

# Bilateral Pathological Subluxation of Hips Secondary to Tuberculosis in an Adult: A Rare Presentation

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## ABSTRACT

Clinical descriptions of tuberculosis date back to antiquity. Extra-pulmonary involvement is noted in approximately 14% of patients, with 1% to 8% having osseous disease. In literature, some cases of bilateral traumatic dislocations have been described, but reports on bilateral pathological subluxations or dislocations of hip joints, that too in adults, are extremely rare. Tuberculosis can present in myriad ways and it can mimic any disease. The sole purpose of writing this article was to report one of the extremely rare presentations of skeletal tuberculosis.

**Keywords:** Bilateral hip subluxation, Tuberculosis

## INTRODUCTION

Clinical descriptions of tuberculosis date back to antiquity. Current estimates of the worldwide rate of tuberculosis infection are as high as one third of the world's population. The highest rate of infection currently is in southeast Asia, but the highest rates of infection and mortality are in sub-Saharan Africa. Tuberculosis commonly affects the pulmonary system, but it can affect virtually any organ system of the body. Extra-pulmonary involvement is noted in approximately 14% of patients, with 1% to 8% having osseous disease [1]. Tuberculosis can mimic many conditions and it is commonly included as a differential diagnosis of different clinical presentations. In literature, some cases of bilateral traumatic dislocations have been described, but reports on bilateral pathological subluxations or dislocations of hip joints, that too in adults, are extremely rare. Herewith, we are reporting an extremely rare case of pathological subluxation of both the hips, which was secondary to tuberculosis in an adult.

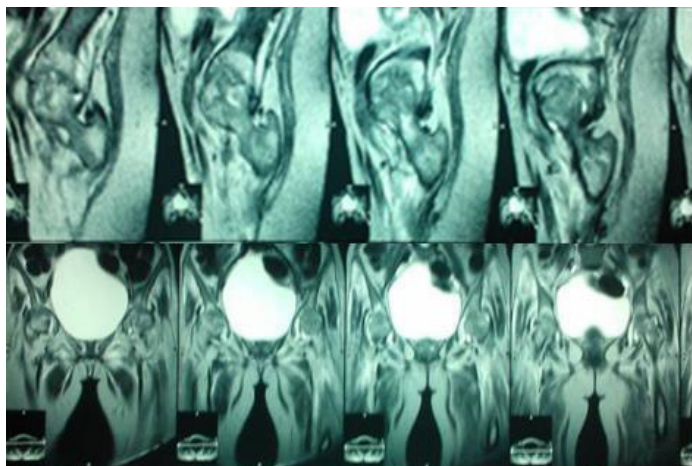
## CASE REPORT

A 24-year-old female patient came to our hospital in the month of June 2013 with complaints of pain in both the hip joints which she had since past 7 months and inability in bearing weight and walking, which she had faced since past one month. On eliciting detailed history, she informed us that she had undergone medical termination of pregnancy about 7 months back, at 6 months of gestation, because of symptoms which had been suggestive of pre-eclampsia, during which time she had high fever and headache. After about 10 days, she developed pain in the right hip region, with persistent fever, with no preceding trauma. She was admitted to a local hospital for the same complaints. After a few days, she developed pain in the left hip. Then, an MRI was taken and apparently a diagnosis of septic arthritis of bilateral hips was made. Based on the discharge papers which were available with the patient, she was treated with intravenous antibiotics for two weeks and with bilateral hip arthrotomy and lavage. She was also put on bilateral skin traction. Culture specimen from arthrotomy didn't grow any organism and antibiotics were apparently given empirically. Even after discharge from the local hospital, pain in both the hips persisted, she was unable to bear any weight and she was also getting on and off fever. When she came to our hospital, she was in lot of discomfort and any attempted passive movement of the hips elicited severe tenderness. Her thighs and gluteals were grossly wasted, but skin over the hip region appeared to be normal,

