

Bilateral Secondary Tubercular Psoas Abscess: A Series of Seven Cases

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Abstract

Infection involving psoas muscles leading to abscess formation may either be primary or secondary to other coexisting pathologies. Usually, secondary and unilateral involvement is commonly seen. We hereby describe the relevant clinico-radiological details of bilateral psoas abscess in seven cases.

Keywords: Bilateral, bilateral psoas abscess, diagnosis, magnetic resonance imaging, Pott's disease, secondary psoas abscess, tubercular spondylitis

INTRODUCTION

Psoas abscess has been classified into two types, namely the primary abscess that presents with infection limited to psoas muscle itself and mostly is pyogenic and the secondary abscess in which associated intra-abdominal or skeletal conditions are present. *Staphylococcus aureus* is the most common causative organism in primary, while secondary cases are mostly associated with associated adjacent tissue infection, tuberculosis of spine, or intra-abdominal pathologies.^[1] Lumbar spine tuberculosis with close anatomical association with psoas muscle is involved in 75%–83% of cases.^[2] Bilateral cases of psoas abscess are uncommon occurrences in the event of tubercular spinal disease.

CASE SERIES

Case 1

A 36-year-old male patient with chronic low backache and mild lumbar dorsolumbar kyphosis with radiographs revealing dorsolumbar gibbus and destruction of D12 and L1 space. He was further investigated with magnetic resonance imaging (MRI) and showed vertebral edema and destruction of the disc with adjacent para- and peri-vertebral collection, suggestive of tubercular involvement [Figure 1a]. Bilateral psoas abscess extending from L1 to L5 was also noted. Weight-based anti-tubercular treatment (ATT) was started leading to clinical improvement and resolution of abscess was

noted in ultrasonography (USG) 4 months later. The ATT was continued till 18 months and no recurrence of the diseases was noted.

Case 2

A 27-year-old male patient presented to us with acute on chronic low back pain with a history of off-and-on evening rise of temperature and loss of appetite for the past 3 months. He has painful list during ambulation for the past 1 month. His radiographs revealed decreased disc space between D12 and L1 vertebrae and corresponding destruction and adjoining paravertebral and epidural collection along with bilateral psoas abscess [Figure 1b]. The abscess extended till inguinal region and was surgically drained. The culture was negative for tubercular bacilli, but the ATT was started, and the patient responded to it and the treatment was continued for 18 months.

Case 3

A 12-year-old female with chronic nonhealing discharging wound over lumbar region was presented to us with gibbus deformity. The radiographs revealed flattening of lumbar

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lordotic curve with anterior scalloping of L1–L5 vertebrae. MRI showed infective spondylodiskitis from L1 to L5 region pre- and para-vertebral and epidural collection. Bilateral psoas abscess along with quadratus lumborum abscess was noted [Figure 1c]. On USG, a posterior wall abdomen abscess was also found. A well compliant treatment with four-drug ATT ensured clinical improvement in initial phase followed by gradual healing of the abscess during 18 month regimen.

Cases 4–6

These cases presented with chronic low back pain with evening fever in only one case and no constitutional features in the rest. The MRI revealed L2–3 involvement in two cases and L2–4 involvement in one case. The involvement of bilateral psoas collection was present in all three although one side had more and the other side has little involvement [Figures 1d and 2]. All underwent ATT and responded to it through full course of 18 months as per the institutional protocol.

Case 7

This case presented with acute low back pain with difficulty in

ambulation. Acute paraspinal spasm was noted, and the patient was managed in line with acute low back pain case with rest and pain medication for 5 days to no response following which MRI was advised. There was a history of previous course of ATT for 9 months for pulmonary tuberculosis. The MRI revealed bilateral psoas abscess with large cystic collection in the left side [Figure 3]. The patient was managed by percutaneous continuous drainage by a surgeon followed by a four-drug ATT for 3 months leading to clinical improvement and then three- and two-drug regimen for the next 5 and 18 months, respectively. No recurrence or untoward complications were noted. The salient features of all above cases has been presented in tabulated form [Table 1].

