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Case Report

Extensive Paraspinal Tuberculosis Masquerading Malignant Tumor in an Elderly Male

Abstract

Paraspinal tuberculosis is an uncommon manifestation of extrapulmonary tuberculosis, and in rare cases, these lesions can mimic malignant lesions. We report a case of an elderly man where imaging showed extensive left paraspinal lesion which was mimicking malignant neoplasm. The patient underwent L3–L4 unilateral partial laminotomy, there was grayish, relatively avascular lesion in the left paraspinal region, involving the left psoas muscle and going into the neural foramina, and a subtotal resection of the lesion could be performed. However, after biopsy, it turned out to be tuberculoma, and the patient was on antitubercular therapy and doing well. The present case illustrates that extensive involvement of the paraspinal soft tissue and adjacent bony structures on imaging in tuberculosis can mimic malignant tumors. Conservative surgical excision will help in preserving the bony elements and in establishing the diagnosis.

Keywords: *Paraspinal tuberculosis, paraspinal tumors, spinal tuberculosis, tuberculoma*

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Introduction

Involvement of thoracolumbar spine is one of the most common sites for musculoskeletal tuberculosis.[1] However, paraspinal extension of tuberculosis and involvement of psoas muscle are uncommon.[2] Rarely, this paraspinal involvement can mimic malignant lesion and can be diagnostic challenge even in endemic countries.[1,3-8] In the present article, we report a case of an elderly man who presented with a large paraspinal tubercular lesion which was masquerading malignant lesion and review the literature.

Case Report

A 65-year-old man presented with a history of mild low back ache pain 1-month duration, radiating to flanks and anterior aspect of abdominal wall. He also had burning sensation and paresthesia in both lower limbs (below groin) of 1-month duration. He had dull abdominal pain for the last 3 weeks, which was associated with loss of appetite. There was no history of fever, trauma, or any focal weakness. There was no history of bowel and bladder disturbances. There was no history of diabetes, hypertension, or tuberculosis. There was no history suggestive of contact with tuberculosis. He was not a smoker or alcoholic. His nutritional status and general and systemic examination were normal. His abdominal examination was unremarkable, and there was no tenderness or hepatosplenomegaly. On spine examination, there was tenderness over L3–L4 region. There was no gibbous or deformity. Higher mental functions and cranial nerves were normal. Motor and sensory examination was normal. Deep tendon reflexes in the upper and lower limbs were normal. Planters were bilateral flexors. X-ray of the chest and lumbar spine was normal. His blood investigations except erythrocyte sedimentation rate (40 mm in 1 h) were within normal range. Ultrasound abdomen showed a lobulated measuring 5.8 cm × 4 cm × 7.3 cm in the left retroperitoneal paraspinal region lateral to the aorta at L3 level. The patient was further investigated with magnetic resonance imaging (MRI) of the lumbar spine which showed a heterogeneous mass at L3 level, mainly located in the left paraspinal area and involving the left psoas muscle. The lesion was extending into the neural foramina with signal changes in vertebral bodies; there was compression of the thecal sac and obliteration of the subarachnoid space [Figures 1-3]. The mass was heterogeneously enhancing after

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contrast administration. Based on imaging findings and short clinical history, a diagnosis of the left paraspinal malignant tumor was suspected. The patient underwent L3–L4 unilateral partial laminotomy, there was grayish, relatively avascular lesion in the left paraspinal region, involving the left psoas muscle and going into the neural foramina, and a subtotal resection of the lesion could be performed. There was no pus in the lesion. Bony elements were relatively healthy on inspection. The patient recovered well after surgery. Histopathological examination of the excised tissue showed caseous necrosis with adjacent granulomas containing epithelioid cell, Langhans giant cells, and lymphocytes suggestive of tuberculosis [Figure 4]. The patient was advised to bear thoracic corset and started on antitubercular treatment (rifampicin, isoniazid [INH], pyrazinamide, and ethambutol for 3 months followed by rifampicin and INH for further 9 months) and doing well at 9-month follow-up.