except for the healed arthrotomy scars on the posterior aspect. Immediately, she was put on bilateral skin traction and parenteral analgesics were started. A battery of radiological and serological tests was done. Plain radiographs revealed partial subluxation of both the hips, with widening of medial joint space and some indistinct lytic areas in the right femoral head [Table/Fig-1]. X-rays of the chest and lumbosacral spines were normal. MRI revealed presence of joint effusions in both the hips and also an altered marrow signal intensity in the acetabulum and head of femur [Table/Fig-2]. Serologically, she was not reactive to HIV and HBs Ag, her haemoglobin was low, total count, ESR and CRP were grossly elevated and peripheral smear showed normocytic hypochromic picture. Serum calcium, phosphorus and alkaline phosphatase were within normal limits. Rheumatoid factor and serum anti-CCP antibodies were negative. Serum vitamin D was subnormal. Sputum acid fast bacilli (AFB) were negative. Serology possibly pointed towards infective pathology and so the patient was put on a course of intravenous antibiotics and also vitamin D supplements. Patient showed no improvements in her symptoms even after 10 days and therefore, a decision was made to do bilateral hip arthrocentesis and to send the aspirate for gram staining, AFB staining, culture and sensitivity and tuberculosis antigen polymerized chain reaction



**[Table/Fig-1]:** Plain radiograph showing bilateral subluxation of hip joints



**Table/Fig-2:** MRI pictures showing joint effusion, subluxation altered signal intensity in both the hips

(PCR). All the tests turned out to be negative, except for tubercular antigen PCR. She was immediately started on multidrug anti-tubercular therapy with Rifampicin, Isoniazid, Pyrazinamide and Ethambutol. The patient showed a dramatic recovery in symptoms after two weeks, even though pain caused by mechanical reasons persisted. Her ESR and CRP reduced and she gained 2 kgs of weight. Patient was continued on skin traction to relieve mechanical symptoms and ATT was continued.

## DISCUSSION

The frequency of tuberculosis of the hip joint is next only to that of the spine and it constitutes 15% of all cases of osteoarticular tuberculosis. Osteoarticular manifestations may be intra-articular or extra-articular [2]. The variable clinical and radiological presentations may mimic common osseous and articular conditions and they may delay the diagnosis of tuberculosis [3]. The lesions can present in synovial or osseous forms. The osseous lesions may be intra-articular within the joint capsule or extra-capsular (extra-articular) [2]. The clinical and radiological manifestations can imitate rheumatoid arthritis, transient synovitis, septic arthritis and retroviral disease in the synovial form and various benign or malignant bone lesions which are seen in children are of the osseous type [3-5]. The intra-articular form may originate from the acetabular or femoral side, and it may progress to involve the joint.

In 1983, Shanmugasundaram described seven different types of radiological presentations of tuberculosis of hip joints, which include: normal type, wandering acetabulum type, dislocating type, perthes type, protrusio-acetabuli type, atrophic type and pestle in mortar type. In the 'dislocating' type, the head dislocates posteriorly or it subluxates due to laxity of ligaments and capsular

distension. The prognosis is poor. The radiological morphology at presentation generally predicts the final outcome, as was suggested by Shanmugasundaram [6].

Traumatic dislocations of hips are relatively a common entity. Their incidence has increased in past couple of decades, because of high energy trauma following road traffic accidents. They may be pure dislocations or those which are complicated by fractures of acetabulum or femoral head or both. They are treated by closed or open reductions on an emergency basis. Rare instances of bilateral traumatic dislocations have been reported in literature [7, 8]. Developmental dysplasia which involves acetabulum and the proximal femur can lead to subluxation/dislocation, which can be bilateral as well. Those who are affected usually present with painless limp, with shortening of limbs in early life and later on, with secondary osteoarthritis.

Pathological subluxations or dislocations can be caused by various aetiologies like infective, neoplastic, inflammatory ones, etc. Infective aetiology, in the form of septic or tubercular can also cause subluxation /dislocation in the late stages, following extensive destruction of bony and ligamentous structures. Pathological subluxation of bilateral hips, which is secondary to tuberculosis in an adult, is extremely rare and to best of our knowledge, it has not been reported, even though a similar condition was reported in a child of 6 years by Tahasildar et al., [9].

## CONCLUSION

Tuberculosis can present in myriad ways and it can mimic any disease. The sole purpose of writing this article was to report one of the rare presentations of skeletal tuberculosis.

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