Painless weakness of the leg

Sir,

Painless weakness of one leg is generally regarded as being symptomatic of neurological disease, and is particularly suggestive of motor neurone disease. We describe a case of peripheral vascular disease presenting with painless weakness of the right leg.

A 34 year old fireman presented to the Institute of Neurological Sciences (INS) with a 3 year history of exercise-related weakness of the right leg. At rest the leg felt completely normal but, on walking, running, cycling and climbing ladders or stairs, his leg became heavy and weak. There was no pain, paraesthesia or sensory loss, but the weakness was occasionally accompanied by cramping feelings. There were no symptoms referable to the other three limbs, to the sensory system, to the cranial nerves or to sphincter function. He had no significant past or family history, and had smoked 20 cigarettes a day for many years.

On examination, the nervous system was completely normal: there was no wasting, weakness, fasciculation or sensory loss, and limb reflexes were normal. Mild trophic changes were noted in both feet, and only the left dorsalis pedis pulse was palpable. The posterior tibial and femoral pulses were difficult to feel on the right, and a soft bruit was audible over the right femoral artery. Capillary return was noticeably slower on the right.

Investigation revealed normal blood count and biochemistry, normal fasting blood sugar and lipoproteins.

Doppler studies revealed stenosis of the common iliac artery on the right, which was confirmed on arteriography. Percutaneous dilatation of the stenosis was performed with complete relief of the patient's symptoms.

Exercise-induced weakness is a common presenting feature of peripheral vascular disease, particularly with more proximal lesions.¹ Indeed, the term 'claudication' derives from the Latin 'claudicare', to limp. Although the weakness is usually accompanied by other features such as tightness and pain, which readily indicate the nature of the problem, this is not always the case. In our patient, the only pointer toward vascular disease was the occasional occurrence of cramping, a common presenting feature of motor neurone disease. When considering the cause of exercise-induced weakness of a limb, peripheral vascular disease should be remembered whether pain is present or not.

Roderick Duncan,
Lesley M. Henderson
*Institute of Neurological Sciences,
Southern General Hospital,
Glasgow G51 4TF, UK.*

Reference

1. Way, L.W. (ed) *Current Surgical Diagnosis and Treatment*, 6th Ed. Lange, Los Angeles, 1983, p. 697.