Peripheral arterial disease: diagnosis and management

Peripheral arterial disease (PAD) is a common condition, in which the arteries carrying blood to the legs and feet become narrowed or blocked (National Institute for Health and Clinical Excellence, 2012). It affects 3–7% of people in the general population and 20% of those over the age of 60.

The main cause of PAD is atherosclerosis, which is the build-up of fatty deposits on the arterial walls. Pain on walking that stops after resting (intermittent claudication) is the most common initial symptom and is the result of the narrowed arteries not delivering adequate blood to leg muscles.

Even when asymptomatic, PAD is a marker for an increased risk of potentially preventable cardiovascular events. In its more severe manifestations, it may lead to critical limb ischaemia which, in turn, can progress to severe intractable pain, ulceration and gangrene. Approximately 1–2% of people with intermittent claudication will eventually undergo amputation, making PAD the largest single cause of lower limb amputation in the UK (NICE, 2012).

Treatments for PAD are aimed at relieving its symptoms, and depend on the severity of the condition. They range from changes in lifestyle – for example smoking cessation, advice to exercise, management of cardiovascular risk factors and vasoactive drug treatment – to endovascular treatments. These include balloon angioplasty, endovascular stents, adjunct or alternative treatments, and techniques and surgical reconstruction to unblock or bypass occluded or narrowed arteries.

NICE guidance
The NICE guideline makes a number of recommendations that aim to resolve the considerable uncertainty and variations in practice and improve outcomes. It contains a number of recommendations that are particularly important to vascular nurse specialists who are part of the vascular multidisciplinary team, as well as to other nurses working in this field. It also offers evidence-based guidance on the aspects of care that are coordinated and often undertaken independently by nurses.

For many patients with PAD, modifiable risk factors, such as smoking, poor diet and a lack of exercise, have probably played a significant part in the development of their condition. A key recommendation in the guideline is that all people with PAD are offered information, advice, support and treatment on the secondary prevention of cardiovascular disease. This should be in line with NICE guidance on smoking cessation; diet, weight management and exercise; lipid modification and statin therapy; the prevention, diagnosis and management of diabetes; the prevention, diagnosis and management of high blood pressure; and antplatelet therapy.

In addition, the guideline recommends that all people with PAD are offered oral and written information about their condition, which should be discussed with them so they can share decision-making, and understand the course of the disease and what they can do to help prevent its progression. Information should include:

- Causes of their symptoms and the severity of their disease;
- Risks of limb loss and/or cardiovascular events associated with PAD;
- Key modifiable risk factors, such as smoking, diabetes, hyperlipidaemia, diet, body weight and exercise;
- How to manage pain;
- Treatment options, including the risks and benefits, and how to access support for dealing with depression and anxiety.

Nurses are often the health professionals who support patients in understanding this information and enabling them to come to a decision that is tailored for their personal circumstances.

The assessment of a patient at risk of PAD should include:

- Asking about the presence and severity of possible symptoms of intermittent claudication and critical limb ischaemia;
- Examining the legs and feet for evidence of critical limb ischaemia, for example ulceration;
- Examining the femoral, popliteal and foot pulses;
- Measuring the ankle brachial pressure index (ABPI).

Patients with intermittent claudication should be offered a supervised exercise programme and those with critical limb ischaemia should be assessed by a vascular multidisciplinary team before treatment decisions are made.

Conclusion
PAD can lead to disabling symptoms and may indicate more widespread cardiovascular disease that puts people at risk of stroke and heart disease.

This guideline provides clear recommendations on reducing the risk of future circulatory problems, and on accurate diagnosis and treatment of the disease in the legs. The importance of lifestyle changes is emphasised, particularly the benefits of exercise and supervised exercise programmes.

Reference

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The guideline is available for download at www.nice.org.uk/CG147