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Case Report

Lumbosacral Nerve Root Compression by Gravid Uterus as a Cause of Sciatica in Pregnancy: Diagnosis by Exclusion

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Abstract

A 29-year-old pregnant woman presented with severe left sciatica for three days, which was exacerbated by standing and walking. The patient, who was 11 weeks pregnant, was considering termination of pregnancy due to the debilitating pain. The patient was referred by a neurosurgeon for a lumbar spine MRI (Magnetic Resonance Imaging) as the analgesics did not help much. MRI of the lumbar spine did not reveal any structural abnormalities. The patient's symptoms were significantly relieved by lying on her right side for a few hours. The diagnosis was made by exclusion, as the patient's symptoms were not attributable to any identifiable spinal pathology. The patient was managed conservatively with positioning techniques, and her symptoms greatly improved. This case highlights the importance of considering compression of the lumbosacral nerve roots by the gravid uterus as a potential cause of sciatica in pregnant women, especially when other spinal pathologies have been excluded.

Keywords: Sciatica, Female, Pregnancy, MRI

Introduction

Sciatica is a common complaint during pregnancy, affecting approximately 16.9% of women, as reported by several studies [1-3]. The symptoms of sciatica, including radiating pain, numbness, and tingling in the lower extremities, can significantly impact a woman's quality of life and daily activities. While lumbar disc herniation is a common culprit for sciatica in the general population, the growing uterus presents a unique challenge in pregnant women. This case report explores lumbosacral nerve root-compression by the gravid uterus as a potential cause of sciatica in pregnancy, highlighting the importance of diagnosis by exclusion.

Case Description:

A 29-year-old pregnant woman presented with a chief complaint of severe left-sided sciatica for the past three days. The patient was 11 weeks pregnant.

The patient reported excruciating, shooting pain radiating down her left lower extremity, accompanied by numbness, tingling and weakness. The pain was significantly exacerbated by standing or walking, and she was considering undergoing an induced abortion to relieve the symptoms. The patient was referred by the neurosurgeon for a lumbar spine MRI as the analgesics did not help much.

Fig 1 Normal spinal canal and a gravid uterus (black arrow) anterior to L5 and S1 Vertebrae.

Fig 2 Gravid uterus (white arrow) in the left side of the pelvic cavity.

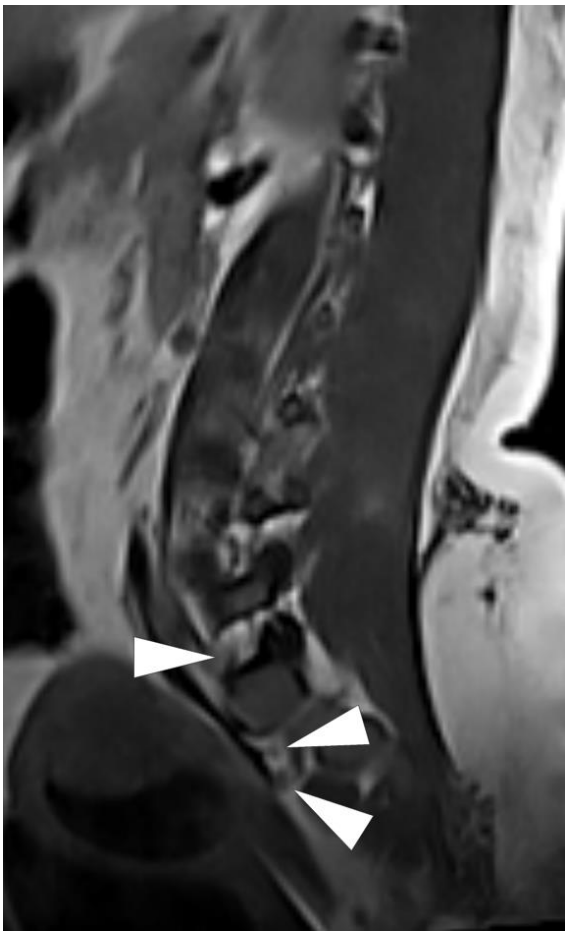

Fig 3 Left lumbosacral nerve roots in close contact to the posterior uterine wall.

Magnetic resonance imaging of the lumbar spine was performed and revealed the gravid uterus anterior to L5 and S1 vertebrae (Fig 1) in the left side of the pelvis (Fig 2) in close proximity to the left lumbosacral nerve roots (Fig 3).

The MRI did not reveal any disc herniation, spinal stenosis, or other structural abnormalities that could account for the patient's symptoms.

Given the lack of identifiable spinal pathology and the position of the uterus on the left side of the pelvis in close proximity to the left lumbosacral nerve roots, compression of the left lumbosacral nerve roots by the gravid uterus was suspected to be the cause of the left sciatica. The patient was advised to maintain a right lateral recumbent position as much as possible to alleviate pressure on the lumbosacral nerve roots.

Over the next few hours, the patient's symptoms gradually improved with the conservative management approach. The severe shooting pain and numbness in the left lower extremity subsided, and she was able to ambulate with minimal discomfort. The patient was closely monitored throughout the remainder of her pregnancy, and she did not require any further intervention.

Discussion

This case report describes a pregnant woman experiencing sciatica attributed to lumbosacral nerve root compression by the gravid uterus. While lumbar disc herniation and other musculoskeletal conditions are more common causes of sciatica in the general population, this case demonstrates the importance of considering pregnancy-specific factors during diagnosis.

The growing uterus can exert pressure on the lumbosacral nerve roots as it enlarges throughout pregnancy [4]. This compression can irritate the nerves, leading to the characteristic symptoms of sciatica, including radiating pain, numbness, and weakness in the leg [5].

As with this case, diagnosing lumbosacral nerve root compression by the gravid uterus often relies on a process of

exclusion. A thorough history and physical examination are essential to rule out other common causes of sciatica, such as lumbar disc herniation, piriformis syndrome, and sacroiliac joint dysfunction [6].

Imaging studies like MRI is a useful tool in some cases as it is considered to be safe during pregnancy if clinically indicated [7].

Fortunately, most cases of sciatica in pregnancy resolve spontaneously with conservative management [8]. This typically includes activity modification to avoid positions that aggravate pain, physical therapy with a focus on core strengthening and stretching exercises, and analgesics like acetaminophen for pain relief [9].

In this case, the patient's prompt response to conservative therapy aligns with the typical course of sciatica due to nerve compression from the gravid uterus.

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