An unexpected etiology of lumbosciatica

Une lombosciatalgie d'étiologie inattendue

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RÉSUMÉ

La lombosciatalgie est une cause fréquente de consultation. Une exploration urgente et une éventuelle cure chirurgicale s'imposent dès lors qu'elle est hyperalgique ou qu'elle s'accompagne d'un déficit neurologique. Une imagerie par résonnance magnétique lombaire est indiquée en premier lieu à la recherche d'une hernie discale. Toutefois, d'autres étiologies doivent être évoquées. Nous rapportons l'observation d'un homme de 37 ans qui consulte pour des lombosciatalgies droites L5 hyperalgiques et déficitaires. L'enquête étiologique a conclu à la présence d'un pseudo-anévrysme de l'artère iliaque interne droite comprimant le nerf grand sciatique homolatéral. Le patient a été opéré avec une bonne évolution clinique.

Mots-clés

Lombosciatalgie; pseudoanévrysme; nerf sciatique

SUMMARY

Lumbosciatica is a frequent symptom. When it is hyperalgic and/or deficient, it requires urgent exploration and an eventual surgical procedure. In most of the cases, medullary lumbar (instead of medullary) MRI is required looking in the first place at an intervertebral disc herniation. Other etiologies are rare but must be kept in mind. We report a case of a 37-year-old man with left L5 hyperalgic and deficient lumbosciatica. The conclusion of the etiological research led to pseudoaneurysm of the internal iliac artery compressing the ipsilateral sciatic nerve.
The patient was operated on with a good clinical course.

Key-words

Lumbosciatica;Pseudoaneurysm; sciatic nerve;

INTRODUCTION

Lower back pain with sciatica is a frequent reason for consultation. It concerns old and young people. It can be associated with paresthesia, numbness and sensory and/or motor deficiencies at the lower limbs with a huge impact on social and professional life. In more than 90% of cases, lumbosciatic pain is of **lumbar canal** origin. Rare differential diagnoses are to be kept in mind because some of them can be surgical emergencies.

CASE REPORT

It is a 37-year-old man with a past medical history of aortic valve replacement since the age of 20 for idiopathic aortic insufficiency. No other medical history is to report.

This patient presented to the emergency department with a 3-month history of left sided lower back pain, radiating to the external aspect of the left limb down to his foot. He had no history of recent trauma or injury to his back, or any known malignancy or fever.

He complained of numbness in the L5 and S1 dermatomes and did not have sphincter dysfunction. This symptomatology has not given way to any medical treatment. A lumbar CT scan done in another institution after one month of evolution concluded that there was no disco-radicular conflict.

The evolution was marked by the exacerbation of the symptomatology and the installation of a neurological deficit, which led to his hospitalization in the orthopedic surgery department.

On initial examination, the vital signs were: blood pressure 120/75 mm Hg, pulse rate 84 beats/min, respiratory rate 14 breaths/min, and temperature 37,4°C. Cardiopulmonary examination was without abnormalities. His abdomen was soft and flat. He had no abdominal tenderness or palpable mass. The osteo-articular examination found a difficult walk. The patient was using two crutches and had to drag the left leg. The Lasègue's sign and the bell test did not accentuate the pain, which were permanent. Hip, knee and ankle passive mobilization was normal. Neurological examination showed proximal and distal muscular weakness in the left leg. Osteotendinous reflexes were abolished. Perineal examination, with especially anal tone, was normal.

The right leg showed normal tone, power, sensation and reflexes. **The leg vascular examination was normal.**

Initial hematology panel, coagulation profile, and chemistry panel were all within normal limits.

X-ray of the lumbar spine was unremarkable. The magnetic resonance imaging (MRI) of the spine was contraindicated because the patient was carrying a mechanical aortic valve. CT scan of the lumbar spine showed no disco-radicular conflict but revealed a pelvic mass. Injection of the contrast agent found a 6 X 5 cm pseudoaneurysm of the left internal iliac artery (fig.1) compressing the ipsilateral sciatic nerve (fig.2).

A laparotomy was performed, and the internal iliac artery was ligated, followed by the evacuation of the pseudoaneurysm.

The patient has remained pain-free with progressive improvement in neurological function under physiotherapy at a follow-up of 2 years.

