



Vascular Specialists of Central Florida, Inc.

Peripheral Vascular Disease Update with PEARLS

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Peripheral Vascular Disease (PVD) is a term that refers to a collection of illnesses that occur due to blockages in arteries. When the disease occurs in the lower extremity arteries, it is typically also called Peripheral Arterial Disease (PAD). Claudication, the symptom complex that occurs due to the occlusive plaque is a cramping of the muscles that occurs with activity, and is relieved with rest. The Latin derivative is "Claudico," to limp. The typical atherosclerotic occlusive disease in the arteries to the muscles of the legs limits the ability to increase blood flow to those muscles during exercise, with the result being pain. The pain is absolutely reproducible, and predictable. In fact, if the pain occurs at varying distances (that is, the patient has "good days and bad days"), we immediately consider musculoskeletal causes of pain. Vascular mediated pain should be relieved by rest, typically merely standing still and not require sitting down. Once again, a requirement of sitting down to relieve discomfort would lead us to first consider nonvascular etiologies. The risk factors for PAD are increasing age, diabetes, high blood pressure, elevated cholesterol and smoking.

It is estimated that between eight and 12 million Americans have PAD, with many having no symptoms, due to the fact that the occlusive disease is not yet severe enough. As the occlusive disease worsens, symptoms appear. Vascular surgeons typically divide patients with PAD into several categories: nondisabling claudication, lifestyle limiting claudication and limb-threatening disease. The decision to treat at all is individualized, depending on the patient, and their severity of disease. The type of treatment is also always individualized, based on the extent and distribution of disease, and the severity of the patients' symptoms.

The patterns of disease are various and can be classified. Disease of the Aortoiliac vessels is termed "inflow" and that of the femoral, popliteal and tibial vessels is "outflow" disease.

The most common symptom is calf pain, due to the fact that the most commonly involved artery is the Superficial Femoral Artery. Pain is typically in the muscle group that is one "joint" below the occlusive plaque, assuming the disease is not multi-level. If the plaque primarily involves the infra-renal aorta, pain is usually in the buttock. Disease of the iliac vessels manifests itself as ambulatory pain in the hips and/or thighs. The most effective way to diagnose arterial occlusive disease is the use of the Peripheral Vascular Laboratory, with a Lower Extremity Arterial Study with Treadmill Exercise.

TREATMENT OF PERIPHERAL ARTERIAL DISEASE

It is important to recognize that most patients with PAD remain stable in reference to their leg symptoms. PAD, however, is a significant marker for heart disease. If you have PAD, whether symptomatic or not, your life

expectancy is shortened. It is very important to remember that it is not normal to have leg pain merely because one is getting older.

The medical treatment of PAD is basically an attempt to halt the progression of disease (by risk factor modification) and to create a healthier life style in general. The hallmarks of conservative or medical therapy are exercise, blood pressure control, the stopping of smoking and the improvement in cholesterol levels and patterns. Some of the medications used are platelet inhibitors (aspirin and Plavix) to help prevent clotting along plaques, and statins to lower cholesterol. Currently, Cilostazol (Pletal) is the only medication that will improve walking distance.

When leg symptoms are disabling or lifestyle threatening, and medical therapy is either inappropriate or has been ineffective, the treatment needs to be more involved and aggressive. If the diagnostic arteriogram (X-rays) demonstrates focal (nondiffuse) blockages of the arteries, then a balloon angioplasty/stent procedure can be considered. If the blockages, however, are complete or in multiple areas, then operative reconstruction is generally required. Surgical results (patency, durability and complications) depend on the level of disease treated, the type of conduit selected, and the patient's comorbidities.

In the most severe category of disease, limb threat, a bypass is typically required, and angioplasty is only rarely considered to be either appropriate or sufficient. Limb threat is defined as the presence of gangrene, a nonhealing wound, or pain at rest in the foot. The limb will be lost if successful reconstruction is not accomplished.

In summary, it is obviously critically important to recognize the presence of arterial occlusive disease, and to individualize treatment based on the patient's general medical status, age and lifestyle.

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