

Tubercular Aortic Aneurysm with Rupture into Psoas Abscess

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Abstract

Tuberculosis is highly prevalent in developing country and with rising incidence of HIV, incidence of tuberculosis is further rising. Spine is most common site of osseous involvement of tuberculosis and the psoas abscess one of its common complication. We encountered a rare case of bilateral tubercular psoas abscess having aneurysm of abdominal aorta. While performing aspiration of abscess through posterior paraspinous approach for diagnostic work up, we land up in fatal complication of aortic aneurysm rupture. The case was further managed by injecting glue, so could avoid life threatening complication.

Keywords: Tubercular aortitis; Tubercular aortic aneurysm; Psoas abscess

Introduction

Psoas abscess is one of the common complications of tubercular spine. Tubercular aortic aneurysm is very rare complication of psoas abscess and should be identified to prevent its rupture during abscess aspiration.

Case Presentation

A 33 year old Hindu, married female presented with complaints of chronic backache and severe pain in bilateral lower limb. The patient MRI spine revealed a tubercular spine with bilateral psoas abscesses (Figure 1). The patient was referred to us for diagnostic aspiration of abscess under ultrasound guidance.

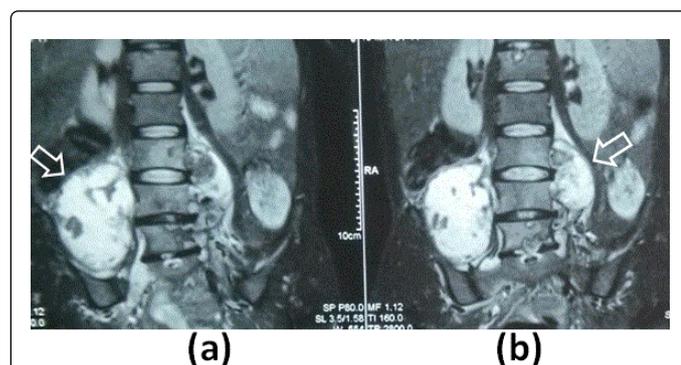


Figure 1: Coronal T2W MR images: (a and b) showing tubercular spine with bilateral psoas abscesses (shown by open arrow). The lumbar vertebra shows cortical erosion, patchy marrow hyper intensity with focal changes in intervertebral disc.

Under ultrasound guidance, abscess aspiration was started with a 20 G LP needle through left sided posterior Para spinal approach. As the

needle advanced into the abscess and aspiration started, spurt of haemorrhagic collection came out just after initial aspirate. Doppler signal was traced to identify the source of bleed which revealed an aortic aneurysm with focal leak adjacent to the psoas abscess and the LP needle within the leak/hematoma.

Aspiration was stopped immediately and one ml of isobutyl 2-cyanoacrylate injected immediately through the same syringe adjacent to the aneurysm wall with a hope that the glue will be able to block the leak site.

Procedure was abandoned and on repeat review, MRI images showed aortic aneurysm with focal contained rupture in left sided psoas abscess (Figures 2 and 3).

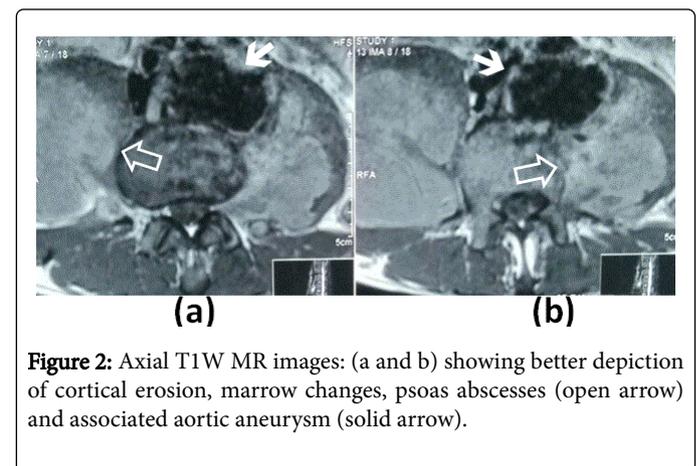


Figure 2: Axial T1W MR images: (a and b) showing better depiction of cortical erosion, marrow changes, psoas abscesses (open arrow) and associated aortic aneurysm (solid arrow).

