

No quick fix for peripheral artery disease -- repeat hospitalizations

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Even after initial procedures to clear blockages in leg arteries, hospitalizations and associated costs in patients with peripheral artery disease increase as the condition progresses, according to research reported in *Circulation: Cardiovascular Quality and Outcomes*, an American Heart Association journal.

"We are dealing with clinically and economically severe consequences of PAD, a disease which is truly preventable," said Elizabeth Mahoney, Sc.D., the study's lead author. "Our prior research estimated that vascular-related hospitalizations for PAD patients cost the United States \$21 billion. Invasive treatment for PAD is costly, and a first [invasive procedure](#) becomes a risk factor for further procedures."

PAD, a debilitating condition in which blood flow to the arteries in the legs is obstructed, affects an estimated 8 million Americans, a number expected to increase, said researchers. PAD also is associated with high risk of major [cardiovascular events](#).

For the study, researchers used U.S.-based data from the Reduction of Atherothrombosis for Continued Health (REACH) Registry, an international prospective registry of patients at risk for atherothrombosis, or hardening or narrowing of the arteries due to plaque buildup.

"PAD shares the same risk factors as cardiovascular conditions like stroke and heart attack, but does not always have the dramatic onset,"

said Mahoney, director of health economics and technology assessment at the Mid America Heart and Vascular Institute of Saint Luke's Hospital in Kansas City, Mo. "Even if it does, it's not treated as seriously."

The prevalence of PAD is known from prior studies to increase from approximately 5 percent at age 50 to 10 percent by 65 and over 25 percent in patients 80 and older, researchers said.

Among 25,763 U.S. participants in the REACH registry, researchers identified 2,396 (9.3 percent) with symptomatic PAD and 213 (0.8 percent) with asymptomatic PAD when they enrolled in 2003 and 2004.

Scientists defined PAD symptoms when claudication was present (characteristic muscle cramping in the lower extremities during exertion) with an ankle-brachial index (ABI) of less than 0.90; a history of lower-limb revascularization such as balloon angioplasty or stenting; or amputation.

The ABI is measured by comparing blood flow in the ankle to that in the arm to detect poor circulation. Patients were considered asymptomatic if they had an ABI of less than 0.90 without symptoms.

Researchers compared the rates of vascular-related hospitalizations and associated costs. One- and two-year follow-up data were available on 1,543 patients with symptomatic PAD and 134 patients with asymptomatic PAD.

Twenty-three percent of asymptomatic and 31 percent symptomatic PAD patients had at least one vascular-related hospitalization during the two-year study. Average cumulative 2-year hospitalization costs per patient were \$7,000 for patients with a history of claudication; \$7,445 for those with asymptomatic PAD; \$10,430 for those with lower limb amputation; and \$11,693 for those with a history of revascularization

procedures.

"This high rate of hospitalizations would not be acceptable to most patients or physicians as an ideal course of care," says senior author, Alan T. Hirsch, M.D., professor of epidemiology and community health at the University of Minnesota. "No one should assume that the first admission for a PAD procedure is a permanent resolution or 'fix' of the underlying condition."

"In addition to more widespread use of the ABI as an early diagnostic test, preventive strategies, including the adoption of a healthy lifestyle, may help to arrest or stall the progression of the disease and minimize the risk of adverse outcomes."

Provided by American Heart Association

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