DISCUSSION

The bilateral psoas abscesses are uncommon with 1%–5% in studies, but many studies also report it to be up to 30%.^[3] Eleven out of 31 (35%) cases and 20 out of 40 (25%) cases of

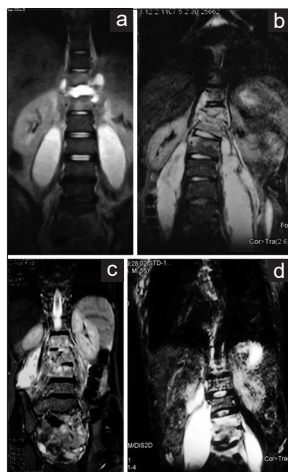


Figure 1: The magnetic resonance imaging images of Case 1 (a) and Case 2 (b) showing D12–L1 Pott’s spine and large bilateral psoas abscess. Case 3 (c) has L2–3 and Case 4 (d) has L2–4 involvement with bilateral psoas abscess

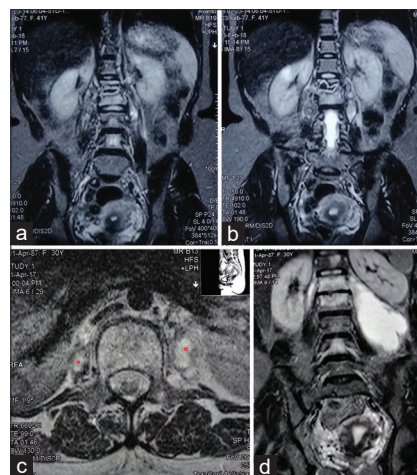


Figure 2: Magnetic resonance imaging of Case 5 (a and b) showing signal changes in bilateral psoas muscles suggestive of milder abscess along with lumbar Pott’s spine. Case 6 had larger right-sided abscess and smaller left-sided abscess (denoted by star signs) noted in axial (c) and coronal views (d)

Table 1: Relevant details about cases with bilateral psoas abscess in tuberculosis spine						
Case	Age	Sex	Clinical presentation	Spine involvement (MRI)	Additional findings	Other features
1	36	Male	Pain and mild kyphosis	D12-L1	Left lobe liver cyst, prostatitis, and cystitis on USG	Chronic smoker
2	27	Male	Pain, lump at flanks and painful list	D12-L1	Epidural abscess, L4-5 disc	Surgical drainage
3	12	Female	Discharging wound over back	L2-L5	Epidural collection, posterior abdominal wall abscess on USG	Malnourished, gradual healing of wound
4	41	Female	Insidious pain with evening rise of temperature	L2-3		Asthma
5	55	Male	Chronic low back pain	L2-4		Diabetic
6	30	Female	Chronic low back pain	L2-3	L5-S1 disc protrusion	
7	65	Male	Back stiffness and pain, list	L2-3		Previous ATT for pulmonary TB 6 years back surgical drainage

D: Dorsal spine, L: Lumbar spine, MRI: Magnetic resonance imaging, USG: Ultrasonography, ATT: Anti-tubercular treatment, TB: Tuberculosis

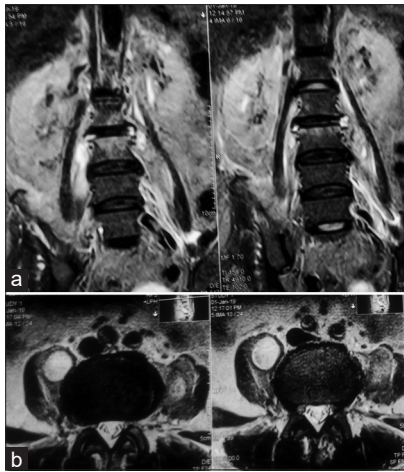


Figure 3: Magnetic resonance imaging showing marrow edema of L2–3 vertebra on coronal plane with bilateral psoas abscess (a) and axial view showing loculated large right-sided abscess and smaller left-sided abscess (b)

tubercular psoas abscess were noted in a recent large series.^[4,5] Unlike in primary cases with fever, back or abdominal pain, and limited hip motions as common features, tubercular psoas abscess cases may present with or without any constitutional symptoms. All our cases were young, immunocompetent, and showing no significant neurological deficit. Lumbar spine tubercular involvement has been reported to be overtaking the common dorsolumbar location in the older studies.^[5]

We diagnosed each case with MRI as it is the most sensitive investigation.^[6] USG was also done as initial investigation, but the extent of psoas abscess was better identified in MRI, especially in cases with little collection on the one side. USG, however, was used for follow-up assessment of reduction in size of the collection with the treatment. Most cases were managed conservatively, while percutaneous drainage was done in only two cases, one of which had large cystic collection in one of the psoas abscess. Percutaneous drainage has been found to be effective treatment modality even in cases not suitable for major surgery.^[4,7] The treatment included four-drug ATT for 3 months followed by three- and two-drug regimen for the next 5 and 18 months, respectively. No drug resistance

or nonresponse to therapy was noted in our cases. There are, however, reports of complicated psoas abscess like rupture followed by extensive tissue necrosis and exposure of pubic bones, urinary bladder, and psoas muscle itself.^[8] A careful clinical suspicion and judicious use of MRI are thus crucial to diagnose these cases at the earliest for prompt treatment and optimal outcome.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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