10-MINUTE CONSULTATION

Intermittent claudication

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A 58 year old smoker presented with a six month history of pain in the left calf during walking.

What issues you should cover

Is this really intermittent claudication?

Ask about key symptoms of peripheral arterial disease, including walking distance before onset. In peripheral arterial disease, pain in the hip, thigh, and calf (rarely foot) is not present at rest, on weight bearing, or when starting to walk but occurs after a distance that is predictable (and shorter going uphill). The pain is felt in the muscle, not the bone or joint, and is relieved rapidly with rest or reduction of walking pace. Pain occurring before 200 m reflects Fontaine stage Ia peripheral arterial disease; pain at or beyond 200 m reflects stage IIa.

Main differential diagnoses

Spinal claudication manifests as weakness not pain and starts soon after standing up, with relief on sitting or bending (lumbar spine flexion). Radiculopathy relates mainly to back problems, radiates down the leg, is not relieved by resting, and may diminish by changing position. With hip arthritis, pain starts with weight bearing and is related to activity. In arthritic and inflammatory conditions, pain is continuous and intensified by weight bearing, with tenderness, swelling, and hyperthermia. With a Baker's cyst the pain is aggravated with activity, not relieved by resting, and may have tenderness and swelling behind the knee.

Medical history

Record risk factors, family history, other cardiovascular symptoms or events, and previous peripheral vascular interventions. Pay attention to drug treatment, such as β blockers, 5-HT receptor agonists, and ergot

derivatives—these can worsen existing peripheral arterial disease.

What you should do

- Examine the affected leg. Look for colour and trophic changes, as well as early ulcerations suggesting critical ischaemia. Compare skin temperature with that of the other leg. A capillary refill time (established by pressing the toe firmly and noting the time it takes for the pallor to disappear) of more than three seconds indicates severe peripheral arterial disease. Examine pulses at the groin and popliteal fossa, and the pedal pulses. Absent pulses indicate an occlusion above this level. Conduct auscultation of the aorto-iliac arteries in the lower abdomen and femoral arteries.
- If peripheral arterial disease is suspected, the first and most important screening test is the ankle-brachial index, easily done during a consultation. Systolic blood pressure of the dorsalis pedis, posterior tibialis, or fibularis artery is obtained with a handheld Doppler and divided by the higher of the two brachial pressures. An index <0.9 confirms peripheral arterial disease.
- Peripheral arterial disease is recognised as having a risk equivalent to that of coronary heart disease, making secondary prevention mandatory. Thus, immediate treatment should start with low dose aspirin (75 mg daily) and statins, regardless of the total cholesterol concentration.
- Optimal control and treatment of all cardiovascular risk factors is crucial. Consequently, get blood checked for glucose and lipids. Advise patients with obesity (body mass index >25 , waist circumference ≥ 102 cm for men and ≥ 88 cm for women) to lose weight.
- To stop the progression of peripheral arterial disease, a recommendation to stop smoking is essential as smoking is the strongest risk factor. Offer nicotine replacement treatment or suggest a smoking cessation programme.
- Advise the patient to exercise (brisk walking) for 30 minutes twice daily to increase pain-free walking and total walking distance by stimulating collateral blood flow.
- Uncomplicated intermittent claudication does not need referral to a specialist. If the patient has warning symptoms, refer quickly to a vascular specialist for further assessment and decision for angioplasty or bypass surgery. Be aware of the 5 Ps—pain, pale, pulseless, paraesthesia, paralysis—indicating an acute limb ischaemia.

USEFUL READING

Burns P, Gough S, Bradbury AW. Management of peripheral arterial disease in primary care. *BMJ* 2003;326:584-88.

British Cardiac Society, British Hypertension Society, Diabetes UK, HEART UK, Primary Care Cardiovascular Society, Stroke Association. JBS2: Joint British societies' guidelines on prevention of cardiovascular disease in clinical practice. *Heart* 2005;91(suppl 5):v1-52.

Hiatt WR. Medical treatment of peripheral arterial disease and claudication. *N Engl J Med* 2001;344:1608-21.

Patient information sheet is available from the Vascular Society of Great Britain and Ireland (www.vascularsociety.org.uk/patient/int_claud.html)

P+ A figure summarising initial approach is on bmj.com. This is part of a series of occasional articles on common problems in primary care