

A Tale Of Two Cities: Tuberculosis Versus Pyogenic Septic Hip Arthritis

¹Kow RY, ¹Ruben JK, ¹Zaharul-Azri MZ, ²Low CL, ³Jacob Abraham VA, ³Premchandran N

¹Department of Orthopaedic Surgery, Hospital Kuala Lipis, Kuala Lipis 27200, Malaysia.

²Department of Radiology, Hospital Kemaman, 24000 Kemaman, Terengganu, Malaysia.

³Department of Orthopaedic Surgery, Hospital Tengku Ampuan Afzan, Kuantan, Malaysia

INTRODUCTION:

Septic arthritis of the hip can result in devastating disability if not treated promptly. It is important to differentiate tuberculosis (TB) and pyogenic septic arthritis as they differ in the term of management. We present two cases of septic hip arthritis and the clinical differences of tuberculous versus pyogenic arthritis are highlighted.

CASE REPORT:

Mdm A, a 30-year-old pharmacist with no underlying medical illness, presented with a complaint of right hip pain for 3 months. She had normal total white blood cell count and mildly elevated erythrocyte sedimentation rate (60 mm/hour). Magnetic resonance (MR) images of her right hip were suggestive of avascular necrosis of the right femoral head with no collection seen. However, her right hip pain worsened and a computed tomography scan of the right hip after 6 months of conservative treatment revealed a collection within the right hip joint with bony erosion (Figure 1). An arthroscopy washout was performed and bone fragments from the right hip joint were positive for polymerase chain reaction (PCR) of *Mycobacterium tuberculosis*. Anti-TB medication was given for 9 months and she subsequently recovered.



Mr S, a 39-year-old retroviral-positive patient, presented with right hip pain for 3 months. His blood investigations showed raised infective markers. MR images of the right hip revealed a huge collection at the right hip joint with severe bony erosion and reduced joint space which were confirmed intra-operatively (Figure 2). Culture of the joint fluid showed growth of *Pseudomonas aeruginosa*. He underwent

arthrotomy washout and subsequently recovered with initiation of antibiotics.

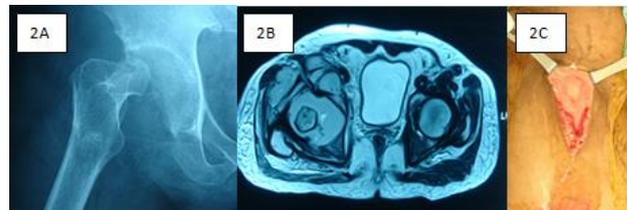


Figure 2A shows narrowing of the right hip joint space with destruction of the right femoral head. Figure 2B shows a collection surrounding the right femoral head which is also seen during arthroscopy washout (Figure 2C).

DISCUSSIONS:

Tuberculous hip arthritis has an insidious onset of disease, minimal sclerosis, and relatively preservation of the joint space. On the other hand, pyogenic hip arthritis is more aggressive with rapid destruction of the joint space and osteomyelitic changes. A proper history taking and blood investigations can provide clues on the etiology of the septic hip arthritis. The diagnosis is confirmed with isolation of the causative organism either through synovial fluid sampling or open biopsy.

CONCLUSION:

Quadruple assessments comprising of clinical, biochemical, radiological and microbiological examinations are needed to differentiate tuberculosis and pyogenic septic hip arthritis.

REFERENCE:

Sung HH et al. Tuberculous versus Pyogenic Arthritis: MR Imaging. *Radiology* 2001;218:848-853.