ENTRAPMENT NEUROPATHY OF THE SUPERFICIAL PERONEAL NERVE

A BILATERAL CASE

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A 21-year-old female athlete presented with bilateral lumps in her calves which became painful on exercise. Exploration revealed entrapment of the superficial peroneal nerves. Her symptoms were relieved by fasciectomy.

We report a case of bilateral entrapment of the superficial peroneal nerve induced by exercise and relieved by local fasciectomy. We have been unable to find any previous report of a bilateral case.

CASE REPORT

A 21-year-old woman presented with a history of painful lumps on the lateral aspects of both calves. Her symptoms had progressed over a period of six years. Initially her only symptom had been pain on exercise, particularly when walking uphill. One year before presentation she noticed that small lumps appeared during exercise at the site of the pain; these later became permanent but were more noticeable on exercise. She had been a county hockey player but the pain had stopped her playing. There was no radiation of pain to the foot nor any weakness or numbness. She was otherwise healthy.

![Fig. 1](image-url)

Probe indicating the fascial defect where the nerve can be seen leaving the lateral compartment.

![Fig. 2](image-url)

The nerve has been released by fasciectomy. The fusiform swelling of the nerve can be seen.

On examination there were bilateral, symmetrical, non-tender, fatty lumps, each 2 cm in diameter, situated 10 cm above the lateral malleolus. There was a palpable fascial defect associated with each lump. The lumps did not disappear on elevation of the legs.

Exploration revealed that each lump consisted of a small nodule of fat bulging through the fascial defect where the superficial peroneal nerve left the lateral compartment (Fig. 1). The nerve appeared to be trapped by the fascia and had developed a fusiform swelling, which was more obvious in the right leg.

Both nerves were decompressed by a limited excision of the fascia (Fig. 2). Six months after operation the patient was able to cycle and to jog without discomfort.

DISCUSSION

Superficial peroneal nerve entrapment is an uncommon compression neuropathy. Kopell and Thompson (1963) described a similar neuropathy but did not mention a fascial defect as part of the syndrome. Garfin, Mubarak and Owen (1977) reported a patient with superficial peroneal nerve entrapment associated with a fascial defect and a muscle hernia. However, their patient had an anterolateral compartment syndrome which was
treated by complete fasciotomy. We have been unable to find any previous reports of a bilateral case.

Banerjee and Koons (1981) reported two patients with unilateral superficial peroneal nerve entrapment made worse by exercise; one of these also had a lipoma at the site of entrapment. Both patients were cured by limited fasciotomy. These authors suggested that an inversion injury or wearing high boots might have precipitated the lesions.

In our patient there was no history of trauma nor evidence of a compartment syndrome. Her symptoms were presumably caused by irritation of, and pressure on, the superficial peroneal nerve by the sharp edge of the fascial defect. This aetiology is supported by the fact that her symptoms settled after only a local fasciectomy.

Although uncommon, superficial peroneal nerve entrapment should always be considered as part of the differential diagnosis of leg pain, particularly in athletes.

REFERENCES

