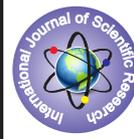


TB OSTEOMYELITIS OF ANTERIOR INFERIOR ILIAC SPINE: RAREST CASE REPORT



Orthopaedics

KEYWORDS: TB osteomyelitis, AIIS

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ABSTRACT

INTRODUCTION: Tuberculosis is continued to pose one of the major public health problems in developing country like India. It involves various systems of the body, including the skeletal system. Osteoarticular tuberculosis is the second most common form of extra pulmonary tuberculosis next to lymph nodes and constitutes about 13% of all extra pulmonary cases. The major osseous areas of predilection of tubercular involvement in order of occurrence are spine, hip, knee, foot, elbow, and hand 1. Isolated iliac bone tuberculosis is an uncommon entity, we are discussing here a rare case of Anterior inferior iliac spine tuberculosis presented to us with discharging sinus from anterolateral aspect of thigh. **CASE SUMMARY:** 19-year female presented with complaining of left hip pain since last 4 months with discharging sinus from left thigh since last 15 days (figure1). MRI was suggesting enhanced erosive lesion involving left anterior inferior iliac spine (figure 2). And abscess extending anterior inferiorly into the left groin and anterolateral upper thigh figure 3,4,5). Abscess drainage with Sinus tract excision was done. Biopsy was suggesting chronic granulomatous inflammation. Culture was positive for mycobacterium tuberculosis complex. Patient was started on AKT. Patient was symptom free with a normal activity level without any signs of recurrence on 8 month follow up. **CONCLUSION:** Modern antitubercular drugs revolutionized the outcome of treatment of osseous tuberculosis. Early diagnosis is of paramount importance for early prompt treatment and better clinical outcome.

INTRODUCTION:

Tuberculosis is a leading cause of death among the infectious diseases. Because of current migratory patterns, tuberculosis has become a global concern. The World Health Organisation declared tuberculosis a global emergency in 1993. It is generally accepted that osteoarticular tuberculosis is the result of a haematogenous or lymphatic spread from a reactivated latent focus, usually pulmonary; however, previous infection is not always encountered, and in only 40–50% of the cases³, it is possible to demonstrate another active infection site. The commonest site for skeletal tuberculosis is the spine followed by the hip, knee and ankle joints. Tuberculosis involving the pelvic bones with abscess formation is a relatively rare entity.

Active case finding is crucial in the management of tuberculosis. As is risk factor assessment and identification of drug resistant tuberculosis. Early diagnosis of active tuberculosis is vital for its treatment. In clinical circumstances, a tissue biopsy for Tuberculous PCR may prove to be of crucial diagnostic value. Role of radiology, in particular MRI has been significant in early detection of suspicious cases. We present a rare case of anterior inferior iliac spine tuberculosis in 19-year old female presented to the orthopaedic department pain over left hip with discharging sinus over anterolateral upper thigh.

CASE REPORT:

19-year female presented with complaining of left hip pain since last 4 months with discharging sinus from left thigh since last 15 days. Pain was insidious in onset and slowly progressive. Clinical examination revealed deep tenderness localized to AIIS with tender, discharging ulcer 4cm × 3 cm, surrounded by indurated, erythematous skin with serous, odorless discharge oozing from its sinus on anterolateral aspect of upper thigh. There was no localized swelling and palpation did not reveal any inguinal lymphadenopathy. Laboratory tests revealed mildly raised WBC count (11,300/mm³), ESR was raised (80mm/hr) with positive C Reactive Protein. Montoux test was nonconclusive. Chest radiographs were normal while the pelvic radiographs revealed rarefaction and lytic changes in AIIS.

MRI showed enhanced erosive lesion involving left anterior inferior iliac spine, suggesting osteomyelitis and peripherally enhancing

abscess (26cm × 5.5cm × 5.2cm) interposed between the left iliacus muscle and left iliac bone extending anterior inferiorly into the left groin and anterolateral upper thigh region involving the left iliopsoas muscle and tendon and tensor fascia lata (figure 2,3,4,5). Further extension was present into overlying subcutaneous fat in the anterolateral thigh region reaching upto skin surface. It was operated with open biopsy and drainage of abscess along with debridement and sinus tract excision. Biopsy showed necrotic bony trabeculae along with granulation tissue comprising inflammatory infiltrate of lymphocyte, plasma cells, macrophages and epithelioid cells forming ill formed granuloma. Acid Fast Bacilli (AFB) stain was performed and it demonstrated multiple AFB positive bacteria (figure 6). BACTEC MGIT TB culture showed mycobacterium tuberculosis complex.