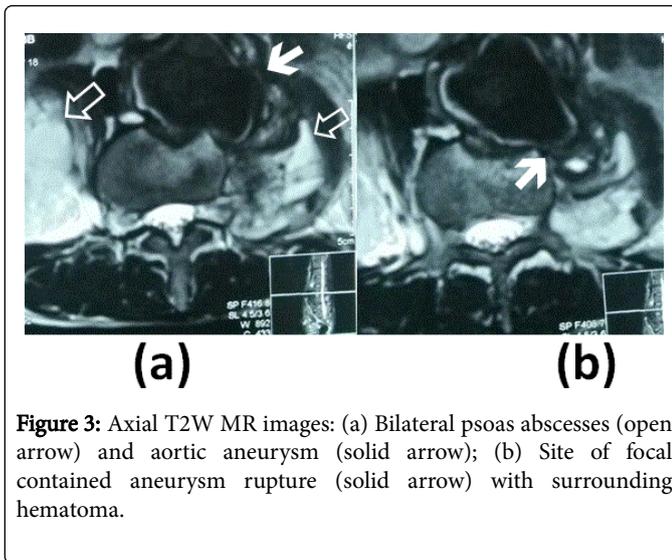


Figure 3: Axial T2W MR images: (a) Bilateral psoas abscesses (open arrow) and aortic aneurysm (solid arrow); (b) Site of focal contained aneurysm rupture (solid arrow) with surrounding hematoma.

Further ultrasound scan did not reveal any increase in size of the bleed or the psoas abscess and there was no further evidence of Doppler signal extending into the psoas abscess. The possible reasons for no further leak were application of glue into the outer wall of the aneurysm and the tamponed effect of the adjacent hematoma and abscess. Timely abandoning the procedure and active intervention prevented a fatal life threatening haemorrhage.

The aspirate was sent for microscopic examinations which revealed presence of mycobacterium bacilli. HIV serology and VDRL test (for syphilis) were negative.

Patient was managed conservatively with antitubercular medications. Over the period of six month follow up patient shows marked improvement in clinical symptoms. Follow up ultrasound study also revealed significant reduction in size of psoas abscess.

Discussion

Tuberculosis is highly prevalent in developing country and the spine is most common site of osseous involvement of tuberculosis [1,2]. Psoas abscess is one of the common complications of tubercular spine and aortic aneurysm is very rare complication of psoas abscess [3]. Tuberculosis aneurysms are usually a consequence of trans mural spread by direct extension from a contiguous tuberculosis focus, often lymphadenitis [3], but also from pulmonary [4], digestive [5], and vertebral [6].

Available literature suggests tubercular aneurysm of abdominal aorta may rupture spontaneous or following BCG therapy for bladder cancer [7,8]. It can be managed by surgical graft repair or conservatively in contained rupture by administering antitubercular medication [9,10].

Psoas abscess aspiration either single time or via percutaneous catheter drainage is one of the routine and rewarding procedures performed by interventional radiologists. Technical success is immediately apparent by aspiration of purulent contents and is nearly

always achieved, with a relatively very low complication rate. The rare possibility of an associated aneurysm cannot be easily appreciated even on ultrasound when aspiration is done from posterior approach until there is a high degree of suspicion. In our experience of approx. 300 cases of tubercular spine with psoas abscess, it was first case of tubercular aortic aneurysm with focal contained rupture into psoas abscess cavity.

In our case, there was no any previous history of tuberculosis, immunity related or metabolic disorder. Spinal tuberculosis was primary source of infection leading to psoas abscess formation and aortic aneurysm as delayed complications. The explanation of spurt of haemorrhage is passage of needle into hematoma surrounding contained rupture of aneurysm. So, there is possibility of iatrogenic complication during psoas abscess aspiration of tubercular aortic aneurysm with contained rupture into psoas abscess. Our case was managed conservatively thereafter by antitubercular medication.

The purpose of this report was to make surgeons and radiologists aware of possible fatal complication when the abscess is associated with an aortic aneurysm. It is the operator's responsibility to avoid this risk by employing proper Tran's abdominal ultrasound and Doppler before passing a needle into the psoas abscess.

Conclusion

Hence, we concluded tubercular aortic aneurysm with contained rupture into psoas abscess is very rare complication which must be looked for, before intervention procedure to avoid fatal life threatening complication.

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