

Challenge in finding the Great Mimicker

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INTRODUCTION:

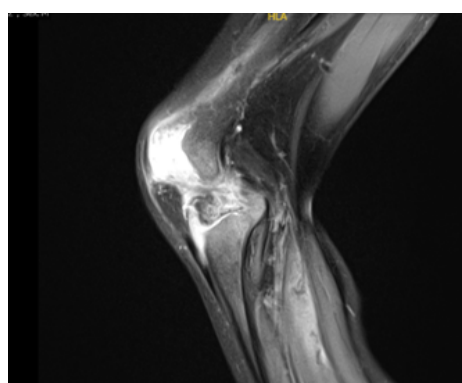
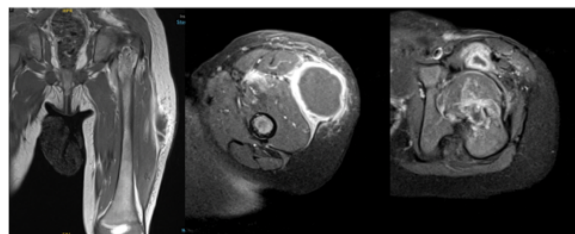
Mycobacterium Tuberculosis (MTB) osteomyelitis in children can be difficult to diagnose early because of vague symptoms such as pain and swelling. Confirmatory tests can also be inconclusive at times like in these cases we encountered.

REPORT:

Firstly, 2 year old Malay girl with painless left hip and proximal thigh swelling had normal gait and full range of motion. Despite a 4-month history of illness, her inflammatory markers were mildly raised. Radiographic imaging revealed osteomyelitis and effusion. Multiple diagnostic tests were inconclusive including MTB Quantiferon test and MTB cultures and smears except for granulomatous inflammation on histopathology, but was negative on Ziehl-Neelsen staining. The diagnosis was finally confirmed by a positive MTB PCR test.

Second case : a 7 year old boy who presented with a right knee swelling and his working differential diagnosis was soft tissue tumour and right knee MTB infection. Similar to the first case, his laboratory test all came back as negative after a biopsy, including that of Interferon-Gamma Release Assays (IGRA) and the only positive was histopathological granulomatous inflammation and a positive MTB PCR.

Patients are receiving recommended anti-TB medication and are recovering well. The first patient's growth prognosis is uncertain as follow-up is ongoing, while the second patient has a 3cm limb length discrepancy after 2 years.



Top: MRI left Hip
Bottom: MRI right knee

CONCLUSION:

While tuberculosis is common in Malaysia, one confirmatory lab test cannot be relied on due to possible inconclusive or negative results. A combination of available tests should be used by the physician with a high level of suspicion to diagnose and begin proper anti-tuberculosis treatment to prevent complications like growth disturbance.

REFERENCES:

1. Agarwal, A. (2020). Paediatric osteoarticular tuberculosis: a review. *Journal of Clinical Orthopaedics and Trauma*, 11(2), 202-207.
2. Gupta, S., Parihar, A., Agarwal, A., Agarwal, S., & Singh, S. (2022). Pediatric Osteoarticular Tuberculosis as a Diagnostic Dilemma and a Review of Literature. *Cureus Journal of Medical Science*, 14(3).