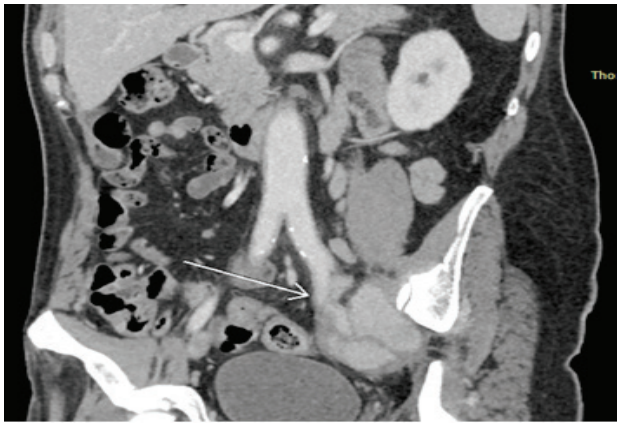

Figure 1 ; Coronal CT of the abdomen : left internal iliac artery pseudoaneurysm

Figure 2 : Axial CT shows the internal iliac pseudoaneurysm (surrounded by white arrows) obstructing and crushing nerve roots

DISCUSSION

Lumbosacral plexopathy is defined as signs and symptoms due to dysfunction of the nerve plexus formed from the ventral division of the lumbar, sacral and coccygeal nerve roots. The most common symptom is lumbosciatica.

When a patient has sciatica/radicular symptoms, the clinician usually looks to the spine for the origin of those symptoms. Extraspinal causes are less commonly considered in the differential diagnosis. Sciatica with neurological deficit in a lower limb(s) is commonly due to lumbosacral radiculopathy but can also be due to lumbosacral plexopathy [1]. Lumbosciatica can be present in its hyperalgic and/or deficient form, such as the case of our patient, where an urgent exploration by a spinal MRI is necessary. MRI allows diagnosis of most etiologies.

Lumbosacral plexopathy causes vary according to its pathophysiology [2]. The most common cause of intrinsic nerve damage is diabetes mellitus [3], whereas the most common extrinsic cause is local compression or invasion of the nerve root by, in 90% of cases, an intervertebral disc herniation. Secondarily, there is spinal canal stenosis, spondylolisthesis, piriformis syndrome and spinal tumors [1]. After all, radiotherapy, renal transplant and aorto-iliac aneurysms and pseudoaneurysms are rare causes to be kept in mind. The lack of knowledge of these etiologies may be the cause of a delay in diagnosis.

Arterial aneurysms of the lower limbs account for 16% of all aneurysms [4]. 10 % of them sit at the common and internal iliac arteries [5]. Pseudoaneurysms are rarer.

A pseudoaneurysm or false aneurysm is a small pocket of communicative blood with an artery or a cardiac cavity. It follows the rupture of the wall of the latter. The blood is then contained by the adjacent structures against the aneurysm which preserves the integrity of its wall. Classically, the aneurysm had a large neck and pseudoaneurysm a tight one. The traumatic origin is the first cause to evoke. Other etiologies (septic, Behcet's disease, Marfan's disease) are also to be found. In the case of our patient, a thorough etiological investigation was conducted and no origin was found. Moreover, no causality could be established between this false aneurysm and aortic insufficiency.

The pseudoaneurysm may remain clinically silent, but when ruptured the consequences can be dramatic [1]. The clinical presentation is variable and depends on the etiology. However, pain due to compression of the lumbosacral nerve root is the most prominent symptom and tends to be the initial clinical manifestation in the early course of the disease. Progressive unilateral sensory change and weakness occur in most patients, but incontinence is rare [6]. Pseudoaneurysmal dilatation in the distal aorta, iliac arteries, and their branch vessels can compress the lumbosacral plexus. Nerves of segments L5 and S1 are located directly posterior to the internal iliac artery. The neurological symptoms are usually due to their compression [7].

We believe that a relationship exists between the size of this mass and the exacerbation of the symptomatology. This would explain the gradual evolution of the clinic and the installation of a neurological deficit.

Delgado-Garcia et al. [5] said that 13% of patients with iliac aneurysms have symptoms of plexus irritation or deficit; some other authors argue that it is below this value. Sciatic nerve lesions due to aneurysms or pseudoaneurysms in the pelvic cavity are rare; hence, this may cause diagnostic confusion [8].

Surgery is the solution for these cases, and results are generally good with loss of pain and gradual return to normal function.

There are different ways to treat pseudoaneurysms such as: ultrasound-guided compression technique, thrombin injection, endovascular stent placement and open surgery. The gold standard for surgical repair is open interstitial graft repair [9].

CONCLUSION

lumbosciatic is very often of **lumbar canal** origin. If an intraductal cause has not been found, it will be necessary to strive to find a peripheral conflict on the path of the sciatic nerve.

Internal iliac artery pseudonaneuvrysm can be one of these etiologies.

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