Case Report

Psoas abscess like metastasis mimicking Koch's spine

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ABSTRACT

In endemic country like India, psoas abscess is commonly associated with dorsolumbar tuberculosis. A 56-year-old HIV-negative female treated case of carcinoma of cervix presented to rural hospital with psoas abscess like lesion and vertebral involvement. Patient was managed as tuberculosis of lumbar spine. Patient presented to us after 1 year with progressive neurodefecit and huge psoas abscess. USG-guided FNAC of psoas abscess revealed squamous malignant cell. This was recurrence of the operated FIGO stage 1b carcinoma of cervix, presenting as metastasis to lumbar spine and psoas muscle. We report a rare case of cervical carcinoma in HIV-negative women presenting as lumbar vertebra involvement and psoas abscess like metastasis initially managed as tuberculosis of spine. This case report also highlights possible errors that could be made in such rare cases.

Key words: Cervical cancer recurrence, lumbar metastasis, psoas abscess like metastasis, tuberculosis endemic region

INTRODUCTION

Psoas abscess may be classified into primary or secondary. Primary is hematogenous spread of infection; Secondary is contiguous spread from the surrounding structures. This entity was first described by Herman Mynter in 1885 as psositis. CT and MRI scan are the accurate diagnostic modalities for detection.[1] In India, tuberculous involvement of the dorsolumbar spine is the common cause of secondary psoas abscess. Invasive cervical cancer is an AIDS-defining condition, which may present as psoas abscess like metastasis.[2] Psoas abscess like metastasis in HIV negative with carcinoma of cervix is extremely rare.[3-5] We report a case of huge psoas abscess like metastasis misdiagnosed and managed as tuberculosis (TB) of spine.

CASE REPORT

A 56-year-old female presented to us with increasing back pain, weight loss, and progressive weakness in both lower limbs with difficulty in walking since the past 1 year. History of tuberculosis of lumbar spine was obtained, for which postdecompression with pedicle screw fixation was done 1 year back and anti-tuberculosis therapy was started at a rural center after inconclusive biopsy. On examination of spine, well-healed surgical scar mark of previous surgery was seen; tenderness was present over the lower lumbar spine. Patient was lying uncomfortably in bed over the left side with right hip in flexion. On hip examination, there was a pseudo-flexion deformity. On abdominal examination, an indurated mass was palpable in the right iliac and inguinal region. Neurological examination findings were grade 2 power in the right knee and grade 0 in right ankle and toes. Tone was decreased, and both right-sided knee and ankle reflexes were absent. Plantar reflex was down going with decreased sensation over L4, 5, S1 dermatomes. Upper limb neurology was normal. A scar was seen over the abdomen, for which history of radical hysterectomy done 7 years back was revealed. Postoperatively, chemotherapy and radiotherapy were given. The rural center's preoperative MRI showed altered marrow signal intensity with L4 vertebral body destruction with relatively spared disc spaces. Abnormal right paravertebral soft tissue was noted involving the right psoas muscle extending from L3 to L5 level [Figures 1a-c]. On present investigation, USG showed right-sided psoas abscess. ESR was 50 at the end of

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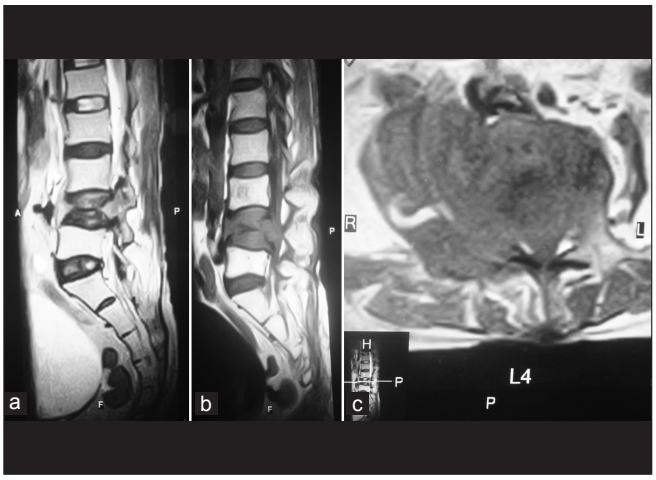

Figure 1: (a) T2-weighted sagittal image (b) T1-weighted sagittal image (c) T1-weighted axial image

