

# Tuberculous Osteomyelitis in Young Children, A Diagnostic Dilemma

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## INTRODUCTION:

Tuberculosis (TB) is one of the commonest world-wide diseases with 12% children infected<sup>1</sup>. Diagnosis of TB Osteomyelitis is challenging and sometimes missed. We present a case of a pediatric patient with TB osteomyelitis of the right distal femur.

## REPORT:

This is a 2 years old boy with 18 months history of chronic symptomatic right knee swelling. He presented in June 2020 at 6 months old with fever, knee swelling and resisted movement. X-ray was normal and he was diagnosed as transient synovitis. Due to the covid-19 movement control order (MCO), he was unable to attend the follow-up and subsequently defaulted. However, the child experienced monthly fever episodes with worsening knee swelling before consulting us in January 2022. His respiratory examination was clear. X-ray and MRI of right knee exhibited medial intramedullary metaphyseal lesion of the distal femur extending to the physal-epiphyseal region with subcutaneous collection. Blood investigations showed leucocytosis and elevated ESR. Surgical debridement done revealed 10mls of congealed pus intramuscularly. Pus, tissue and bone were sent for sensitivity, culture and HPE. Tissue TB GeneXpert detected the presence of Mycobacterium Tuberculosis (MTB). Post-operatively, child was active, ambulating and responded well to anti-TB medication.

**Figure 1&2: Initial & current x-ray**

**Figure 3:Right knee MRI**

**Figure 4: Intra-operative photo**



## DISCUSSION:

TB osteomyelitis is typically monoarticular lesion affecting the hips & knees. Diagnosis is confirmed through clinical, radiological findings, histologic examination, and cultures. The Xpert MTB/RIF assay (GeneXpert) is a prompt and highly sensitive test that allows immediate initiation of treatment. Surgical debridement combined with anti-TB therapy for 9-12 months is an effective therapy<sup>2</sup>.

## CONCLUSION:

High index of suspicion is needed to diagnose TB osteomyelitis and proper follow-ups are crucial. Early treatment allows full resolution and may prevent future growth disturbances. GeneXpert is helpful in obtaining a rapid diagnosis and should be made widely accessible.

## REFERENCES:

<sup>1</sup> WHO. Global Tuberculosis Report 2020. Geneva, Switzerland.

<sup>2</sup> Yilmaz, Ahmet & Gulek, Bozkurt & Ciloglu, Osman. (2016). Epiphyseal tuberculous osteomyelitis in a child: a case report.