

# Guidelines: PAD Is Underdiagnosed, Undertreated

*Primary care physicians, said the committee, need to take on more responsibility for recognizing PAD.*

BY ALICIA AULT  
Contributing Writer

Peripheral arterial disease affects 15-20 million Americans, but it is not being properly diagnosed or treated, according to the authors of new guidelines for the management of PAD.

"Severe peripheral arterial disease is essentially an overlooked medical emergency in the United States," said Dr. Alan T. Hirsch, chairman of the guidelines writing committee, in a briefing with reporters.

Cochair Dr. Ziv J. Haskal said a lack of focus on PAD—both by patients and physicians—has led to an average 4-month delay in diagnosing critical limb ischemia. Up to 80% of amputations may be due to that condition, and 60% may be preventable by earlier interventions, said Dr. Haskal, director of the vascular and interventional radiology division at New York-Presbyterian Hospital/Columbia University Medical Center in New York.

Though the panel cochairs emphasized that PAD is underdiagnosed and undertreated, they hesitated to point fingers.

"This isn't about looking back with blame. This is about looking forward," Dr. Hirsch said.

The committee called on physicians to routinely ask patients if they have PAD symptoms, and to adopt physical exam techniques to ferret out blockages in the legs, feet, aorta, kidneys, and intestines.

Guidelines on PAD have been published

before, but none have had such broad backing, noted Dr. Hirsch, who is director of Abbott Northwestern Hospital's Vascular Center in Minneapolis.

The American Heart Association/American College of Cardiology Guidelines for the Management of Patients With Peripheral Arterial Disease is a product of the American Association for Vascular Surgery/Society for Vascular Surgery, the Society for Cardiovascular Angiography and Interventions, the Society of Interventional Radiology, the Society for Vascular Medicine and Biology, and the ACC/AHA Task Force on Practice Guidelines. They were endorsed by the American Association of Cardiovascular and Pulmonary Rehabilitation; the National Heart, Lung, and Blood Institute; the Society for Vascular Nursing; the TransAtlantic Inter-Society Consensus; and the Vascular Disease Foundation.

The 17-member committee, which included representatives of most of these organizations, pored over 1,300 peer-reviewed studies to provide what Dr. Hirsch called "very powerful, evidence-based tools."

The guidelines cover the diagnosis and management of atherosclerotic, aneurysmal, and thromboembolic PAD, but are limited to the abdominal aorta and its branches, the kidneys, the intestines, the legs, and the feet. Separate guidelines will be issued by the ACC in the spring on extracranial and vertebral arteries.

The guidelines offer background on

each condition, including causes, risk factors, prevalence, and how to recognize it. Diagnosis and treatment recommendations are given, along with a corresponding rating of the level of evidence that supports the test or therapy.

Primary care physicians need to take on more responsibility for identifying PAD, the guidelines committee said.

"The key to this is it requires awareness among primary care physicians," said Dr. Norman R. Hertzler, a cochair and chairman emeritus of the department of vascular surgery at the Cleveland Clinic.

For lower-extremity PAD, diagnosis can be confirmed with an ankle brachial index, which should be done for individuals at high risk for blockages in the legs or suspected of having such blockages.

Dr. Hirsch said that this recommendation would require a change in clinical practice, but that it "is important even for those with negligible to no symptoms because it represents a powerful opportunity" to prevent stroke, gangrene, amputation, or death. The guidelines have a table identifying patients who should have an ankle brachial index performed.

Dr. Haskal noted that PAD in the kidneys can lead to loss of function or difficult-to-control hypertension, which can affect heart function. Primary care physicians should consult the guidelines' algorithms on identifying who is at risk and who should be screened, he said. Screening is done largely with proven non-invasive imaging techniques such as duplex ultrasound.

Dr. Hertzler said screening is also crucial to identifying abdominal aortic aneurysms

before they rupture. The mortality rate from a ruptured aneurysm—50%—has remained unchanged for decades, he said. But the risk of death after an elective repair is only 5%.

"A routine physical exam should not just involve listening to the chest and taking a chest x-ray. It should also include an abdominal exam in the office, and we've emphasized that in the guidelines," Dr. Hertzler said.

The guidelines give recommendations on exam techniques and on treatment options, including a comparison of open abdominal repair vs. endograft repair. The endograft appeals to patients and poses a lower operative risk in sicker patients, but it has a higher rate of late complications and requires lifelong surveillance with CT scans to determine the stability of the graft and an absence of leaks, he said.

The ACC/AHA committee is planning several ways to make sure health care providers—especially those on the front lines—know about the new guidelines. An introductory Webcast was broadcast in December, and continuing medical education slides are being created for training programs, Dr. Hirsch said.

