

SACROILIAC TUBERCULOSIS: A DIAGNOSTIC CHALLENGEGupta M. K.^{*1}, Pandey S.², Sarkar K.³, Butta S.⁴,⁵Dr. Bivash Pathak and ⁶Debananda Gonjhu¹M. B. B. S., MD, Post Graduate Trainee, Department of Tropical Medicine, School of Tropical Medicine, Kolkata.²M. B. B. S., MD, Post Graduate Trainee, Department of Tropical Medicine, School of Tropical Medicine, Kolkata.³M. B. B. S., MD, Assistant Professor, Department of Tropical Medicine, School of Tropical Medicine, Kolkata.⁴M. B. B. S., MD, Post Graduate Trainee, Department of Pathology.NRS Medical College, Kolkata.⁵M.B.B.S., D T M& H, Post Graduate Trainee, Tropical Medicine, School of Tropical Medicine, Kolkata.⁶M. B. B. S., MD, Assistant Professor, Tropical Medicine, School of Tropical Medicine, Kolkata.**Corresponding Author: Gupta M. K.**

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ABSTRACT

Skeletal tuberculosis (TB) account for 10% of Extra Pulmonary TB. Sacroiliac joint (SIJ) tuberculosis (SITB) forms 2-5% of articular TB. Vague symptoms and neglected examination of SIJ delays its diagnosis. Complete diagnosis is by physical examination, radiology and microbiological techniques including molecular diagnostics. Treatment with anti tubercular treatment (ATT) is generally successful alone without need of surgical intervention. We report a case of a lady with long standing sacroiliac TB successfully treated with ATT.

INTRODUCTION

Tuberculosis is a major public health problem worldwide. India accounts for the highest TB burden country in the world accounting for 24% of the world TB cases^[1].

Tuberculosis mostly affects the lungs and around in 20% affects the extra pulmonary sites (EPTB)^[1]. Diagnosing EPTB remains a challenge because of inaccessible site of involvement and pauci bacillary nature of the disease^[1]. Skeletal TB account for 10% of EPTB². Sacroiliac joint tuberculosis (SITB) forms 2-5% of articular TB but still uncommon as it faces delayed diagnosis. Usually it occurs secondary to a primary site TB^[2]. Sacroiliac joint tuberculosis is usually unilateral and can clinically presents with pain in the buttock and low back that may be of short duration or even more than years. There may be difficulty in clinically distinguishing it from inflammatory back pain^[3]. The diagnosis of sacroiliac tuberculosis is done by radiology, histopathology and molecular tests like mycobacterial tuberculosis (MTB) specific cartridge based nucleic acid amplification test (CBNAAT)^[3].

Case proper

40 years married Hindu lady coming from a city in west Bengal presented with a history of constant low back pain of 3 months duration along with fever for last 2 month which was intermittent and low grade in nature. She did not give history of any joint pain, morning stiffness; history of any contact with PTB patient.

On examination she was febrile, anemic, normotensive, pulse rate of 120/min with GCS of 9/15. There was neck stiffness without meningeal irritation signs. She had tenderness on the lower spine and sacral area.

There was no organomegaly or lymphadenopathy and examination of other systems were normal.

She was started on Intravenous fluids along with antibiotics and other supportive medicines suspecting Meningitis. Her blood investigations and CSF fluid study was initiated and she was put on continuous monitoring.

Her hemogram showed Hb 10.2 gm/dl, WBC 17000/cu mm (N68 L30 M1 E1 B0) and ESR 110. Her blood biochemistry showed hyponatremia, hypokalemia and hypoalbuminemia. CSF study was normal.

Initially the patient improved with antibiotics but again she became febrile. On further history taking she explained her LBP to be of chronic around 5 to 6 years but have gained in intensity for the last 3 to 4 months. Serum IgG Brucella, rheumatoid factor and anti-CCP came negative. X ray LS spine showed lumbar spondylosis with left sacroiliac joint showing reduced joint space. MRI of sacroiliac joint was done which showed asymmetrical bilateral sacro-ilitis (left >Right) with periarticular soft tissue signal changes and small collection on the left side. A CT guided FNA was done and cytology revealed chronic granulomatous disease. Further a CBNAAT was which was positive for MTB rifampicin sensitive.

She was started on standard ATT from DOTS on the 10th day of admission and her fever started decreasing after 10 days of ATD. She was discharged with medical advice. Her LBP also decreased on her 1st post discharge

visit after 1 month and 6 months follow up showed complete resolution of symptoms.

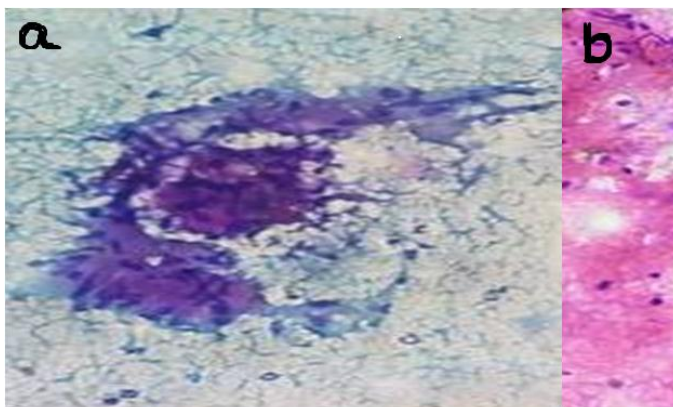


Fig 1(a,b): Smear shows clusters of round to ovoid epithelioid cells in a necrotic background admixed with few chronic inflammatory cells (MGG , 400X) (H&E ,400X) impression of chronic granulomatous infection.



