Common iliac artery aneurysm presenting as acute sciatic nerve compression

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Summary: Aneurysms of the iliac arteries usually remain silent, but when they rupture the consequences can be dramatic. They produce few clinical signs suggestive of their presence. However, such aneurysms have been found to be the cause of non-vascular clinical situations. Often they present with features of compression on adjacent viscera. We present a case in which a large common iliac artery aneurysm was found to be causing symptoms of acute sciatic nerve compression.

Introduction

Isolated aneurysms of the iliac arteries are rare with an estimated occurrence of 1–2% of that of aortic aneurysms. When they do occur, one presentation can be acute sciatic nerve compression.

Case report

A 68 year old man was admitted with a sudden onset of pain radiating from the right buttock to the leg, followed by retention of urine. He was unable to bear any weight on his right leg. His previous medical history was unremarkable. Examination revealed a right foot drop, absent right ankle jerk, loss of sensation on the lateral aspect of the right leg and restriction of straight leg raising. Abdominal examination was normal except for a distended bladder, which was subsequently catheterized. Rectal examination was also normal. There were no other abnormal physical signs. Investigations, including plain X-rays of the lumbar spine and myelogram, were normal. Ultrasonography showed a large aneurysm 10 cm × 8 cm of the right common iliac artery.

At laparotomy the aneurysm was dealt with using an in-lay prosthetic graft. Post-operatively right iliac vein thrombosis occurred which was treated by bandaging alone. Anticoagulation was not used owing to recent vascular surgery. Electromyography done following the operation revealed severe denervation of the muscles of the right leg and an abnormality compatible with either a partial sciatic nerve lesion or fairly extensive lumbosacral root pathology. Currently the signs of sciatic nerve compression are resolving.

Discussion

The majority of isolated iliac artery aneurysms involve the common iliac artery. Although iliac aneurysms have a high mortality, there are very few reported cases in which a true aneurysm of the iliac artery was found to be causing nerve compression, and none in which the symptoms appeared as suddenly as in this patient.

Soimakallio & Oksala¹ have reported a case of internal iliac artery aneurysm causing sciatic pain in the leg for a number of years. Clark & McCollum² reported a case in which posterior rupture of an iliac artery aneurysm caused nerve root compression with complete resolution after surgical management of the aneurysm. Traumatic false aneurysms, especially of the superior gluteal artery, have been noted to cause sciatic nerve compression.³ A gluteal swelling when present in such cases may confuse the diagnosis with that of an abscess.⁴ Iliac artery aneurysms have also been implicated⁵ as a cause of testicular pain due to involvement of the genital branch of genito-femoral nerve. Waldman & Braun⁶ reported a case in which bilateral iliac artery aneurysms presented with signs and symptoms of neuropathy of the femoral nerve. Chapman *et al.*⁷ have reported two cases of sciatic nerve compression due to aneurysm of the hypogastric artery in one and bilateral iliac artery aneurysms in the other.

Iliac artery aneurysm can thus present according to the structure it compresses; occasionally the presenting features are those of iliac vein thrombosis. Silent aneurysms may be picked up during physical examination for unrelated conditions and in general, less than half the cases have symptoms before rupture.¹ When there is a suspicion of an iliac artery aneurysm, abdominal ultrasonography, computed tomographic scanning and arteriography either done alone or in combination may help arrive at the definitive diagnosis. In our case ultrasonography alone was necessary.

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