

Unraveling the Puzzle: Paediatric TB Arthritis - Lessons from a Case Series

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INTRODUCTION:

In the intricate realm of paediatric tuberculosis (TB), complexities arise. WHO (2015) highlighted this, with 1 million pediatric TB cases among 10.4 million worldwide. Unlike adults, children often exhibit extrapulmonary TB, increasing morbidity risks. We explore three compelling cases of TB arthritis, revealing diagnostic nuances and clinical hurdles.

REPORT:

Case 1:

A 9-year-old with Klinefelter syndrome presented with left hip pain and ambulation refusal. His mother had completed anti-TB treatment a year prior. Despite negative TB tests, septic markers were elevated, and radiographic findings showed hip joint widening, while ultrasound was inconclusive. Initially treated for transient hip synovitis, symptom relief was short-lived. Symptoms recurrence prompted reevaluation, revealing worsening imaging findings. Hip washout uncovered abundant purulent material, with intraoperative samples (Synovial Fluid AFB, MTB PCR, HPE) confirming TB, contrasting earlier negative tests.

Case 2:

A 7-year-old boy presented with right knee soft tissue swelling. Radiograph and MRI were suggestive of soft tissue tumour and infection. We proceeded with open biopsy and knee washout revealing distal thigh pus collection and thickened synovium. Despite negative Interferon-Gamma Release Assays (IGRA), other intraoperative samples (MTB PCR, HPE) were positive for TB.

Case 3:

A 2-year-old girl presented with painless left hip and thigh swelling with unremarkable hip motion for 4 months. Despite mildly raised inflammatory markers, imaging indicated

osteomyelitis and intramuscular collection. Hip washout revealed bony erosions and pus collection. IGRA was inconclusive, however intraoperative samples (MTB PCR, HPE) confirmed TB diagnosis.

All patients completed anti-TB treatment successfully but faced sequelae complications. Second patient developed limb length discrepancy with genu valgum deformity, while the third patient's growth prognosis remains uncertain pending ongoing follow-up.

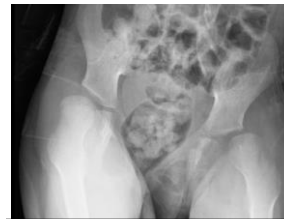


Figure 1: X-ray of Case 1 showing left hip subluxation.



Figure 2: X-ray of Case 2 showing distal femur lytic lesion with growth plate erosion.

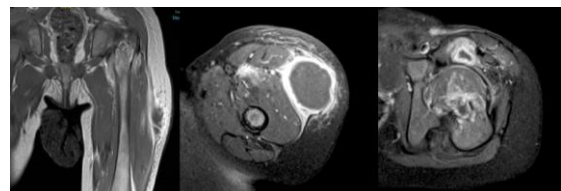


Figure 3: Left Hip MRI showing collection and OM changes

CONCLUSION:

Our case series reveals challenges in diagnosing paediatric TB arthritis, often late with subtle symptoms. Emphasizing high suspicion and MTB PCR reliability, we stress thorough follow-up for addressing sequelae and ensuring good long-term outcomes.

REFERENCES:

1. Maphalle Et al. Pediatric Tuberculosis Management: A Global Challenge or Breakthrough? Children (Basel). 2022 Jul 27;9(8):1120