The ACC will also prepare wall charts and pocket guides. Eventually, the ACC will start to measure whether the guidelines are improving public health, but that is farther down the road, Dr. Hirsch said.

The guidelines appear in summary form on the ACC Web site at [www.acc.org/clinical/guidelines/pad/summary.pdf](http://www.acc.org/clinical/guidelines/pad/summary.pdf). The full text version will eventually be published there and on the American Heart Association's Web site, [www.heart.org](http://www.heart.org). ■

## Four Drug Classes Reduce Risk of Death in Peripheral Artery Disease

BY MITCHEL L. ZOLER  
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DALLAS — Treatment with each of four drug classes—statins,  $\beta$ -blockers, aspirin, and ACE inhibitors—was associated with significant cuts in mortality in patients with peripheral artery disease during an average follow-up of 8 years, Dr. Harm H. Feringa reported at the annual scientific sessions of the American Heart Association.

"Patients with peripheral artery disease have, by definition, coronary artery disease. A patient with proven coronary artery disease should get" these drugs, commented Dr. Don Poldermans, a coinvestigator on the study and professor of medicine at Erasmus University in Rotterdam, the Netherlands. "You need to find a reason not to give these drugs to patients with peripheral artery disease," he said.

The analysis reviewed 2,420 consecutive patients with peripheral artery disease seen at Erasmus University during 1983-2004. Their average age was 64 years, and 72% were men. The average ankle-brachial index was 0.58. At baseline, 19% of the patients were treated with a statin, 25% were treated with a  $\beta$ -blocker, 22% were on aspirin, and 26% received an ACE inhibitor.

During follow-up, 1,067 (44%) of the patients died, according to data from civil registry records. The investigators performed a multivariate analysis to determine the relative risk for all-cause mortality associated with various clinical measures and with drug treatment.

The most powerful clinical association for death was renal failure, which increased mortality by 3.3 times. Hypercholesterolemia boosted mortality by 77%, a history of heart failure was linked with a 73% increased risk, and age of more than 70 years was linked with a 68% increased risk of death.

Treatment with a statin at baseline was linked with a 54% reduced risk of death. Treatment with a  $\beta$ -blocker was associated with a 32% reduced risk, aspirin was linked with a 28% reduced risk, and treatment with an ACE inhibitor was linked with a 20% reduced risk of death. All of these associations were statistically significant, said Dr. Feringa, an Erasmus University physician.

Treatment at baseline with a calcium channel blocker, warfarin (Coumadin), a diuretic, or a nitrate was not significantly associated with a reduced risk of death.

So far, the analysis has not looked for possible interactions between treatment with statins,  $\beta$ -blockers, aspirin, and ACE inhibitors. ■

## One-Fifth of Adults Aged 40 and Older Has Lower Extremity Disease

One-fifth of the U.S. population aged 40 years and older has lower extremity disease, the Centers for Disease Control and Prevention reported.

In the 1999-2002 National Health and Nutrition Examination Survey, about 5% of adults aged 40 and above had peripheral arterial disease (PAD), 13% had peripheral insensate neuropathy (PN), and 4% reported a foot ulcer or were observed to have a current foot lesion or toe/foot amputation. Overall, 18.6% had one or more of these lower extremity disease (LED) conditions, the CDC said (MMWR 2005;54:1158-60).

The majority of these cases—including two-thirds of those with PAD and three fourths with PN—were asymptomatic. About one-fourth of the cases of both conditions were severe, defined as an ankle-brachial blood pressure index of less than 0.7 in either leg with PAD, or three or more insensate areas with PN.

The prevalence of LED was about twice as high in people diagnosed with diabetes as in those without,

and 53% of the diabetics were symptomatic, compared with 31% of nondiabetics. Among individuals with PN, 42% of the diabetics were symptomatic versus 21% of nondiabetics, whereas one-third of the PAD group was symptomatic regardless of diabetes status.

Not surprisingly, the prevalence of LED increased with age, from 12.3% among those aged 40-59 years to 26.2% of 60- to 74-year-olds, to 40.8% of those aged 75 and older.

The conditions also were more common overall in men than in women (23% vs. 17%) and were higher among blacks (27%) than either whites (19%) or Mexican Americans (21%).

Diabetics had higher LED rates than nondiabetics in all age, sex, and racial/ethnic groups, the CDC noted.

In 2003, the American Diabetes Association issued guidelines for the diagnosis and management of PAD, including a recommendation that an ankle-brachial index be obtained in all diabetic patients over age 50 (Diabetes Care 2003;26:3333-41).

—Miriam E. Tucker