



A CASE REPORT: TUBERCULOSIS OF ELBOW JOINT IN AN ADOLESCENT MALE AT GOVERNMENT MULTISPECIALITY HOSPITAL SECTOR 16 CHANDIGARH.

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ABSTRACT Tuberculous Arthritis of Elbow joint is a rare condition that is difficult to diagnose as it is rare (only 1-5% of Musculoskeletal tuberculosis) and presents with delayed presentation and non specific symptoms. Delay in diagnosis can result in irreversible osteoarticular destruction and loss of joint function. Timely intervention with Anti tubercular Treatment can preserve joint and prevent loss of function of joint. In advanced cases undiagnosed for longer period of time, surgical intervention may also be required.

KEYWORDS :

INTRODUCTION

Tuberculosis (TB) is a bacterial disease caused by *Mycobacterium tuberculosis* (sensu stricto) and other members of the *Mycobacterium tuberculosis* complex (MTBC) [1, 2]. India accounts for approximately one-fourth of the global TB disease burden [3]. TB can present in pulmonary and extra pulmonary forms. Musculoskeletal TB accounts for up to approximately 30–40% of extra pulmonary cases and 1–3% of all TB cases. [4, 5]. The spine is most commonly affected followed by the hip, knee, and other joints. [6]. The elbow is an uncommon joint to be affected by TB. The exact incidence remains unknown. It is estimated that the elbow joint is involved in approximately 1–5% of all cases of musculoskeletal TB [7]. Clinically, it is associated with nonspecific inflammatory symptoms such as joint swelling, redness, and painful restriction of movement. Due to its vague clinical presentation, it is often misdiagnosed, leading to delays in initiating appropriate treatment. As a result, significant joint damage may already be present by the time of diagnosis [8].

Case Discussion

A 15 Year old Boy presented in Orthopedic OPD at GMSH Sector 16 Chandigarh in January 2026 with chief complaints of pain, swelling and restricted movements of left elbow joint for past 1-2 months. (Fig 1)

There was no history of trauma or surgery of affected joint, chronic/acute cough, sputum or any other respiratory symptom. He was thin built and gave history of occasional rise of evening temperature which was undocumented and not significant according to the patient. Investigations done by previous consultant at a local hospital suggested raised TLC and MRI left elbow suggesting significant effusion and synovial thickening of elbow joint. No diagnosis had been made by the previous attending. (Fig 2) After careful clinical examination, patient underwent relevant investigations. The Chest Xray showed significant pleural effusion. Fluid collected after pleural tapping and arthrocentesis was sent for analysis. (Fig 3, 4 & 5)

Differential Diagnosis

Chronic septic arthritis, inflammatory arthritis and osteomyelitis.

Treatment and Follow up

A definitive diagnosis of *Mycobacterium tuberculosis* was made by CB-NAAT testing.

Antitubercular treatment was initiated after counseling the patient and his parents. Patient followed up after 2 months. (fig 6, 7, 8) wherein significant reduction in pain and swelling along with improved mobility of elbow joint was seen.

CONCLUSION AND RESULTS

It is relevant to note that in the above case, despite MRI being done by the previous attending, no diagnosis of Tuberculosis had been suspected at all as the patient had no typical symptoms of tuberculosis. High degree of vigilance is required even if systemic symptoms and pulmonary involvement is not evident. Thus, careful clinical assessment, relevant imaging and laboratory investigations are essential for early diagnosis of tuberculosis of elbow joint. Timely Anti-Tubercular Treatment can preserve the functional activity of joint and prevent deformity.



Figure 1: Patient on Presentation to OPD with Restricted Joint Movement.

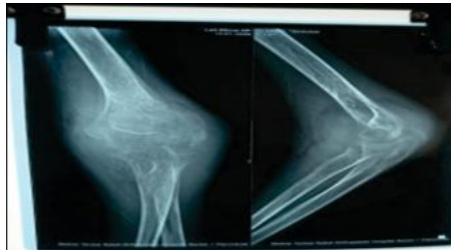


Figure 2: Xray of Left Elbow Showing Pheister Triad:

1. Juxtaarticular osteoporosis.
2. Peripheral erosions.
3. Narrow joint space



Figure 3: Chest Xray Showing Pleural Effusion

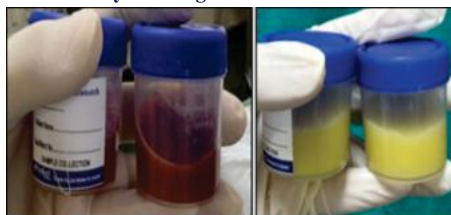


Figure 4&5: Fluid Collected on Pleural Tap & Arthrocentesis.



Figure 6: Follow Up Xray of Left Elbow Showing Improvement



Figure 7: Patient on 2 Month Follow up After Treatment, Showing Improved Mobility of Elbow Joint.

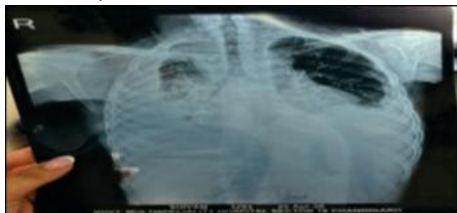


Figure 8: Chest X ray on Follow up.

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