was significantly lower (34 percent) in the aspirin group than in the placebo (a rate of events of 1.8 percent vs. 3.1 percent), but was not associated with significant reductions in all-cause or cardiovascular death, heart attack, or major bleeding.

A total of 125 cardiovascular events occurred among 1,516 patients (8.2 percent) receiving aspirin monotherapy compared with 144 events among 1,503 patients (9.6 percent) in the placebo or control groups. Aspirin monotherapy was associated with a 36 percent reduction in the risk of nonfatal stroke (2.1 percent vs. 3.4 percent), but no statistically significant reductions in all-cause or cardiovascular death, heart attack, or major bleeding.

"Results of this meta-analysis demonstrated that for patients with PAD, aspirin therapy alone or in combination with dipyridamole did not significantly decrease the primary end point of cardiovascular events, results that may reflect limited statistical power," the authors write. "The major limitations of this meta-analysis reflect the limitations of published literature on aspirin for treating PAD. Many of these trials were small and of short duration, resulting in few major cardiovascular events."

"However the current evidence was insufficient to rule out small yet important benefits of aspirin (as suggested by the point estimate of a 12 percent risk reduction)," they add. "Larger prospective studies of aspirin and other antiplatelet agents are warranted among patients with PAD in order to draw firm conclusions about clinical benefit and risks."

More information: *JAMA*. 2009;301[18]:1909-1919.

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