An unusual presentation of a ruptured abdominal aortic aneurysm

F.S. HADDAD, N.C. HATRICK & D.J. SHANAHAN

The Homerton Hospital, Homerton Row, London, UK

SUMMARY

Abdominal aortic aneurysm should always be considered in the differential diagnosis of isolated lower limb neuropathies.

Keywords: aortic aneurysm, femoral neuropathy.

INTRODUCTION

The increasing incidence of abdominal aortic aneurysms and the catastrophic consequences of rupture, make early recognition and intervention vital. However, diagnosis is often hampered by atypical and occasionally insidious presentations. We present the case report of one such patient whose aneurysmal rupture was heralded by an isolated painful femoral neuropathy.

CASE REPORT

A 75-year-old hypertensive male smoker presented to the accident and emergency (A&E) department with a 5-week history of increasing left knee pain and thigh weakness. This was associated with painful hip movement and giving way of the left knee. General, abdominal and back examination were performed and recorded as normal. Neurological assessment revealed weak hip flexion and weak knee extension on the left side, an absent left knee jerk, and hyperaesthesia in the left thigh and medial calf region. Radiographs of the lumbar spine, pelvis and knees revealed marked degenerative changes, there was some retroperitoneal calcification which was not appreciated at the time.

The patient was initially admitted to the orthopaedic unit and managed with bedrest and analgesia. His leg pain worsened, and routine blood tests revealed a falling haemoglobin level and deteriorating renal function. This led to further investigation with ultrasound and CT scanning

which demonstrated a posterior rupture of a 6-cm abdominal aortic aneurysm.

During surgery, a large infrarenal aneurysm was noted with a left lateral rupture and a large retroperitoneal haematoma. A 16-mm Dacron bifurcation graft repair was undertaken.

The patient made a good post-operative recovery. Mobilization was hampered by a dense residual left femoral nerve palsy which has been confirmed electromyographically, with no evidence of recovery after 3 months.

DISCUSSION

The femoral nerve is formed within the substance of psoas major and emerges from its lateral border to run deep in the gutter between psoas and iliacus behind the iliac fascia. It lies in a closed compartment and is vulnerable to compression by a retroperitoneal space-occupying lesion. This has frequently been reported in association with anticoagulation, haemophilia and renal transplantation.¹ The association of an abdominal aortic aneurysm with femoral neuropathy suggests rupture and an enlarging haematoma rather than a pressure effect secondary to aneurysmal dilatation.^{2,3} The nerve lies within a closed fascial space; compression due to a small contained aneurysmal rupture would present as an isolated left femoral nerve palsy. This provides a window of opportunity for aneurysm repair before a catastrophic bleed occurs.

The last point is well illustrated by our patient, who gave a 5-week history of left-sided progressive femoral nerve entrapment. Initial haemodynamic stability and the absence of palpable abdominal or distal aneurysmal disease masked the diagnosis. This highlights the importance of a high index of suspicion when assessing middle-aged and elderly patients with painful lower limb

Correspondence:

F.S. Haddad,
Senior House Officer
in General Surgery,
46B Hanover Gate
Mansions, Park
Road, London NW1
4SN, UK

neuropathies. Femoral, obturator and even sciatic nerve compression are recognized complications of aneurysmal rupture.^{3,5} These lesions may indeed be common, since neurological examination prior to emergency aneurysm surgery is often cursory. If the high morbidity and mortality of ruptured abdominal aortic aneurysms are to be reduced in these patients, we would recommend that all elderly patients with acute isolated lower limb neuropathies be assessed for aneurysmal disease.

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