Fig 3: X ray bilateral sacroiliac joint showing reduced joint space on the left side in comparison to the right side.

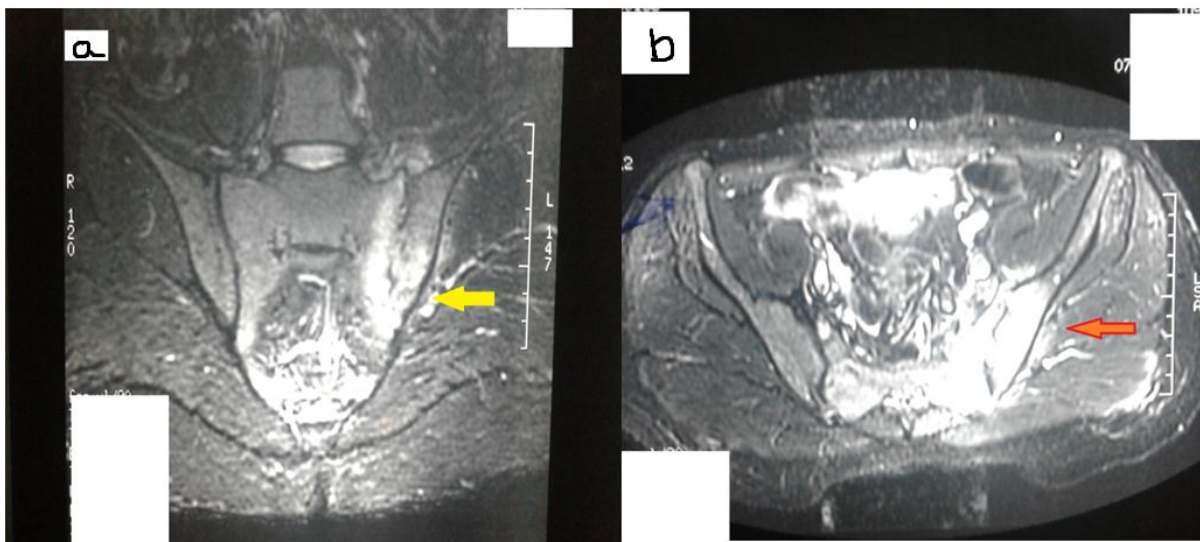


Fig 2(a,b): MRI of Sacro iliac joints show asymmetrical bilateral sacro-ilitis (left >Right) with periarticular soft tissue signal changes and small collection on the left side.

DISCUSSION

Sacroiliac tuberculosis is among the under diagnosed form of articular TB. Most of the patients are examined in supine position thereby neglecting the sacroiliac joint. It mostly affects female^[1] and our patient was also a lady. End result of it is bony ankylosis^[7]. Study by Jatin Prakash showed median age of 27 years^[6].

Our patient presents with chronic low back pain with increased intensity along with evening rise high grade fever associated with intense sweating, high ESR. Additional features as pain worsening on lying supine on affected side, prolong sitting, bending forward with knee in extension^[1,2,3] were also present in our patient. These features are suggestive of tuberculosis but a differential diagnosis should be considered and common one includes Ankylosing spondylitis, Brucellosis or pyogenic infections and rheumatoid arthritis^[1,3].

Examination showed positive straight leg raise test, Gaenslen, Faber test which are the positive in inflammatory pathology of sacroiliac joint and highly suggestive of sacroiliitis^[1,5]. Spine tenderness was present in lower sacral region without any swelling or induration excluding psoas abscess as secondary cause of sacroiliitis. Therefore it is a case of primary tuberculous sacroiliitis which is still rarer.

The diagnosis is made by a combination of clinical symptoms, examination, radiological and histological or microbiological as stated by other authors as Kim et al including our report. Kim et al had classified sacroiliac tuberculosis into 4 stages according to radiological features and possible corresponding treatment modality^[8]. Our patient had erosion of sacroiliac joint without extensive destruction hence it was stage 2 disease and medical management was preferred treatment.

A definitive diagnosis was made by the demonstration of granulomatous reaction and positive CBNAAT for mycobacterial tuberculosis sensitive for rifampicin.

Response to treatment by ATT was one of the most important features favouring tuberculous sacroiliitis as patient became afebrile by end of 1st week and slowly regained appetite, reduced pain and stiffness. After completion of intensive phase she had significant relief of her symptoms. 60% of patients had complete resolution by ATT alone in a study by Jatin Prakash^[6].

CONCLUSION

Skeletal tuberculosis (TB) is still a common problem in developing countries. Infections of the sacroiliac joint are uncommon and the diagnosis is usually delayed. MR imaging is the most sensitive and specific imaging modality for diagnosing sacroiliitis at its early stage. However, because of the overlapping clinical features with spondyloarthropathies, needle or open biopsy is

usually required for definitive diagnosis. Early diagnosis and prompt medical management prevent surgical requirement.

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