CASE REPORT

Bilateral psoas abscess during pregnancy presenting as an acute abdomen: atypical presentation

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prakasharuna@hotmail.com**SUMMARY**

Nearly half of skeletal tuberculosis patients have spinal tuberculosis, but psoas abscess develops in only 5% of spinal tuberculosis cases. However, bilateral psoas abscess is a rarity. Psoas abscess occurring in pregnancy could be a clinical dilemma and is hardly reported. We report an unusual presentation of bilateral psoas abscess in pregnancy presenting as an acute abdomen and adnexal mass.

BACKGROUND

Spinal tuberculosis is commonly encountered in tropical countries. Although unilateral tuberculous psoas abscess has been reported but bilateral psoas abscess is a rarity.¹ An interesting clinical scenario in pregnancy of 'bilateral psoas abscess mimicking acute abdomen and adnexal mass' is being reported. There is no such case reported in the literature to date.

CASE PRESENTATION

A 24-year-old primigravida at 13 weeks of gestation presented with severe pain in the lower abdomen for 1 week. Mild degree of pain in the lower abdomen and back was present since the time of conception. There was no history of pain during micturition, constipation or diarrhoea, trauma, fever, anorexia or weight loss. Abdominal examination revealed a suprapubic lump of 16–18 weeks size. Vaginal examination revealed 12–14 weeks size uterus deviating to the left side and a tender, 10×15 cm cystic mass with restricted mobility felt through the right fornix which was also extending anterior to the uterus.

INVESTIGATIONS

Investigations revealed haemoglobin 10.4 gm/dL, total leucocyte count 10 000/mm³, differential leucocyte count P50 L30 M18 E2, erythrocyte sedimentation rate (ESR) 48 mm and CA-125 11 IU/L. Liver and kidney function tests and plasma sugar levels were normal. An emergency ultrasonography revealed bilateral adnexal masses of 10×8 cm and 12×12 cm with variable echogenicity and septations and single live intrauterine fetus of 14 weeks. In view of suspicion of a large corpus luteal cyst in both the ovaries, MRI was performed that showed (figure 1) a bilateral large iliopsoas abscess (right>left). There was extensive marrow oedema of L5 and S1 vertebral bodies with L5/S1 discal abscess (figure 2). Large paraspinal abscess was seen extending from S1 to S3.

Figure 1 Coronal T2 fat-suppressed MRI reveals altered signal intensity involving the L5/S1 vertebral bodies along with involvement of the intervertebral disc (thin white arrow). Thick white arrows denote the craniocaudal extent of the psoas abscess bilaterally.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis of twisted ovarian cyst and pedunculated twisted fibroid was made in view of the adnexal mass.

Figure 2 Axial T2-weighted MRI showing the gravid uterus with the fetal head (thick white arrow) and large abscesses within the bilateral psoas muscles (thin white arrow). Bilateral common iliac vessels (black arrow) are displaced medially by these abscesses.

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The final diagnosis of tuberculosis of the L5–S1 vertebrae with bilateral psoas abscess with prespinal abscess and epidural abscess was made after the investigations.

TREATMENT

The patient was started on antitubercular treatment (ATT) (rifampicin, isoniazid, ethambutol and pyrazinamide).

OUTCOME AND FOLLOW-UP

Repeat abdominal sonography after 2 months of ATT showed regression in the size of the abscesses. At 38 weeks of gestation, the patient delivered a 2.5 kg female baby through a cesarean section performed for fetal distress.

DISCUSSION

Tuberculosis poses a challenge to the whole world and continues to be a major public health problem in India, with an estimated prevalence of three million tuberculosis cases in India alone.² Spinal tuberculosis is the most common type of skeletal tuberculosis, constituting nearly half of such cases. Interestingly, 5% of patients with spinal tuberculosis develop psoas abscess.³ Psoas abscess may be classified as primary or secondary depending on the presence or absence of the underlying disease. An underlying disease of the viscera lying in close relationship to the psoas muscle, can lead to a secondary psoas abscess, which might be the cause of a palpable mass in the fornicies, as in our case. The most common reported cause of secondary psoas abscess is Crohn's disease.⁴ However, in developing countries the commonest cause of secondary psoas abscess is tubercular osteomyelitis of the lumbar spine. Bilateral psoas muscle abscess is a rarity and represents less than 3% of secondary abscesses.⁵

Psoas abscess is rare during pregnancy and only a few cases are reported in the literature.⁶ However, bilateral psoas abscess presenting as an adnexal mass and acute abdomen during pregnancy is not reported before to the best of our knowledge. In most pregnancies in developing nations, backaches could be a routine occurrence due to ligament stretching, postural changes and calcium deficiency⁷; and this could prevent attention being focused on an underlying aetiology, making diagnosis of a psoas abscess unlikely; specially since it is insidious in onset and has a non-specific clinical presentation. However, pregnancy induced backache is unlikely at 14 weeks as in this case.

Progressive local back pain for weeks to months with or without associated muscle spasm and rigidity should prompt the clinician to suspect a spinal cause for the abscess. In general, laboratory testing is non-specific. However, a complete blood count, ESR, C reactive protein, blood cultures and urinalysis may be helpful in diagnosing infection in non-pregnant patients but during pregnancy they are unlikely to be helpful.

Plain radiographs may reveal underlying discitis or vertebral osteomyelitis in chronic lesions but abdominal radiographs are avoided during pregnancy; especially in early pregnancy. In a non-pregnant patient, the gold standard imaging modality is

intravenous contrast-enhanced spiral CT.⁸ However, MRI is better than a CT at imaging the spinal canal and provides a more complete evaluation of the spinal pathology and is also safe during pregnancy as there is no risk of radiation exposure.⁹

The classical triad of fever, backache and limitation of hip joint movements secondary to psoas spasm is present in only 30% of patients with psoas abscess.¹⁰ Fever, weight loss and constitutional symptoms are encountered in less than 40% of the cases.⁸

The initial ultrasound in the present case was suggestive of bilateral complex adnexal masses with normal CA 125 value, presenting a diagnostic dilemma. Therefore, in tropical countries, it is important to keep at the back of one's mind the possibility of an underlying psoas abscess in a pregnant woman with abdominal pain and backache despite normal neurological examination.

Learning points

- Psoas abscess should be considered as a differential diagnosis in pregnant patients from the tropics who present with lower abdominal pain and backache.
- MRI is safe as well as better than CT imaging of the spinal canal and provides a more complete evaluation of the spinal pathology during pregnancy. CT is unacceptable in pregnancy when there is an alternative MRI.
- Psoas abscess is characterised by triads of fever, backache and limitation of hip joint movements, but it is not commonly observed.

Competing interests None.

Patient consent Obtained.

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