Progressive joint deformity has recently been implicated in the pathogenesis of late functional deterioration following previous paralytic poliomyelitis.³ This probably results in a greater than normal stress placed on the gastrocnemius on the other side in order that the patient may continue to walk, with the result that it hypertrophies.

Final diagnosis

Progressive functional deterioration after paralytic poliomyelitis.

Keywords: poliomyelitis; late functional deterioration

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A healthy patient who suddenly developed a foot-drop

Gus Plaut

A 76-year-old man had taken up gardening. A few days after a particularly tiring day he suddenly developed a right-sided foot-drop. There were no other muscle weaknesses. He had not used chemical garden sprays. His medical history included treatment for asthma with inhaled steroids and a successful resection of the colon for carcinoma.

He was suspected to have a metastatic tumour in the upper sacral or lower lumbar region, affecting the sciatic nerve, and was referred to the local oncology clinic. X-Rays and an abdominal computed tomography scan showed no abnormality, apart from minor osteo-arthritis of the vertebral column.

Questions

- What further investigations would you advise?
- What is the likely diagnosis?
- What treatment is indicated and what is the prognosis?

18 North Mill Place,
Mill Chase, Halstead,
Essex CO9 2FA, UK
G Plant

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Answers

QUESTION 1

A detailed history and physical examination should have preceded the request for investigations. The patient had knocked the lateral side of his knee while carrying a heavy rolled-up garden hose. No bruise developed at any time, and the discomfort from the injury subsided within 24 hours. Apart from the loss of dorsiflexion at the ankle, eversion of the foot and extension of the toes were reduced. There was an anaesthetic area on the dorsum of the foot. No other neurological signs were present.

QUESTION 2

The patient had injured the peroneal nerve (synonym: lateral popliteal nerve) at the point where it curves round the neck of the fibula. The sciatic nerve divides into medial and lateral popliteal nerves in the lower thigh. The lateral division or peroneal nerve then curves round the neck of the fibula, where it is only covered by subcutaneous tissue and skin. It is easily palpable at this site. Further down it innervates the tibialis anterior muscle, the peroneal muscles and the long extensors of the toes. It supplies the skin of the dorsum of the foot. The peroneal nerve was compressed at the neck of the fibula.

QUESTION 3

Nerve stimulation studies may be performed to ascertain whether the nerve is completely divided. If it is not divided, recovery usually is complete in 4–6 months, as occurred in this patient.

Discussion

A recent letter in *The Lancet*¹ describes injuries to the peroneal nerve at the neck of the fibula due to ski injuries. The authors state “This type of peroneal injury has rarely been reported and its cause is widely ignored ...” Many of their patients did not recover completely, even with immediate microsurgical repair. They advocate prevention with protective pads on the lateral aspect of the ski pants.

A series of 302 patients with peroneal nerve lesions seen in 30 years at the Department of Neurosurgery in Louisiana, USA, includes injuries to this nerve by sharp lacerations, gunshot wounds and tumours.² If the nerve is divided they advise surgical repair or nerve graft. If spontaneous recovery of a compressed nerve has not occurred in about 6 months, neurolysis is advised. In their series 45% of patients made an acceptable recovery.

Final diagnosis

Compression of the peroneal nerve at the neck of the fibula.

Keywords: peroneal nerve; peripheral nerve injuries; fibula

¹ Wechselberger G, Schoeller T, Bauer T, Otto A, Rainer C. Increased peroneal nerve injuries caused by ski edges. *Lancet* 1999;**353**:753–4.

² Kim HD, Kline DG. Management and results of peroneal nerve lesions. *Neurosurgery* 1996;**39**:312–20.

An unusual cause of bowel obstruction

A Huang, D L McWhinnie, G P Sadler

A 73-year-old woman presented with a 24-hour history of colicky abdominal pain, abdominal distension and vomiting. Medical history revealed that her bowels were opening normally and there was no history of recent change in bowel habit or weight loss. She was hypertensive and had not undergone previous abdominal surgery. The patient had previously been investigated for rectal haemorrhage when a barium enema was performed (figure 1). Examination of her abdomen revealed distension with no scars or external herniae. On auscultation tinkling bowel sounds were heard. No peritonism was present and digital rectal examination was normal. Plain abdominal radiograph was obtained (figure 2). The patient underwent an exploratory laparotomy, following which she made uneventful recovery. A post-operative small bowel enema confirmed the diagnosis (figure 3).

Figure 1 Barium enema

Figure 2 Plain abdominal X-ray

Figure 3 Small bowel enema

**Department of
General Surgery,
Milton Keynes
Hospital, Standing
Way, Eaglestone,
Milton Keynes
MK6 5LD, UK**
A Huang
D L McWhinnie
G P Sadler

Correspondence to
Mr A Huang, 40 York
Terrace East, London
NW1 4PT, UK

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Accepted 14 June 1999

Questions

- 1 What is the diagnosis?
- 2 What are the differential causes of this condition?
- 3 What are the surgical options at laparotomy?