

Sciatica due to pelvic hematoma: case report

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Abstract: Sciatica is defined as pain in the sciatic nerve distribution. The most common reason of sciatica is radiculopathy due to lumbar disc hernia. Other causes can be congenital, acquired, infectious, neoplastic, or inflammatory. The piriformis syndrome is another cause. The pain starts in an insidious manner when the cause of sciatica is an extraspinal tumor. It is intermittent at first but a constant and progressive pain that does not decrease with position or rest gradually develops in all patients. The possibility of an intraabdominal or pelvic mass should always be considered and the relevant tests requested when the cause of the sciatica cannot be explained. We present an 83-year-old male who presented with non-traumatic and non-vascular lumbosacral plexopathy due to a large hematoma in the left adductor muscle following the use of warfarin sodium.

Key words: Lumbosacral plexopathy, pelvic hematoma, sciatica

Introduction

Sciatica is defined as pain in the distribution of the sciatic nerve. The sciatic nerve consists of components from the L4-S3 nerve roots. The nerve exits the pelvis from the greater sciatic foramen along the posterior part of the thigh. It divides into the tibial and main peroneal nerves in the lower third of the thigh (7).

The most common cause of sciatica is radiculopathy due to lumbar disc hernia. Other causes can be congenital, acquired, infectious, neoplastic, and inflammatory. The piriformis syndrome is another cause. Pain of vascular origin, reflected pain not of spinal

origin, and peripheral neuropathies can mimic sciatica (1,7).

The pain increases slowly when the cause of the sciatica is an extraspinal tumor. It is intermittent at first but a constant and progressive pain that does not decrease with position or rest gradually develops in all patients. The possibility of an intraabdominal or pelvic mass should always be considered and the relevant tests requested when the cause of the sciatica cannot be explained (1,7).

We present an 83-year-old male who presented with non-traumatic and non-vascular lumbosacral plexopathy in the left adductor muscle due to a large hematoma following the use of warfarin sodium.

Lumbosacral plexopathy due to a hematoma in the left adductor muscle caused by warfarin use is rare in the literature. Our colleagues should be as careful when injecting substances in the canal as they are when injecting them outside the canal during magnetic resonance imaging (MRI) investigations. We presented this case to emphasize the importance of this precaution.

Case report

An 83-year-old man presented with back pain, left leg pain and loss of strength in the left leg. The patient said that the pain had been continuing for the last 10 days while the loss of strength had appeared in the last 3 days. The pain was resistant to medical treatment and did not resolve with rest. The patient stated that the pain was gradually becoming more severe. The patient was on warfarin sodium due to a heart valve disease but did not have his INR measured regularly. The left Lasegue test was positive at 40 degrees on neurological examination. The left femoral strain test was positive. The left knee extension strength was 4/5 and left ankle dorsiflexion 3/5. The left patella was hypoactive and there was hypoesthesia of the left L3, L4, L5 dermatomes. Left waller sensitivity was interpreted as positive. Back movements were painful and limited. The patient could only be mobilized with a wheelchair due to the pain. Lumbar MR revealed lumbar degenerative changes and moderate-sized central protrusions at L4-5 and L5-S1. The sections also revealed marked atrophy of the left psoas muscle and low T2 signals in the iliacus muscle (Figure 1). Pelvic computerized tomography (CT) was therefore requested and the images were consistent with

hematoma in the left iliacus muscle (Figure 2). The USG revealed a solid mass. The patient was on irregular warfarin and prothrombin time was 34 sec. The patient was referred to the general surgery department for the intraabdominal hematoma. Surgery was not planned due to the additional systemic problems. The patient was hospitalized for pain control. The pain decreased and became tolerable with tramadol and the hematoma was therefore left to resorb spontaneously. The necessary recommendations for PTZ follow-up were obtained from the Hematology Department and applied. The patient was later discharged and called back for follow-up to the neurosurgery outpatients a week later.



Figure 1 - Low T2 signals in the iliacus muscle in MRI



Figure 2 - Hematoma in the left iliacus muscle in pelvic CT

Discussion

Sciatica is defined as pain in the sciatic nerve distribution. The sciatic nerve consists of components from the L4-S3 nerve roots. The nerve exits the pelvis from the greater sciatic foramen along the posterior part of the thigh. It divides into the tibial and main peroneal nerves in the lower third of the thigh (7).

The most common cause of sciatica is radiculopathy due to lumbar disc hernia. Other causes can be congenital, acquired, infectious, neoplastic, and inflammatory. The piriformis syndrome is another cause. Pain of vascular origin, reflected pain not of spinal origin, and peripheral neuropathies can mimic sciatica (1,7).

