

## **PARTNERS Study Indicates that Peripheral Arterial Disease is Prevalent and Underdiagnosed in the Primary Care Setting, but is Easily Detected by the ABI Examination**

*A Review of:* Hirsch AT, Criqui MH, Treat-Jacobson D, Regensteiner JG, Creager MA, Olin JW, Krook SH, Hunninghake DB, Comerota AH, Walsh ME, McDermott MM, Hiatt WR: Peripheral arterial disease detection, awareness, and treatment in primary care. JAMA 286:1317-1324, 2001.

Peripheral arterial disease (PAD) is an atherosclerotic syndrome that affects 8 to 12 million people in the United States. The disease has significant consequences and is associated with high rates of stroke, myocardial infarction (MI), diminished quality of life, and significant mortality. The PARTNERS program (PAD Awareness, Risk, and Treatment: New Resources for Survival) was initiated to investigate the feasibility of detecting PAD using the ankle-brachial index (ABI) in the primary practice setting and to assess the level of patient and physician awareness of PAD versus other cardiovascular diseases (CVD). PARTNERS study results indicate that PAD is highly prevalent but many patients are asymptomatic. The study demonstrates the ABI exam is an effective means for diagnosing PAD.

The PARTNERS study surveyed 6,979 prospective patients 70 years of age or older, and patients age 50-69 with a history of smoking (minimum 10 pack-years) or diabetes. An ABI was conducted on each patient using a handheld Doppler. Patients were considered to have PAD if their ABI was less than 0.90. A documented history

of coronary artery disease, cerebrovascular disease, or abdominal aortic aneurysm repair was required to make a CVD determination. The patients were divided into four mutually exclusive subgroups: 1) those without any identified vascular disease 2) those with both PAD and CVD 3) those with CVD only and 4) those with both PAD and CVD. Additional surveys quantified atherosclerosis risk factors and PAD awareness (both patient and primary care physician awareness).

### Results

In this study a total of 1,865 patients (29%) were identified with PAD (825 with PAD only and 1,040 with both PAD and CVD) and 1,527 patients (24%) were identified with CVD only. Patients age 50-69 (those with a history of smoking and/or diabetes) accounted for 38% of those screened, while 68% were in the over 70 age group. Patients were well distributed nationally, and the male/female rate was nearly balanced.

The study indicated that patients who had both PAD and CVD were more likely to have had a prior diagnosis of PAD than

patients who had PAD alone. (55% of patients with PAD only were newly diagnosed, versus 35% who had PAD and CVD). The mean ABI was the same (0.78) for patients with PAD only and for patients with PAD and CVD. Furthermore, only 8.7% of the patients with PAD only had a history of claudication. The study also found that 83% of patients with a prior diagnosis of PAD were aware of their diagnosis, but only 49% of their physicians recognized the diagnosis at the time of screening. This was true whether or not CVD was present.

#### Summary

The PARTNERS program is an important advance in the understanding of the prevalence and diagnosis of PAD. The study demonstrates that PAD is detected at high rates in all national regions and all races, it is equally prevalent in men and women, and it is substantially underdiagnosed. Clinicians who rely on the classic symptom (claudication) for diagnosis of PAD are likely to miss 85% to 90% of the cases, but PAD is easily detected through simple ABI testing. Increased diagnosis of PAD can be expected to improve clinical outcomes and may lead to decreasing rates of stroke and cardiovascular mortality.