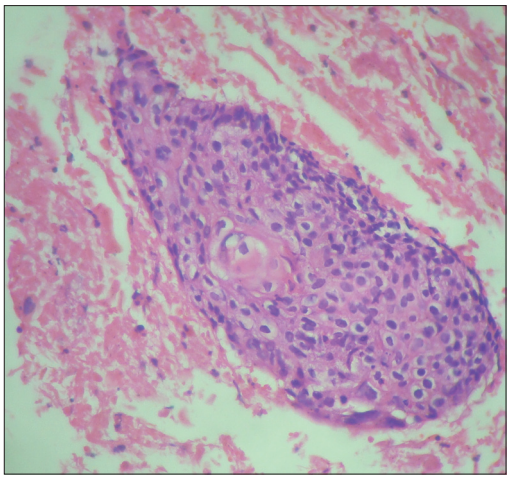

Figure 2: Microscopic appearance of aspirate showing malignant squamous cells, keratin pearl, and surrounding necrotic tissue

1 hour, and serology for HIV was nonreactive. Repeat CT and MRI at our center showed destruction of L4 vertebra and involved intervening disc space with bilateral psoas abscess, right-side extending from L2-S1 vertebra, with extension upto the anterior abdominal wall. The abscess contained solid elements suggestive of granulation tissue. This granulation tissue was compressing the thecal sac from L3 to L5, with compression on mid ureter with right-sided hydroureter and hydronephrosis. A differential diagnosis of MDR tuberculosis was made, with a suspicion of lumbar metastasis. USG-guided aspiration of psoas abscess was done, which on histocytological examination showed abundant necrotic tissue containing many scattered malignant squamous cells and strips of well-preserved neoplastic squamous cells exhibiting moderate nuclear anaplasia [Figure 2]. A diagnosis of metastatic cervical carcinoma was made. Culture of the aspirate was negative. This pathology was recurrence of treated cervical carcinoma in the form of metastasis to the lumbar vertebra and psoas muscle. This huge psoas abscess was psoas abscess like metastasis. Patient died during the course of treatment.

DISCUSSION

Psoas abscess is a rare entity especially in the developed countries.[6] CT scan and MRI are the investigation of choice in these patients. CT or USG-guided aspiration of the abscess will yield specimen for culture sensitivity and histopathology. Pig tailing of the abscess may serve to be diagnostic and therapeutic.[7] Depending upon the source of infection, psoas abscess is classified into primary and secondary. Primary cause remains speculative; hematogenous spread due to abundant blood supply to muscle is the hypothesized etiology. The organisms of primary psoas abscess are *Staphylococcus aureus*, streptococci, and *Escherichia coli*. Secondary psoas abscess results from contiguous spread from adjoining structures. Diseases of the gastrointestinal tract (GIT) (Crohn's disease, diverticulitis, and infection), genitourinary tract (GUT) (cancer, infection, and interventions), vertebral osteomyelitis, tuberculous spondylitis, and septic arthritis are the chief causes.[1] Any case of vertebral involvement with psoas abscess, aspiration with culture, and histopathology of the specimen may serve diagnostic.[7] In this case, aspiration and histopathology was diagnostic. In India, tuberculosis is an endemic disease and spinal tuberculosis is the most common form (approximately 50%) of osteoarticular TB. Psoas abscess is as a rule associated with detectable tuberculous disease of the vertebral column from dorsal 10th to the sacrum.[8]

Metastasis to spine is common with the tumor of breast, genitourinary tract, GIT, thyroid, and lung.[9] Metastasis of spine with a psoas abscess like presentation is very rare.[1-5,10-12] Our report describes one such operated case of squamous cell carcinoma cervix, presenting 7 years after with recurrence in the form of lumbar metastasis with neurodefecit, forming a huge psoas abscess like lesion. Cervical carcinoma in HIV-positive patients are aggressive and have unusual presentation.[2] We found only few reported cases with psoas abscess like metastasis in HIV-negative patient.[3-5]

There are few reported cases of psoas abscess like metastasis associated with transitional cell carcinoma of urinary bladder and carcinoma of cervix.[2-5,10] These metastasis may present only as psoas abscess like lesion[3] or associated with vertebral involvement.[4,5] In this case there was metastasis to lumbar vertebra and psoas muscle, presenting as psoas abscess with vertebral involvement.

This case was initially diagnosed as tuberculosis of lumbar spine and was managed accordingly. The patient presented

with clinical features of back pain, weight loss, weakness in lower limbs, and radiological features like vertebral involvement with psoas abscess pointed toward TB spine. The endemicity of TB in this region and inconclusive biopsy added to the misdiagnosis. We found only one such similar case of psoas abscess like metastasis in the literature where the initial diagnosis was suspected to be TB of spine.[5]

The errors made in this case were that the history of treated carcinoma cervix may have been overlooked. Sparing of disc space on MRI may be seen in central type of tuberculosis; however, other possible etiologies should have been kept as differential diagnosis. Unfamiliarity with the etiologies may lead to mistaken diagnosis and inappropriate treatment.

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