Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Radiology

Psoas Abscess in Pregnancy: A Case Report

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DOI: https://doi.org/10.36347/sjmcr.2025.v13i06.001 | **Received:** 12.04.2025 | **Accepted:** 21.05.2025 | **Published:** 02.06.2025

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Abstract **Case Report**

A psoas abscess in pregnancy is a relatively uncommon condition with non specific signs and symptoms. It may lead to serious complications if not diagnosed and treated. A clinical history and examination are used to make a diagnosis, which is then confirmed by microbiology and radiological findings. We present a case of a primary psoas muscle abscess in pregnancy diagnosed and managed by lumbotomy and drainage.

Keywords: Psoas Abcess, MRI, Pregnancy.

INTRODUCTION

The psoas abscess is a deep suppuration of the psoas-iliac muscle. This pathology is rare and the clinical diagnosis is difficult, especially during pregnancy.

Two types of psoas abscesses exist, the primary and secondary abscess. Primary abscess is caused by spread of pathogen by haematogenous route. The secondary abscess result from a direct extension of an infectious process into psoas muscle. Most common sites of initial focus include digestive tract (Crohn's abscess, appendicitis and diverticulitis), osteomyelitis, pyelitis, tuberculosis. Other secondary pathogenic organisms responsible for this condition include S. aureus, E. coli, bacteroides, and enterococcus amongst others [1].

Psoas abscesses are challenging to diagnose due to heterogeneous symptoms. They should therefore be considered when a pregnant patient complains of persistent back or abdominal pain, weakness in the lower extremities, or fever of unknown origin.

CASE REPORT

A 36-year-old pregnant patient at 26 weeks and 6 days of gestation, with no significant past medical history, who was admitted to the maternity ward of Mohammed VI University Hospital in Marrakech for low back pain radiating to the right iliac fossa, evolving over the past 20 days.

Biological workup revealed neutrophilic leukocytosis and an elevated C-reactive protein (CRP) level at 167. Abdominal ultrasound showed a retroperitoneal collection in the right flank and right iliac fossa. And a single live fœtus of 26 weeks gestation A pelvic MRI was performed, revealing a multiloculated collection in the right iliopsoas muscle, fairly well-defined, extending to the peri- and subhepatic regions. It appeared hypointense on T1 and heterogeneously hyperintense on T2 sequences, measuring 10 x 9.3 x 18.2 cm (AP x T x CC).

Anteriorly, the collection is in contact with the uterine cavity and the right colic angle. Medially, it reaches the vertebral bodies from L4 to S1 without signs of intraspinal extension or disco-vertebral signal abnormalities. Superiorly, it extends to the subcapsular hepatic region, without signal abnormalities in the adjacent hepatic parenchyma. There is associated oedematous infiltration of the paravertebral muscles, and surrounding subcutaneous soft tissues.

A right lumbotomy was performed via a 3 cm incision at the 12th rib. This procedure facilitated the drainage of approximately 800 cc of thick, purulent material, indicating a significant abscess.

Postoperatively, the patient was initiated on a dual antibiotic. The patient's condition showed favorable progression, with improvements observed in radiological imaging, clinical symptoms, and laboratory markers, suggesting effective infection control and recovery.

Figure 1: Ultrasonography showing a retroperitoneal collection in the right flank and right

