



Treatment of acute tuberculous arthritis of hip treated with antitubercular drugs and total hip arthroplasty: A case report

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ABSTRACT

Background: Tuberculous arthritis of the hip is being treated with antitubercular drugs while the hip is kept into traction or in spica, when the acute phase is over hip mobilization is done. In the past, tubercular hip was treated surgically with arthrodesis or osteotomy in case of ankylosis. Now a day the hip is treated with early joint replacement to restore the full functional range of motion to the joints.

Case description: We are presenting a case of 28 year old woman presented with inability to walk and severe pain in the left hip for past six months with adduction deformity and shortening of left lower limb. Patient initially was treated with antitubercular drugs for eight weeks and then total hip arthroplasty was done. The functional and technical outcome of this procedure appeared to be very favorable and successful.

Conclusion: Post tuberculous arthritis treated with antitubercular drugs and total hip arthroplasty showed very good functional outcome.

KEYWORDS

Tuberculosis if hip, total hip arthroplasty, antitubercular drugs.

Introduction

Tuberculosis (TB) of the musculoskeletal system is 1-3% of total TB cases and out of which 15-20% are TB of hip.¹ Tuberculosis is an infectious disease which is caused by Mycobacterium tuberculosis. The tuberculous arthritis is usually associated with high risk of destruction of the involved joints. Tuberculous arthritis of hip is treated with antitubercular drugs while the hip is kept into traction or in spica, when the acute phase is over hip mobilization is done. There are various treatment option including both non-operative and operative, described in literature.⁴⁻⁷ In the past, tubercular hip was treated with arthrodesis or osteotomy in case of ankylosis. Today the hip is treated with joint replacement to restore the functional range of motion to the joint.

Case report:

A 28 year old female presented with pain in the left hip, limp and difficulty in walking since 1 year which aggravated after six months of onset and resulted in inability to walk with severe pain even at rest. There was history of loss of weight, night cry, fever. On examination she had tenderness all around hip with flexion, adduction and internal rotation deformity and shortening of 2 cm. She had raised CRP with normal ESR and LC. After all relevant investigation a presumptive diagnosis of tuberculosis was made and antitubercular treatment was started. After two months of initial treatment with anti tubercular drugs patient showed very good clinical improvement. At this stage total hip replacement (THR) was planned. During surgery some caseating tissue with clear fluid collection was seen escaping from around the hip. Specimen was sent for histopathological examination which showed wide areas of necrosis however no giant cells or epitheloid cells were reported (Figure 8). Postoperatively ATT was continued and at 1 year follow up patient was able to sit and walk as per protocol with no reactivation of infection while still under ATT regime (Figure5, 6).



Figure 1: Pre-op X-ray of tuberculous arthritis of the left hip



Figure 2: Immediate post-op



Figure 3: Post-op at 4 month



Figure 4: Post-op at 1 year

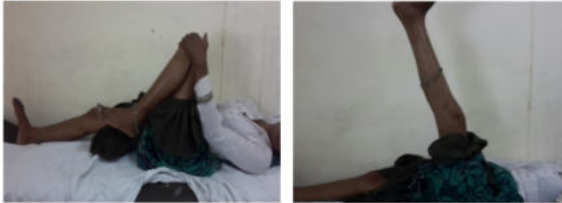


Figure 5(a and b): At 4 months (a) Flexion (b) SLR



Figure 6a and b: At 1 year (a) standing (b) forward bending



Figure 7: Intra-op picture of head of femur

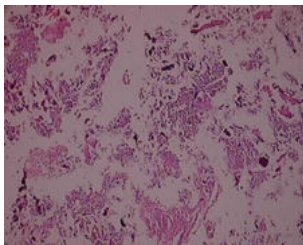


Figure 8: Histopathology

Discussion:

The Tuberculosis of hip is 2nd most common affection of osteoarticular tuberculosis (15%).¹ It is secondary to primary pathology in lung or any viscera. Bacteria lodges in the synovium through haematogenous route which leads to formation of granulation tissue. This granulation tissue extends to bone and leads to subchondral damage, sequestra and involves epiphysis and metaphysis of bone.² It usually presents with pain & swelling around hip, limp, with or without anorexia, loss of appetite, weight loss. As disease progresses deformities, shortening and restriction of movements takes place. Tuli³ classified it as synovitis, early arthritis, advanced arthritis and advanced arthritis with subluxation/dislocation. Diagnosis is mainly clinico-radiological, with supportive blood investigations. Detection of AFB is possible in <10% of osteoarticular TB when done before start of ATT / antibiotic treatment. Sometimes classical histopathological features are lacking in osteoarticular TB. The management

depends upon the stage of clinical presentation and the severity of destruction of hip joint as visible radiologically. This varies from conservative therapy in the form of ATT and traction to surgical management by debridement and/or joint replacement.¹ The surgical options vary from excision arthroplasty to hip replacement. In the active stage of the disease Total hip replacement (THR) is yet another area of controversy.¹ In our case, THR has showed excellent result in acute tuberculous arthritis if done along with conservative management with antitubercular drugs before and after the surgery at least upto one year.

Conclusion:

Tuberculosis of hip joint is second most common osteo-articular TB. Initially patient presents with pain around hip and limp and later with deformities, restriction of movement and shortening of limb. The management is done according to the stages of presentation. Post tuberculous arthritis treated with antitubercular drugs and total hip arthroplasty showed very good functional outcome.

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