

## **A Clinical Review of the Management of Peripheral Arterial Disease in the Family Practice**

*A Review of:* Schainfeld, RM: Management of Peripheral Arterial Disease and Intermittent Claudication. J Am Board Fam Pract 14:443-50, 2001.

In 2001 Dr. Robert M. Schainfeld published a comprehensive review of the management of peripheral arterial disease (PAD) and intermittent claudication based on a search of MEDLINE databases from 1970 to 2001. The review article covers disease prevalence, diagnosis, and approaches to treatment.

Peripheral arterial disease (PAD) is a common atherosclerotic syndrome. The most frequent symptom of PAD, intermittent claudication, is experienced by about 40% of the symptomatic patients. Intermittant claudication typically presents as pain, cramping, or numbness in the calf, buttock, hip, thigh, or arch of the foot.

### Prevalence

PAD is widely reported as an underdiagnosed disease, and in this review Schainfeld reports that the true prevalence of the disease is at least five times higher than reported by physicians. Based on results of non-invasive ABI testing, prevalence of PAD is estimated at 2.5% between age 40 and 59 years, 8.3% between age 60 and 69 years, and 18.8% for those patients age 70 to 79 years.

Most patients with PAD also have cardiovascular disease, and numerous studies have shown that patients with

symptomatic PAD have a high risk of mortality.

### Recognizing and Diagnosing PAD

Risk factors for PAD include smoking, hypertension, diabetes, lipid abnormalities, elevated homocysteine, age, increased fibrinogen and blood viscosity, and lipoprotein(a). Males are more frequently inflicted than females. Smoking is the most significant of these risk factors. Patients with intermittent claudication who smoke face a 5-year mortality rate of 40-50%.

According to the review, routine screening of asymptomatic patients from the general population has not proven to be cost-effective. However, findings from the Systolic Hypertension in the Elderly Program (SHEP) trial have raised the suggestion that the ABI exam be included as part of the standard physical examination for patients older than 55 years of age and in for those patients who appear at risk for atherosclerosis.

### Treatment

The review article discusses a number of treatment options. The highest priority in managing PAD is to modify risk factors. When applicable, it is also important to relieve the symptoms of intermittent claudication. Risk factor intervention

programs including smoking cessation, diet modification, and exercise are discussed. Pharmacological treatments include antiplatelets (including Cilostazol) and lipid-altering agents. Newly emerging agents under study include prostaglandin drugs, angiogenic growth factors, and L-Arginine. L-Arginine induces nitric oxide formation, which has been demonstrated to improve endothelial-dependent vasodilation in those with atherosclerosis.

The article indicates that primary care physicians should feel comfortable managing most patients with PAD. Referral to specialists is usually necessary only when revascularization is indicated by lifestyle-limiting intermittent claudication

or by evidence of critical limb ischemia.

#### Summary

This review article is an excellent source of information about PAD management for the primary care physician. The article describes the diagnosis, goals for therapy, and treatment options, including possible invasive options for severe cases. The article suggests that primary care physicians should be able to manage the majority of PAD patients.