Once histological evaluation confirmed the diagnosis of tuberculosis, the patient was started on multi drug anti-tubercular chemotherapy comprising of Rifampicin, Isoniazid, Ethambutol, Pyrazinamide and streptomycin. 2 month following the treatment, patient improved symptomatically. A repeat radiograph did not show signs of progression. At last follow up after 8 months of chemotherapy, the patient was symptom free with a normal activity level without any signs of recurrence.

DISCUSSION:

Tuberculosis of the pelvic girdle is primarily limited to the sacroiliac joint and less frequently with isolated involvement of ilium or ischial tubercle. AIIS tuberculosis, though rather uncommon¹, is nevertheless more frequent than one might believe. As a rule, this lesion begins insidiously in patient with tuberculosis that is localized elsewhere. Since the introduction of effective anti-tubercular drugs and the general decline in incidence of tuberculosis, involvement of the AIIS appears to have become very rare.

TB of the AIIS has a varied clinical presentation, initially being asymptomatic to the most common presentation of pain and swelling in the hip, hypogastric and groin areas. The earliest symptom is Pain in one hip without other objective changes but the most common cause of the patient's seeking advice has been an abscess, either in the neighbourhood or at the lateral side of the thigh. Plain radiographs of pelvis may show radiolucency with erosion of the iliac

bone. MRI shows erosive lesion of involving bone with peripherally enhancing abscess in iliacus muscle and extending anterior inferiorly into the groin and anterolateral upper thigh region involving iliopsoas muscle⁴. Most of the authors have recommended thorough debridement and toileting of the cavities as a treatment strategy. However, with the advent of anti-tubercular agents the recovery and prognosis is better and in some cases they alone may suffice. Aspirate from the swelling or sinus may be sent for histopathology, AFB stain and culture. FNA is a useful tool for routine cytodiagnosis with diagnostic accuracy ranging from 84.2% to 100%⁵. FNA can collect cells from the deeper areas and even beyond the wall of the viscera to facilitate a proper tissue diagnosis. FNA cytology is a useful tool for sample collection and obtaining a diagnosis⁶. Clinical and radiologic features, along with histopathologic evidence of granulomatous pathology should be sufficient to initiate therapy. The basic treatment of patients with skeletal tuberculosis is adequate and prolonged antituberculous therapy⁷. Plain radiographs and MRI done during the follow up of these patients may show advancing lesions up to 3 to 4 months after the start of treatment. This is because the imaging appearances lag behind the biologic process of repair. Even after complete clinical and radiological healing, there may be residual cavities observed on serial CT scans or on radiographs. However, the imaging done at 6 to 7 months of adequate chemotherapy shows evidence of deterioration of the lesion, one should suspect a nonresponding lesion, which may be caused by drug resistant disease, an immunocompromised state, or a nontuberculous disorder. Repeat biopsy and tissue diagnosis (with or without debridement) becomes mandatory in these patients.

Differential diagnosis in such cases includes pyogenic osteomyelitis, pyogenic abscess, haematomas, enlargement of iliopsoas bursa, hernias and pseudoaneurysms are to be considered⁸. It is essential to differentiate the above entities as the treatment modality as each condition varies. It is even more important to differentiate osteomyelitis and tuberculosis as a delay in diagnosis would result in extensive damage and hence add on to morbidity and residual deformities⁹.

CONCLUSION:

Tuberculosis is a wide disease with various forms of presentations. Conservative management in the form of antitubercular treatment is the initial treatment of choice for AIIS. Surgical management debridement and excision can be performed for discharging sinus. Any abscess or collection should be drained effectively. Awareness of the disease helps detect cases on presentation. High index of suspicion is mandatory. The early diagnosis is of paramount importance for early prompt treatment and better clinical outcome. Timely diagnosis and intervention is thus a key to treatment and helps in reducing the morbidity and deformities. In conclusion, despite the rarity of tuberculosis of the AIIS a high index of suspicion must be practiced in these cases for early diagnosis and treatment.

ABBREVIATIONS:

AIIS: anterior inferior iliac spine.
FNA: fine needle aspiration

CONSENT:

For this case report to be published patient satisfactorily given informed consent for history, physical examination and publishing clinical photos and other relevant details.

ACKNOWLEDGEMENTS:

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FIGURES:

figure 1: clinical picture

figure 2: MRI pelvis coronal

figure 3: MRI pelvis coronal

figure 4: MRI pelvis sagittal

figure 5: MRI pelvis axial

figure 6: AFB smear



figure 1

figure 2



figure 3

figure 4

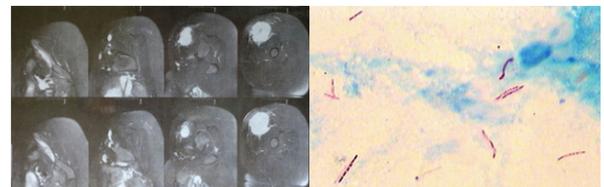


figure 5

figure 6

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