Discussion

Skeletal tuberculosis, an extrapulmonary of tuberculosis, can present without significant systemic clinical manifestation,[5,7,9,10] and the disease in the dorsolumbar region can extend into the adjacent paravertebral tissue and can involve psoas muscle as well.[5,10-13] As we observed in the present case, the clinical manifestation of paraspinal tuberculosis can be vague and may not be associated with constitutional symptoms, particular in cases where the disease mimics malignant lesions.[1,7] Imaging modalities to investigate paraspinal lesions include computed tomography scan and MRI.[12] Because of its multiplanar capability, MRI is the preferred investigations as it will help understand the extent of the disease and plan the surgical approach.[14-16] However, if there is unusual presentation of the paraspinal lesions, based only on imaging, there may be a difficulty in making a correct preoperative diagnosis.[17-19] The differential diagnosis of extensive paraspinal soft tissue and adjacent include malignant tumors, metastasis, pyogenic and fungal infections, sarcoidosis, and rarely paraspinal tuberculosis.[1,20] The management of paraspinal lesions is aimed to confirm the diagnosis, either fine needle aspiration cytology or preferably by complete surgical resection.[5,21-23] To maintain the stability of the spine, we performed the partial unilateral laminotomy. In the present case, we could perform subtotal resection, and once we could confirm the diagnosis of tuberculosis, the patient received antitubercular treatment as per standard protocol.[4,21,22,24]

Conclusion

The present case illustrates that extensive involvement of the paraspinal soft tissue and adjacent bony structures on imaging in tuberculosis can mimic malignant tumors. Surgical excision while preserving the bony elements can help in ascertaining the diagnosis which can be followed by an adequate course of antitubercular therapy.

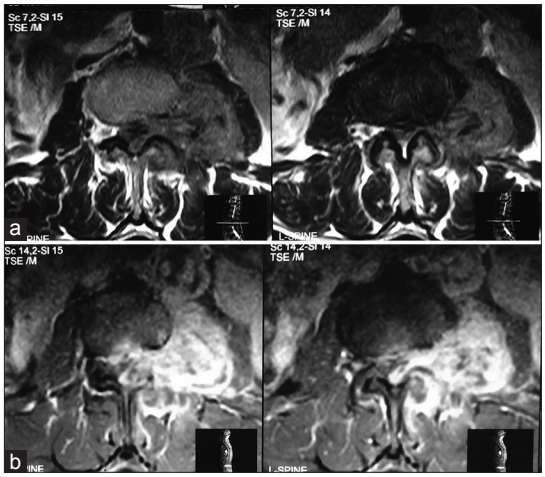

Figure 1: Axial T2 (a) and fluid-attenuated inversion recovery (b) images of the spine showing altered signal intensity in vertebra with enhancing soft tissue causing neural foraminal narrowing and traversing nerve root compression

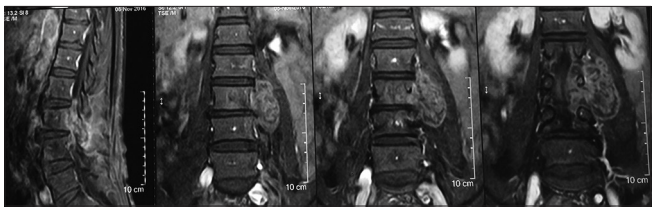

Figure 3: Postcontrast coronal images showing the extension of the lesion along the left psoas muscle

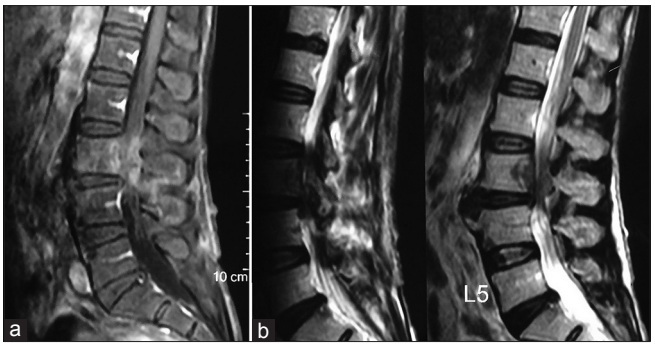

Figure 2: Sagittal fluid-attenuated inversion recovery (a), T2 (b) images of the spine showing altered signal intensity lesion which involving epidural soft tissue

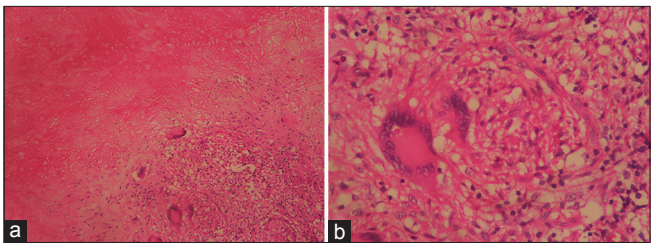

Figure 4: (a) Section showing caseous necrosis with adjacent granulomas containing epithelioid cell, Langhans giant cells and lymphocytes (H and E, ×100) and (b) granuloma with Langhans giant cell, epithelioid cells, and lymphocytes (H and E, ×400)

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Conflicts of interest

There are no conflicts of interest.

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