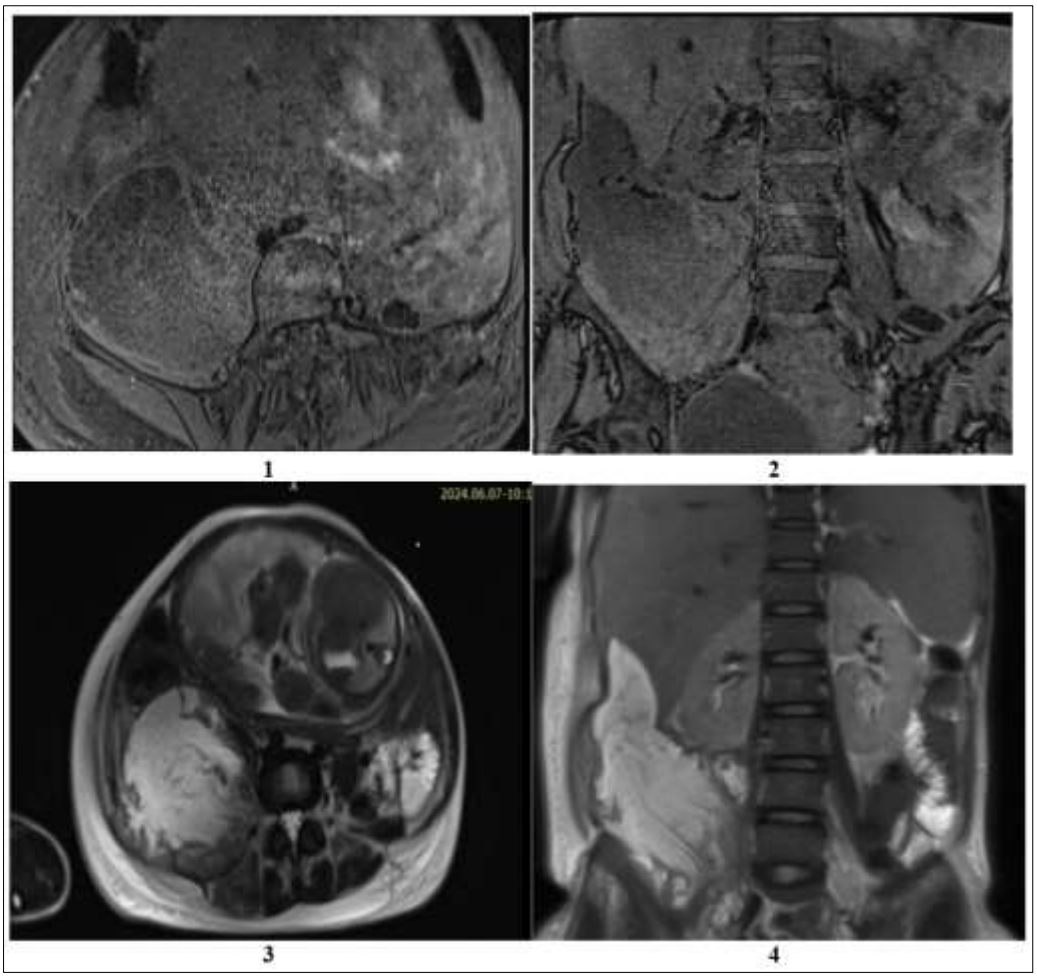

Figure 2: A pelvic MRI revealing a multiloculated collection in the right iliopsoas muscle, fairly well-defined, extending to the peri- and subhepatic regions. It appeared hypointense on T1 (1), (2) and heterogeneously hyperintense on T2 sequences (3), (4), measuring 10 x 9.3 x 18.2 cm (AP x T x CC).

DISCUSSION

Hermann Mynter first described psoas abscesses in 1881 with the triad of back pain, fever, and conspicuous gait. Subsequent studies showed that not all three symptoms are present in all cases. *Staphylococcus aureus*, *Escherichia coli*, or *Mycobacterium tuberculosis* should be mentioned as the main pathogenic germs. Psoas abscesses in pregnancy are very rare. There are some case reports of psoas abscesses after vaginal delivery, caesarean section and abortion curettage, but only a few cases of psoas abscesses during pregnancy [2].

Psoas abscesses occur more frequently in the second and third trimesters but have been reported from 13 and 39 weeks of gestation. The high divergence of

clinical symptoms can be explained by the particular location of the psoas muscle during pregnancy. Thus, back pain, pain during hip movement, an acute abdomen, fever and elevated CRP are described. However, they can be absent in some cases [3].

It is essential to mention that a psoas abscess is often diagnosed after delivery, especially in the later weeks of gestation. Especially when symptoms persist postpartum, the initial diagnosis should be re-evaluated, and a more unlikely diagnosis should be considered. This also explains why patients are often misdiagnosed, and vertebral disc affection or pregnancy-related back pain is viewed more often [4].

Regarding the literature for tubo-ovarian or other abdominal abscesses, percutaneous drainages have been described as a safe and effective therapeutic option during pregnancy [5].

Sonography offers a good diagnostic option even in obese patients. If the findings are unclear, they can be supplemented by MRI. In the end, sonography and MRI examinations were able to determine the exact diagnosis and extent of the psoas abscess in our case.

CONCLUSION

As this case highlights diagnosing and treating psoas abscesses during pregnancy can be challenging. It requires intensive interdisciplinary collaboration between prenatal physicians, urologists, and radiologists. Although treatment was primarily surgical in the literature, ultrasound and/or MRI-guided drainage and antibiotic therapy should be considered as treatment options in pregnancy with potentially good maternal and fœtal out come.

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