

# MYCOBACTERIUM TUBERCULOSIS PROSTHETIC JOINT INFECTION: 10 YEARS AFTER TOTAL KNEE REPLACEMENT

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## INTRODUCTION:

Tuberculosis infection affecting the total knee replacement prosthesis is very rare(1). Diagnosis of this condition can be challenging as the tuberculous synovitis has been described as the 'Great Mimicker' due to its variable and non specific presentation(2). Tubercular prosthetic joint infection accounts for only less than 1% of prosthetic joint infections(3). We present a case of a 69 years old lady with tubercular infection of the right knee, ten years after right total knee replacement.

## CASE REPORT:

69 years old lady presented with right knee pain and swelling for 2 weeks. She has done right total knee replacement about 10 years ago in another hospital. There was gross swelling of the right knee and was warm. Movement of the right knee was restricted due to pain. Knee radiograph showed loosening of the implant. Debridement of the knee joint and washout was done under the impression of prosthetic joint infection. Patient was treated with intravenous gentamicin. The histopathological examination showed focus of epithelioid granuloma with extensive central necrosis with occasional multinucleated giant cell. Antitubercular medications were continued for 9 months before re-implantation was done. Patient was discharged one week after operation with antitubercular medication aimed for completion for total 18 months. She was able to walk without pain at 2 months follow up. Patient was asymptomatic, and the inflammatory markers were normal at 6, one year and one and a half year follow ups



## DISCUSSIONS:

Prosthetic joint infection is rare that only 0.5-2% of the knee and less than 1% of the hip prosthesis is affected(4). Tubercular infection of the joint is commonly due to local reactivation of pre-existing mycobacterium infection, and less commonly due to hematogenous spread of mycobacterium. Synovial tissue biopsy and synovial fluid culture is required to make a diagnosis(5). There is no consensus yet for optimal treatment for tubercular prosthetic joint infection(6). However, two stage exchange arthroplasty for PJI has been said the gold standard treatment(7). Higher success rate of treatment has been seen with two stage exchange arthroplasty compared to prosthesis retention and anti tubercular medication(8).

## CONCLUSION:

Tubercular prosthetic joint infection is rare and need high index of suspicion for early diagnosis. Routine mycobacterium culture is recommended in high endemic area for tuberculosis and usage of polymerase chain reaction test can increase the sensitivity of diagnosing tubercular prosthetic joint infection. Early diagnosis and anti tubercular therapy can result in good long term results.

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