The pain starts in an insidious manner when the cause of sciatica is an extraspinal tumor. It is intermittent at first but a constant and progressive pain that does not decrease with position or rest gradually develops in all patients (7). The possibility of an intraabdominal or pelvic mass should always be considered and the relevant tests requested when the cause of the sciatica cannot be explained.

Bushby et al have reported lumbosacral plexopathy and sciatica due to a ruptured main iliac artery aneurysm. Their patient presented with back pain and sciatica, loss of sensation, loss of strength and numbness that included the L4-S1 roots. CT imaging revealed a large hematoma in the left side of the pelvis due to an 8 cm main iliac artery aneurysm. One must be careful about pelvic and intraabdominal space-occupying lesions while searching for

sciatica etiology, especially when atypical neurological symptoms are present (1).

Melikoğlu et al reported a 50-year-old woman with trauma to the thorax, abdomen and left hip. Severe left sciatica and left foot drop developed approximately three weeks after the trauma. Magnetic resonance imaging showed a large hematoma area next to the lumbosacral plexus and CT angiography revealed a left internal iliac artery aneurysm. The pain resolved immediately with surgical treatment while the foot drop only recovered partially (6). This case emphasizes the importance of considering pseudoaneurysm in cases with sciatica or neurological deficits that develop following incidental trauma or in an iatrogenic manner.

There are many causes of sciatica. Intraabdominal masses may cause sciatica through their effect on the lumbosacral plexus following local invasion or distant metastases. Lumbosacral plexopathy usually develops due to a compressive effect of the tumor. Invasion is a less frequent mechanism (5). Lin et al have reported a 67-year-old female who presented with neurogenic claudication, back pain and left foot drop that had been increasing for the last three months. This was accompanied by increasing abdominal distension. Imaging studies revealed a large pelvic mass compressing the left lumbosacral plexus. Direct plexus invasion was not found on imaging or with observation during surgery. Bilateral ovarian borderline mucinous cystic tumor accompanied by pseudomyxomatous peritonei was found and surgically removed, leading to a dramatic recovery in the sciatica (5).

Ladha et al mention a different spread mechanism for the lumbosacral plexopathy caused by prostate cancer. They report two lumbosacral plexopathy and sciatica cases that developed without any pelvic or extraprostatic spread. They state that the possible mechanism here is direct perineural spread from the prostatic nerves to the lumbosacral plexus. This could be a rare potential spread mechanism of cancer (4).

Dyck et al have divided lumbosacral plexopathy into two groups as diabetic and non-diabetic using a different approach. They state that the cause is ischemic injury due to microvascular damage in many cases thought to be idiopathic. They also emphasize the importance of immunotherapy although the evidence is currently inadequate (2).

Ko et al have described some features of lumbosacral plexopathies. They state that non-traumatic lumbosacral plexopathies are due to a neoplasm in 59.3%, radiotherapy in 22.2%, neurological amyotrophy in 7.4%, and a psoas abscess in 3.7%. The idiopathic cases make up 7.4%. Pain is the presenting symptom in 82.2% of the neoplastic cases (3).

Lumbosacral plexopathy with non-traumatic, non-vascular spontaneous retroperitoneal hematoma due only to warfarin use has been reported very rarely. This hematoma was also present in the lumbar MR images of our patient. A careful history should be obtained when evaluating sciatica. Resistance to medical treatment, progressive increase of the pain, no recovery with position or rest could indicate lumbosacral plexopathy. Atypical neurological deficits and atypical distribution of the pain on neurological

examination can again suggest lumbosacral plexopathy. The most important signs indicating lumbar plexopathy are sciatica unexplained by the spinal column pathology on lumbar MR together with the examination findings. It is important to thoroughly evaluate the adjacent spinal canal in addition to the spinal column on MR images. Radiologists should be consulted regarding this matter and the images should be evaluated together with the radiology report. Abdominal tomography can be used as an additional test if necessary.

Conclusion

The history, physical examination and radiology play a very important role in the evaluation of the patient with sciatica. The most important signs indicating lumbar plexopathy are sciatica unexplained by the spinal column pathology on lumbar MR together with the examination findings. It is important to thoroughly evaluate the adjacent spinal canal in addition to the spinal column on MR images. Radiologists should be consulted regarding this matter and the images should be evaluated together with the radiology report.

Written informed consent of the patient was obtained.

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