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Lifestyle Changes Remain Important in Fighting Peripheral Arterial Disease (PAD)

Not Enough Evidence Yet to Support Minimally Invasive Treatment in Those With Blocked Leg Artery and Showing No Symptoms, Say Researchers in Journal of Vascular and Interventional Radiology

FAIRFAX, Va.—Modifying the risk of peripheral arterial disease (or PAD)—with healthy lifestyle changes—remains vital to one’s health, note researchers in a recent issue of the *Journal of Vascular and Interventional Radiology*. And while PAD can progress and worsen over time, there is not enough evidence yet to advocate minimally invasive treatment in patients who have had a narrowing or blockage of a leg artery but showing no signs or symptoms of the disease, say Irish researchers in a retrospective study of more than 900 individuals.

“In the early stages of PAD, many patients will have no symptoms at all and often will go undiagnosed,” noted Aoife Keeling, an interventional radiologist at Northwestern Hospital in Chicago, Ill. She indicated that the prevalence or frequency of asymptomatic PAD is likely underestimated; however, researchers studied whether minimally invasive treatments—such as angioplasty and/or stenting—should be offered to asymptomatic PAD patients. “While this study is useful in examining the possibility of treating PAD earlier, additional research into the factors that cause PAD progression and the rate of progression—along with methods to slow the disease—need to be conducted,” said Keeling. “Prevention of PAD progression is vital and can be achieved with risk factor modification, for example, if individuals stop smoking, watch their diets, lower their cholesterol and have their blood pressure monitored,” she noted.

PAD (or “hardening of the arteries” particularly in one’s legs) affects an estimated 10 million people in the United States. PAD occurs when plaque accumulates in arteries that supply blood to areas of the body other than the heart and brain. Since plaque blocks the leg arteries first, PAD is considered a red flag for several life-threatening vascular diseases, such as heart attack (the number one killer in this country) and stroke; it can also result in the loss of limb(s). PAD causes a range of symptoms, from no symptoms to pain in the legs while walking (intermittent claudication) to its most severe form that results in pain in the feet/legs at rest that can progress to ulcers (sores/wounds on the feet and toes) and eventual gangrene (black discoloration of the toes or feet; also called critical limb ischemia). The disease’s progression can result in limb loss and even in death.

In the study, 918 patients had leg angiograms (an X-ray exam to diagnose arterial blockage and other problems). Of these, 122 patients (54 percent male, average age 70 years) had an arterial narrowing (50 percent) or blockage without any corresponding leg symptoms, said Keeling. These patients were followed over a maximum of nine years to determine if they developed any symptoms and to see if they required any treatment for their PAD in the form of angioplasty, stenting, surgical bypass or amputation. One-third of the 122 patients developed symptoms of pain or ulceration and almost half of these then required treatment. Overall, only 13.9 percent of the initial group required treatment, so even though PAD progressed over time, the researchers did not believe they had enough evidence to advocate early minimally invasive treatment of PAD in patients who had no initial symptoms, said Keeling. The fact that most of the 122 patients remained asymptomatic may be related to the intense risk factor modification they underwent or other factors as yet unidentified, said Keeling. “We know that many patients have blockages in their leg arteries but may not develop symptoms. We don’t know yet what causes symptoms to develop in some but not in others. We are continuing our research in this area,” she added.

Research shows that the highest risk populations for PAD include seniors (12–20 percent develop the disease), African-Americans (twice as likely to develop clogged leg arteries) and diabetics (one in three who are over the age of 50 develop PAD). In many cases, PAD can be treated with medication (such as blood thinners or drugs that dilate an affected artery), lifestyle changes (such as smoking cessation), diet

and a structured exercise program. With early detection, patients could see an interventional radiologist when intervention is most effective and less invasive treatments are an option. If needed, interventional radiologists can perform minimally invasive angioplasty and/or stenting to open a blocked artery in the leg and restore blood flow.

The Society of Interventional Radiology's Legs for Life[®] Web site (www.legsforlife.org) offers a free online health, family and lifestyle risk quiz for PAD. The higher one's score, the more important it is for that individual to discuss the quiz's results with his or her doctor. More information about the Society of Interventional Radiology, peripheral arterial disease (or PAD), Legs for Life[®] and the Journal of Vascular and Interventional Radiology can be found online at www.SIRweb.org.

"Should Incidental Asymptomatic Angiographic Stenoses and Occlusions Be Treated in Patients With Peripheral Arterial Disease?" is published in the September Journal of Vascular and Interventional Radiology. Co-authors are Michael J. Lee, MSc, FRCPI, FFRRCSI, FRCR; Aoife N. Keeling, FFRRCSI, MRCPI, MSc; and Alaa S. Ayyoub, M.D., all with the Department of Academic Radiology, Beaumont Hospital, Dublin, Ireland; Karim Khalidi, MRCPI, departments of Academic Radiology and Vascular Surgery, Beaumont Hospital, Dublin Ireland; and Peter A. Naughton, FRCSI, M.D.; Cathal K. Kelly, FRCSI; Austin L. Leahy, FRCSI; David J. Bouchier-Hayes, FRCSI; and Thanos Athanasiou, Ph.D., FETCS, all with the Department of Biosurgery and Surgical Technology, Surgical Epidemiology and Quality Unit, Imperial College London, St. Mary's Hospital, London, United Kingdom.

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About the Society of Interventional Radiology

Interventional radiologists are physicians who specialize in minimally invasive, targeted treatments. They offer the most in-depth knowledge of the least invasive treatments available coupled with diagnostic and clinical experience across all specialties. They use X-ray, MRI and other imaging to advance a catheter in the body, such as in an artery, to treat at the source of the disease internally. As the inventors of angioplasty and the catheter-delivered stent, which were first used in the legs to treat peripheral arterial disease, interventional radiologists pioneered minimally invasive modern medicine. Today, interventional oncology is a growing specialty area of interventional radiology. Interventional radiologists can deliver treatments for cancer directly to the tumor without significant side effects or damage to nearby normal tissue.

Many conditions that once required surgery can be treated less invasively by interventional radiologists. Interventional radiology treatments offer less risk, less pain and less recovery time compared to open surgery. Visit www.SIRweb.org.

Local interviews, medical illustrations and broadcast-quality video footage are available by contacting SIR's communications department by phone at (703) 460-5572 or via e-mail at mverrillo@SIRweb.org.