

Tuberculous Arthritis of the Elbow Joint In A 2yr Old: A Case Report

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Abstract:- We present a case of a 2-year-old female with Tuberculous (TB) arthritis of the left elbow joint. The patient presented with a red, painful swollen left elbow associated with fever which was treated as a septic elbow; with washout and antibiotics. The patient was brought in again with persistent swelling, general malaise, and inability to use the elbow. History of travel obtained during this admission and failure to settle despite washout and antibiotics cover raised the suspicion of TB. The patient underwent a further washout, debridement, and samples sent confirmed tuberculosis.

Tuberculosis arthritis of the elbow joint is a rare condition and it usually presents as a chronic condition however it can also present as acute septic arthritis.

I. BACKGROUND

Tuberculosis still remains the leading cause of death caused by a single infectious agent. In 2021 approximately 10.6 million people were affected by TB globally (1). TB can be pulmonary or extra pulmonary of which extrapulmonary TB affecting the musculoskeletal system is approximately 30-40% and most common over spine. (2) Approximately 1-5% of musculoskeletal TB involves the elbow joint (3) which is even lower in areas with low prevalence rates making the differential diagnosis of TB very low on the list.

II. CASE REPORT

A 2-year-old female originally from Bangladesh was brought in by her mum with concerns regarding swelling over the left elbow which was red, warm, and tender with decreased range of movement (ROM). There was no history of respiratory symptoms, loss of appetite, or loss of weight. There was no history of direct contact with TB patients. On examination, she was very anxious and any movement of her left elbow caused her significant distress. X-ray revealed raised anterior and posterior fat and soft tissue swelling of the elbow joint (Fig 1,2). MRI revealed a large effusion of the joint with no cartilaginous or bony changes (fig.3). Apart from a raised CRP of 54 other blood investigations were within normal limits. She underwent aspiration of her left elbow which revealed turbid fluid, she then had a washout of her left elbow joint. Cultures grew staphylococcus coagulase negative (SCOA). She was treated with antibiotics. On follow-up examination the wound was healthy and she had started to mobilise her elbow joint.

She was brought in again after a month with persistent swelling, redness and decreased range of movement over the left elbow. Left elbow tender and warm with decreased ROM. She was treated as a recurrence of the septic left elbow joint with repeated washouts, debridement, and IV antibiotics. Intraoperative findings included lots of synovial inflammation and she required 3 episodes of debridement. Culture samples were sent which confirmed Mycobacterium tuberculosis and she was started on quadruple therapy (Isoniazid, Rifampicin, pyrazinamide, and ethambutol). On follow-up, she has now regained her full range of movement.

III. DISCUSSION

Musculoskeletal TB affecting a non-weight-bearing joint like elbow is quite rare (1-5%) and making the diagnosis can be very challenging. (3) The diagnosis of musculoskeletal TB relies on attention to detail regarding the history, clinical examination, and Imaging which can be a challenging task, especially in younger children as classical signs and symptoms associated with TB are usually absent in addition to difficulty in communication. (4) The use of imaging modalities like MRI has been advocated to provide useful information in differentiating tuberculous and pyogenic arthritis (5) but in this case, imaging did not provide any positive findings hence there was a delay in reaching the diagnosis.

The findings in this report are consistent with other similar case reports in adults like Aggarwal A 2006 (6), Patel S, (7) which state that Musculoskeletal TB of non-weight-bearing joints are often missed on initial presentation because of low level of clinical suspicion

IV. SUMMARY

Diagnosing Musculoskeletal TB affecting the elbow joint is a very challenging task and the clinician should always have a high index of suspicion especially in cases with atypical osteoarticular disease or where there is inadequate response to treatment.

➤ *Not Considering TB as a Differential Diagnosis Can Delay Definitive Treatment.*

V. REFERENCES

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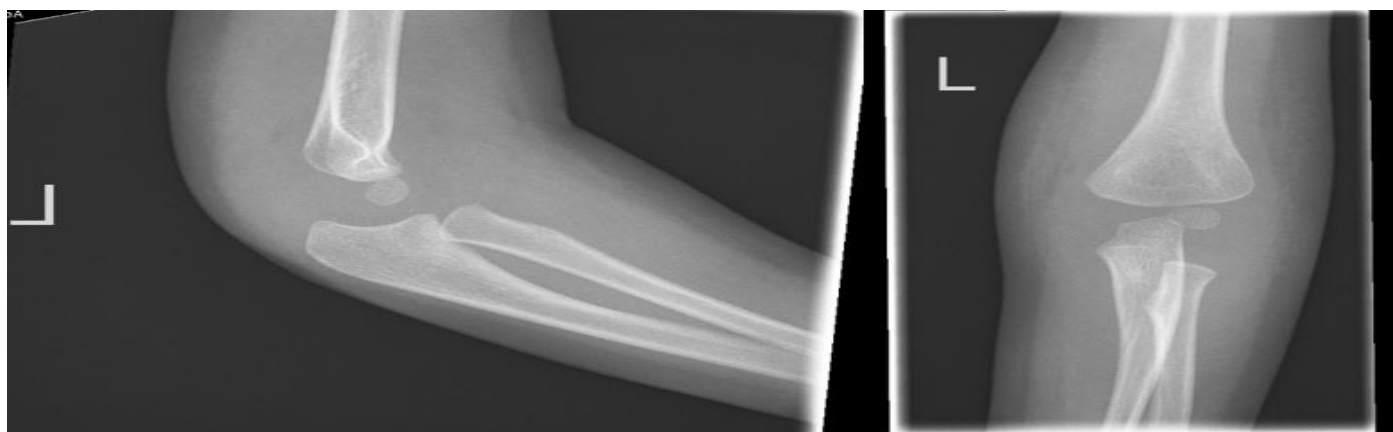


Fig 1 Xray AP,Lat at Initial Presentation



Fig 2 MRI at Presentation



Fig 3 Follow up X-ray 6 Months post-Surgery