Aspirin use does not significantly reduce events among those identified by certain screening method

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Individuals who were identified as being at increased risk of cardiovascular or cerebrovascular events based on screening for low ankle brachial index, a type of pressure measurement used in the diagnosis of peripheral artery disease, did not significantly reduce their risk of these events with the use of aspirin, according to a study in the March 3 issue of *JAMA*.

"The ankle brachial index (ABI), which is the ratio of systolic pressure at the ankle to the arm, is used in the diagnosis of peripheral artery disease affecting the legs. Also, a low ABI is associated with concomitant [accompanying] coronary and cerebrovascular disease and, in healthy individuals, with an increased risk of future vascular events, independently of cardiovascular risk factors," the authors write. They add that because the ABI is a simple, inexpensive, noninvasive test, it could be used in population screening programs to identify new groups potentially responsive to preventive treatments, such as aspirin.

F. Gerald R. Fowkes, F.R.C.P.E., of the University of Edinburgh, Scotland, and colleagues conducted a study to determine whether screening the general population for a low ABI could identify a higher-risk group that might benefit from aspirin therapy. The randomized controlled trial, conducted from April 1998 to October 2008, involved 28,980 men and women, ages 50 to 75 years, free of clinical cardiovascular disease, and who had an ABI screening test. Of those,

3,350 with a low ABI (0.95 or less) were entered into the trial and were randomized to receive once daily 100 mg of aspirin or placebo. The primary outcome for the study was a composite of initial fatal or nonfatal coronary event or stroke or revascularization.

After an average follow-up of 8.2 years, a primary end point event occurred in 357 participants. Between the groups, no statistically significant difference was found in event rates over time. The secondary end point of all vascular events occurred in 578 participants, with the occurrence of these events not differing over time between groups. Also, all-cause death did not differ significantly between the aspirin group and the placebo group. An initial event of major hemorrhage requiring admission to a hospital occurred in 34 participants in the aspirin group and 20 in the placebo group.

"Although this trial was not of screening per se, the results indicate that using the ABI in the community to screen individuals free of cardiovascular disease for an ABI of 0.95 or less is unlikely to be beneficial if aspirin is the intervention of choice. However, given the increased level of risk among those with a low ABI, the use of alternative therapies, such as statins or more potent antiplatelet agents without attendant hemorrhagic risks may usefully be considered," the authors write.

"In addition, given that the trial was a pragmatic trial in the context of ABI screening in the general population, aspirin might still have a net beneficial effect on patients with a low ABI, elevated risk factors, and a greater incentive to continue taking medication. Further trials of the management of patients with a low ABI identified in clinical practice as part of cardiovascular risk assessment programs would be justified."

More information: *JAMA*. 2010;303[9]:841-848.