Varicose veins: diagnosis and management

In this article...

- Overview of the updated NICE guidance on varicose veins
- Discussion of the recommendations
- Explanation of the available treatments

Varicose veins are visible, dilated, tortuous veins that can appear anywhere in the body where there is poor venous return, and are most often found in the lower limbs. They are a common complaint, affecting up to one-third of the UK population and are a significant cause of morbidity (Evans et al, 1999).

Varicose veins can cause a variety of symptoms ranging from itching to ulceration; they have a negative impact on quality of life and are thought to be associated with depression (Sritharan et al, 2012).

The National Institute for Health and Care Excellence has issued an updated guideline on the treatment of varicose veins in adults (NICE, 2013).

Aetiology

Although their exact cause is not clear, varicose veins are classified as primary or secondary.

Primary varicosities are a result of poor venous drainage from the superficial into the deep system. Superficial veins drain into deep veins at specific anatomical locations; two important sites are the groin and the back of the knee, known as the saphenofemoral and saphenopopliteal junctions, which are controlled by valves. When these valves are damaged or not fully functioning, drainage from the superficial system is poor, which leads to increased venous pressure and the development of varicosities.

Secondary varicosities occur from underlying pathology that reduces venous drainage, including deep venous thrombosis (DVT), deep venous incompetence and increased pressure caused by an intra-abdominal mass or obesity; they are also associated with pregnancy.

Symptoms

Varicose veins are a manifestation of long-term venous disease, which can present in a number of ways.

Patients most commonly complain of itching, swelling, aching, restless legs and cramps. Symptoms tend to be worse at the end of the day or after long periods spent standing or sitting.

In severe cases, the increased venous pressure in the legs can lead to changes in the skin. These include eczema, staining (haemosiderin deposition), thickening (lipodermatosclerosis) and, ultimately, Varicose veins occur most often in the leg.

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ulceration. Patients who have varicose veins also have a higher risk of developing DVT.

Assessment
Venous duplex or ultrasound scans are the optimal imaging modalities for the venous system. These non-invasive techniques can assess how well the superficial and deep venous systems are working.

A duplex ultrasound should be used to confirm the diagnosis of varicose veins and the extent of truncal reflux, and to plan treatment for patients with suspected primary or recurrent varicose veins.

Patient consultation
The guideline highlights the importance of using a patient-centred approach to empower people with varicose veins to make informed decisions about their care. It says they should be given information explaining what varicose veins are and their possible causes. The discussion should include:

» The likelihood of progression and possible complications, including DVT, skin changes, leg ulcers, bleeding and thrombophlebitis, and any misconceptions the patient may have about complications;

» Treatment options, including symptom relief, an overview of interventions and their risks and benefits, and the role of compression;

» Advice on weight loss and physical activity, what may worsen symptoms and when and where to seek further medical help.

Treatment
Unlike previous guidance, the updated guideline focuses on alleviating symptoms and preventing the most severe consequences of venous disease, such as ulceration.

The first-line treatment for patients with confirmed varicose veins and truncal reflux is endothermal ablation of the long saphenous vein. This uses heat energy to burn the vein from the inside under local anaesthesia; the heat can be delivered via radiofrequency or laser energy.

A catheter is inserted into the vein under ultrasound guidance, and treatment is delivered through this. If endothermal ablation is not suitable, ultrasound-guided foam sclerotherapy should be offered instead. If neither option is suitable, surgery should be offered.

Both radiofrequency and endovenous laser ablation have been shown to be as effective as open surgery and have similar recurrence rates; however, endovenous ablation has a quicker recovery time and higher quality-of-life scores (Rasmussen et al, 2011; Brar et al, 2010). Endothermal ablation is only effective in veins large enough to accommodate the catheter; in smaller veins, foam sclerotherapy is recommended. This involves injection of a chemical sclerosant into the vein and applying pressure, allowing it to scar from within.

If interventional treatments are unsuitable, graded compression therapy can be used. This works by compressing the superficial venous system, promoting drainage in the deep veins. The guideline states that stockings should not be used for more than seven days, or used as a first-line treatment unless no other intervention is suitable.

Management during pregnancy
Pregnancy can exacerbate the symptoms of existing varicose veins, cause new ones to develop and increase the risk of venous thromboembolism. Intervention on the venous system carries a risk of DVT of 0.5-1% (Marsh et al, 2010) so should be avoided during pregnancy unless absolutely necessary. Compression therapy is a useful alternative.

Pregnant women should be given specific information about varicose veins and pregnancy. No interventional treatments should be carried out unless these are absolutely necessary; compression hosiery should be used to relieve leg swelling associated with varicose veins.

BOX 1. WHEN TO REFER TO A VASCULAR SERVICE

Patients should be referred to the vascular service if any of the following are observed:

» Bleeding from the varicose veins – in this situation, the referral must be made immediately

» Symptomatic primary or symptomatic recurrent varicose veins

» Lower-limb skin changes, such as pigmentation or eczema, thought to be caused by chronic venous insufficiency

» Superficial vein thrombosis (characterised by the appearance of hard, painful veins) and suspected venous incompetence

» A venous leg ulcer (a break in the skin below the knee that has not healed within two weeks)

» A healed venous leg ulcer

Referral
Some patients may require referral to a vascular service (Box 1). Bleeding varicose veins may be a life-threatening emergency that need immediate medical attention (Fragkouli et al, 2012).

Referral is also warranted for patients with symptomatic varicose veins or skin changes.

Conclusion
All members of the healthcare team need a good understanding of the underlying causes of venous disease and its management so they can give patients who have varicose veins up-to-date, accurate information; those involved in managing these patients need to be familiar with the updated guideline.

Patient education is paramount, particularly with the recent shift from open to endovascular techniques. Risks, benefits and treatment options need to be considered and discussed with patients to ensure the most appropriate treatment is provided.

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The full NICE guideline can be found at: www.nice.org.uk/cg168

References