

Peripheral Vascular Disease (PVD)

Definition

Peripheral vascular disease is a narrowing of blood vessels that restricts blood flow. It mostly occurs in the legs, but is sometimes seen in the arms.

Description

Peripheral vascular disease includes a group of diseases in which blood vessels become restricted or blocked. Typically, the patient has peripheral vascular disease from atherosclerosis. Atherosclerosis is a disease in which fatty plaques form in the inside walls of blood vessels. Other processes, such as blood clots, further restrict blood flow in the blood vessels. Both veins and arteries may be affected, but the disease is usually arterial. All the symptoms and consequences of peripheral vascular disease are related to restricted blood flow. Peripheral vascular disease is a progressive disease that can lead to gangrene of the affected area. Peripheral vascular disease may also occur suddenly if an embolism occurs or when a blood clot rapidly develops in a blood vessel already restricted by an atherosclerotic plaque, and the blood flow is quickly cut off.

Causes and symptoms

There are many causes of peripheral vascular disease. One major risk factor is smoking cigarettes. Other diseases predispose patients to develop peripheral vascular disease. These include diabetes, Buerger's disease, hypertension, and Raynaud's disease. The main symptom is pain in the affected area. Early symptoms include an aching, tired sensation in the affected muscles. Since this disease is seen mainly in the legs, these sensations usually occur when walking. The symptoms may disappear when resting. As the disease becomes worse, symptoms occur even during light exertion and, eventually, occur all the time, even at rest. In the severe stages of the disease the leg and foot may be cold to the touch and will feel numb. The skin may become dry and scaly. If the leg is even slightly injured, ulcers may form because, without a good blood supply, proper healing can not take place. At the most severe stage of the disease, when the blood flow is greatly restricted, gangrene can develop in those areas lacking blood supply. In some cases, peripheral vascular disease occurs suddenly. This happens when an embolism rapidly blocks blood flow to a blood vessel. The patient will experience a sharp pain followed by a loss of sensation in the affected area. The limb will become cold and numb, and lose color or turn bluish.

Diagnosis

Peripheral vascular disease can be diagnosed by comparing blood pressures taken above and below the point of pain. The area below the pain (downstream from the obstruction) will have a much lower or undetectable blood pressure reading. Doppler ultrasonography and angiography can also be used to diagnose and define this disease.

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Treatment

If the person is a smoker, they should stop smoking immediately. Exercise is essential to treating this disease. The patient should walk until pain appears, rest until the pain disappears, and then resume walking. The amount of walking a patient can do should increase gradually as the symptoms improve. Ideally, the patient should walk 30–60 minutes per day. Infections in the affected area should be treated promptly. Surgery may be required to attempt to treat clogged blood vessels. Limbs with gangrene must be amputated to prevent the death of the patient.

Prognosis

The prognosis depends on the underlying disease and the stage at which peripheral vascular disease is discovered. Removal of risk factors, such as smoking, should be done immediately. In many cases, peripheral vascular disease can be treated successfully but coexisting cardiovascular problems may ultimately prove to be fatal.