

Peripheral Artery Disease Often Goes Undiagnosed

Do you have pain when you walk? The answer to this simple question can often uncover peripheral artery disease (PAD), especially in patients with risk factors for the disease, explains Jeffrey F. Bleakley, MD, FACC, interventional cardiologist at the New England Heart Institute. PAD is a common and frequently under-diagnosed medical condition. Treatment can provide improved quality of life for patients.

Leg pain leads symptoms

One third of patients with PAD have typical claudication in one or both legs on walking, primarily affecting the calf due to occlusion of the superficial femoral artery. The pain is not eased by continued walking and is relieved with rest. The severity of the condition increases slowly, with 25% of patients with PAD experiencing worsening claudication and 5% undergoing amputation within five years.

Peripheral Artery Disease Risk Factors

- Age >40
- Tobacco abuse
- Diabetes
- Hypertension
- Dyslipidemia
- Family history of CAD/PAD

Claudication can also present with buttock pain or erectile dysfunction in men with iliac artery disease. The diagnosis may sometimes be confused with neurologic disease. PAD, however, is exertion-related and does not improve with positional change, which often occurs with a neurological condition such as sciatica.

The age-adjusted prevalence of the disease, which affects men and women equally, is 12%. Patients with PAD have approximately the same relative risk of death from cardiovascular causes as do patients with coronary or cerebrovascular disease. The severity of PAD is closely associated with the risk of myocardial infarction, stroke and death from vascular causes.

Blood pressure and angiography aid diagnosis

Peripheral artery disease can be diagnosed and treated much less invasively than in years past, notes Dr. Bleakley. A simple ankle-brachial index (ABI) test can be performed in the office, comparing a patient's blood pressure in the lower extremities to that in the arms. An ABI of 0.91-1.30 is normal, 0.41-0.90 consistent with mild to moderate PAD, and <0.40 indicative of severe PAD.

More than half of patients with peripheral artery disease, based on an abnormal ankle-brachial index, do not have typical claudication or limb ischemia at rest, but have other types of leg pain on exertion, with decreased ambulatory capacity and impaired quality of life. Most patients with PAD have a reduced functional capacity that limits their ability to perform daily activities. Noninvasive computed tomographic angiography (CTA) or magnetic resonance angiography (MRA) can be utilized to visualize a patient's blood vessels, possibly confirming the diagnosis of PAD and the specific location of a lesion.

Weighing treatment options

"Patients with peripheral artery disease are candidates for secondary-prevention strategies, including aggressive risk factor optimization and anti-platelet therapy," adds Dr. Bleakley. Smoking cessation is extremely important for these patients. Initial treatment may include a supervised exercise program and pharmacological therapy, including cilostazol.

If noninvasive treatments fail and the patient continues to experience lifestyle-limiting claudication, balloon angioplasty or stenting can relieve many patients' symptoms. While some debate exists as to whether stenting is superior to angioplasty in treating lower extremity PAD, Dr. Bleakley says that with improved technology, stenting in the correct locations appears to be the more efficacious treatment.

He notes that the restenosis rate for balloon angioplasty is 40 to 60% at one year, whereas restenosis with stainless steel stents is 15 to 20% at one year but equivalent to angioplasty at five years. A study reported in the *New England Journal of Medicine* in May 2006 compared nitinol stents and angioplasty at 6 and 12 months and showed short-term benefit with stenting. Percutaneous intervention is less invasive with less morbidity and mortality, but surgery is still indicated in those patients with diffuse disease.



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Newer technologies provide additional therapeutic options. Cryotherapy, in which a balloon freezes tissue as it expands, is a new PAD therapy that has proved beneficial in small studies. Another is the use of a debulking device, which debulks the lesion and carves away the inside of the plaque-laden vessel. Other devices are utilized for crossing total occlusions.

"As cardiologists, we are used to deploying three millimeter stents in very delicate coronary vessels," says Dr. Bleakley, who has extensive experience in treating both coronary artery and peripheral artery disease. "We are well trained to work on other much larger vessels in the periphery utilizing similar technology."

For more information about the treatment of peripheral artery disease, contact Dr. Bleakley at 603.669.0413. ♥