

TUBERCULOUS KNEE JOINT : A CASE REPORT

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INTRODUCTION:

Tuberculosis is an ancient disease that is still a major morbidity worldwide¹. Along with the increase in prevalence of pulmonary tuberculosis, skeletal tuberculosis seems to be on the rise too². The complication of joint related tuberculosis can be very disabling and may impede the function of an individual if left untreated. The incidence of extrapulmonary tuberculosis is ranging from 2- 20% and in Malaysia it represents 10% of cases³, of which skeletal tuberculosis may range from 1-20% of all extrapulmonary tuberculosis. In Sarawak, osteoarticular tuberculosis has been encountered in the spine, hip, knee, elbow and wrist.

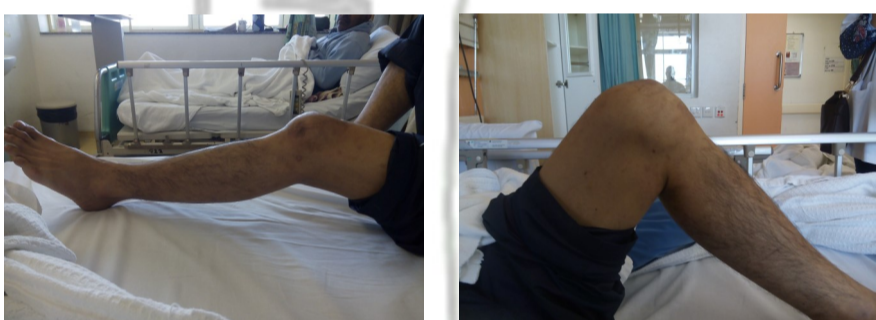
CASE PRESENTATION

Mr Z is a 42 year old gentleman which presented with multiple episodes of left knee swelling since September 2013. Patient was then diagnosed with smear negative pulmonary tuberculosis with left knee tuberculous arthritis for which he completed 9 months of anti-tubercular treatment in April 2015.

PHYSICAL EXAMINATION

The left knee was minimally swollen with restriction of range of motion which is 20 – 90 degrees of flexion with firm end points. Fixed flexion deformity at 20 degrees. Other joints were grossly normal. In December 2015, patient proceeded with a left total knee replacement. Post-operative range of motion was 10 – 120 degrees.

Pre-operative



Post-operative

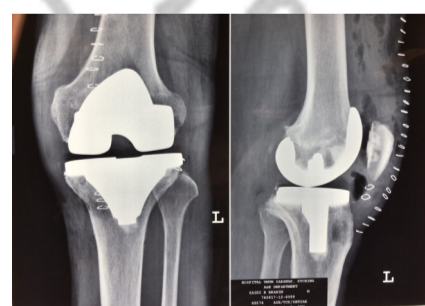


LAB RESULTS AND IMAGING STUDIES

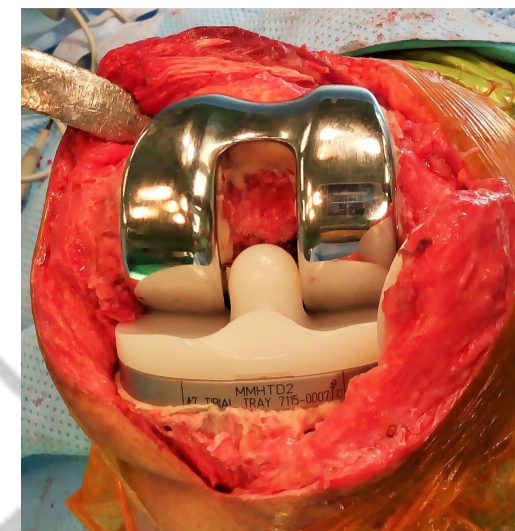
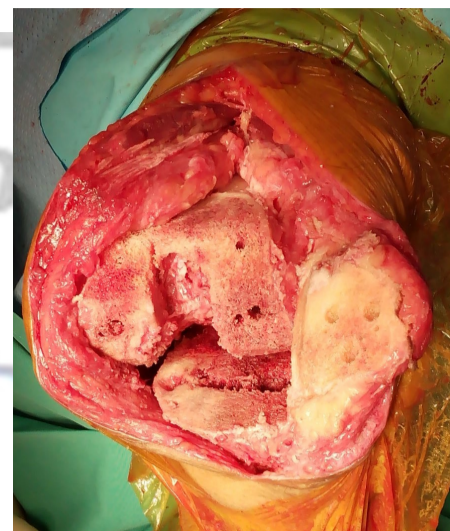
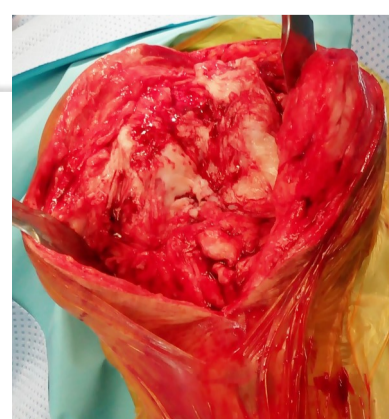
The left knee x-ray, showed severe bone erosion, narrowed joint space with osteomyelitic changes of the femur, tibia and patella. ESR 119, CRP positive prior to antituberculosis and ESR 7, CRP negative after completion of treatment.



2014



POST-OPERATIVE



DISCUSSIONS:

Tuberculosis (TB) still remains as a major health burden to the Malaysian public health³. The preponderance of osteoarticular TB is predominantly spine (40%), followed by the hips (25%) and lastly the knee (8 %)⁴. Occurrence of skeletal TB is about 15-20% of immunocompetent patients, however it is rarely the primary presentation of TB⁴. Osteoarticular involvement is usually through haematogenous spread from a primary focus likely the lungs⁵ as seen in this case. In the present case, due to chronicity of left knee pain and stiffness, treatment was started on high index of suspicion and diagnosed with smear negative tuberculosis with left knee tuberculous arthritis. Laboratory investigations in favour of TB was the markedly raised ESR of 119 with positive CRP. Besides that, radiological changes that were supportive of TB knee was also seen, known as the *Pemister triad*, which include juxta-articular osteopenia, joint space narrowing and erosions⁴. Intraoperatively, extensive joint fibrosis and erosion was seen. The end of the tubercular arthritis spectrum, includes severe joint destruction, sclerosis and fibrous ankyloses⁶. A positive smear is only seen up to 16%⁷ of cases and a positive culture ranges from 30.4% - 87% of cases⁷. Tuberculous arthritis spares no joints and is usually mono-articular². Su et al. (1996)⁸ and Eskola et al (1988)⁹ suggested that knee replacement is indicated advanced TB knee and positive results can be expected in those who were treated with antibiotics prior to and after surgery. However, risk of reactivation is present in those without prophylactic antibiotics and on corticosteroids^{8,9}.

CONCLUSION:

High index of clinical suspicion is needed to diagnose tubercular knee arthritis as early treatment leads to better outcome.

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