

Enhanced care through advanced technology®

Maryann Verrillo, (703) 460-5572 Diane Shnitzler, (703) 460-5582 March 11-12, Lisa Tadje, (212) 453-2137 March 11-12, Don Murphy, (212) 453-2462 March 11-12, Neil Hochman, (212) 453-2067 March 13-18, Tampa Press Room, (813) 276-6905, (813) 276-6906 or (813) 276-6912 comm@SIRweb.org

EMBARGOED FOR RELEASE UNTIL MONDAY, MARCH 15, 2010, 9 A.M. (Eastern)

Interventional Radiologists Examine Simple Test That Might **Predict Heart Attacks**

Prevalence of Abnormal Ankle-brachial Index (ABI) Test High Among Patients Who Are Otherwise Not Considered at Risk of Coronary Heart Disease by Framingham Risk Score

TAMPA, Fla. (March 15, 2010)—The prevalence of abnormal ankle-brachial index (ABI) test results among individuals tested for peripheral arterial disease (PAD)-and who are not considered at high risk of a coronary heart event by Framingham-based risk factors—is high and provides another way to identify those who may be at risk for future heart attacks, say researchers at the Society of Interventional Radiology's 35th Annual Scientific Meeting in Tampa, Fla.

"Any methods to improve identification of individuals who are otherwise not considered at high risk for heart attack—based on Framingham risk factors—would have significant public health impact," said Timothy P. Murphy, M.D., FSIR, an interventional radiologist and director of the Vascular Disease Research Center at Rhode Island Hospital in Providence. "With the help of the simple ankle-brachial index (ABI) test, a comparative blood pressure reading in the arm and ankle that is used to screen for peripheral arterial disease, thousands of lives can possibly be saved," he added. "This type of novel risk factor can positively impact public health by improving risk prediction," said Murphy. Interventional radiologists can partner with primary care doctors, who may not be aware of-or able to administer-noninvasive tests like the ABI in managing patients' vascular disease, he explained. "Since ABI screening is not routinely performed, a large number of individuals are not being identified as high risk and, thus, not being treated for their risk factors. Interventional radiologists can work with primary care doctors in evaluating patients' risk for cardiovascular disease as well as by managing established PAD," added Murphy.

Coronary heart disease is the leading cause of death in the United States. About 1.1 million Americans suffer heart attacks each year and almost one-third of those heart attacks result in death. Risk factors such as smoking, diabetes, high blood pressure, high blood cholesterol and obesity are associated with increased risk of heart attack and are routinely monitored by doctors to identify at-risk patients. However, about twothirds of coronary events occur in individuals not known to be at high risk of such events. Methods to improve identification of individuals who are otherwise not considered at high risk based on Framingham risk factors would have significant public health impact. "Early detection is paramount. Primary preventions, such as initiating lifestyle changes and medical intervention directed at modifying risk factors (smoking cessation, blood glucose and blood pressure control, lowering cholesterol and exercise)—can be started before costlier and more intensive interventions are needed," said Murphy, co-author of "Prevalence of Abnormal Ankle-Brachial Index Among Subjects With Low-intermediate Framingham Risk Score."

Traditional risk-scoring algorithms, such as Framingham risk score, are known to have low sensitivity for predicting risk of fatal or nonfatal cardiovascular events. Abnormal ABI, which is indicative of underlying PAD, has been shown to be associated with a higher risk of cardiovascular disease. "In our study, we found abnormal ABI to be highly prevalent; 10 percent of our study population-who were otherwise not known to have coronary heart disease, stroke, diabetes and are not considered at high risk based on Framingham risk assessment—have underlying PAD," said Murphy.

Researchers reviewed the results from the PEDAL study, a population-based, cross-sectional study of 822 participants (women, 69.7 percent; non-Hispanic white, 89.7 percent) conducted at 23 Legs for Life® sites nationwide. PEDAL was conducted in 2007-08 during SIR's Legs for Life® PAD national publichealth screening program. The participants (average age, 64 years) did not have known cardiovascular disease or diabetes and were screened for PAD with an ABI test. Variables to compute Framingham risk scores of the participants were available to calculate 10-year risk of coronary heart disease. Risk was determined to be low, intermediate or high, per Framingham categories. A low Framingham risk score was observed in 256 participants (31.1 percent); of these, 11.3 percent had an abnormal ABI. Of the 414

CONTACT

3975 Fair Ridge Drive Suite 400 North Fairfax, Virginia 22033 703.691.1805 703.691.1855 fax www.SIRweb.org participants (50.4 percent) with an intermediate Framingham risk score, 12.8 percent had abnormal ABI test results.

Last year, researchers analyzed information from the 1999–2004 National Health and Nutrition Examination Survey (NHANES)—a nationally representative cross-sectional survey of the U.S. population for 6,292 men and women ages 40 and older without known history of heart disease, stroke, diabetes or atherosclerotic vascular disease—along with available data on standard cardiovascular risk factors and screening tests (including the ABI). They found that novel risk factors (those not traditionally considered in the Framingham risk score) are abnormal in up to 45 percent of those not considered high risk for coronary heart events. It was the first time researchers determined the prevalence of PAD in a large population of women and men who were not considered at high risk for cardiovascular disease.

The ABI, a comparative blood pressure reading in the arm and ankle, is used to screen for peripheral arterial disease. It is a direct measure of fatty plaque buildup in leg arteries and an indirect gauge of plaque accumulations throughout the entire cardiovascular system. Because atherosclerosis is a systemic disease, women and men developing plaque in their legs are likely to have plaque building up in the carotid arteries, which can lead to stroke, or the coronary arteries, which can lead to heart attack. Early detection of PAD is important because these individuals are at significantly increased risk, and preventive measures can be taken.

More information about the Society of Interventional Radiology, interventional radiologists, peripheral arterial disease (PAD), cardiovascular disease and the ankle-brachial index can be found online at www.SIRweb.org.

Abstract 43: "Prevalence of Abnormal Ankle-Brachial Index Among Subjects With Low-intermediate Framingham Risk Score," R. Dhangana, T.P. Murphy, S.H. Ahn and J.V. Cerezo, all at Rhode Island Hospital/Brown University, Providence, R.I.; J.R. Col and W.R. Hiatt, both at the University of Colorado Denver, Denver, Colo.; M.B. Ristuccia, Rhode Island Hospital, Providence, R.I., SIR 35th Annual Scientific Meeting March 13–18, 2010, Tampa, Fla.. This abstract can be found at www.SIRmeeting.org.

###

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 <u>www.SIRweb.org</u>.

The Society of Interventional Radiology is holding its 35th Annual Scientific Meeting March 13–18 in Tampa, Fla. The theme of the meeting is "IR Innovation," celebrating the remarkable inventiveness of SIR members and highlighting the contributions made to both creating the field of interventional radiology and to improving patient care.

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