

## CASE REPORT

### TUBERCULOUS OSTEOMYELITIS OF PATELLA: A CASE REPORT

Babu B. Hundekar<sup>1</sup>

#### HOW TO CITE THIS ARTICLE:

Babu B. Hundekar. "Tuberculous Osteomyelitis of Patella: A Case Report". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 79, October 01; Page: 13908-13912, DOI: 10.14260/jemds/2015/1981

**ABSTRACT:** The knee joint is the third most frequent skeletal location for tuberculosis after spine and hip. Isolated patellar osteomyelitis of tubercular etiology is rare with literature reporting an incidence of 0.09% to 0.15%. Here we report a case of tuberculous osteomyelitis affecting the patella. **CASE REPORT:** A 24 year old young male of Indian origin, working in Australia for a period of 3 years, presented with complaints of pain in the left knee since 3 months. There was minimal swelling of left knee and tenderness over medial border of patella. There were no signs of involvement of knee joint proper. Diagnosis was confirmed by imaging and histopathology studies. Curettage followed by anti-tubercular treatment was given for 9 months. **CONCLUSIONS:** Tuberculosis of the patella is a rare finding. The diagnosis frequently is delayed because of its rarity and variable presentation, which may be acute with systemic signs or insidious with mild local signs. Surgical debridement combined with ATT for 9 months ensures recovery.

**KEYWORDS:** Tuberculosis; Patella.

**INTRODUCTION:** Osteo-articular Tuberculosis accounts for 3 to 5 % of all cases of extra-pulmonary tuberculosis.<sup>(1)</sup> Although knee joint is the third most common joint affected by tuberculosis after spine and hip, pure patellar osteomyelitis of tubercular etiology is rare with literature reporting an incidence of 0.09% to 0.15%.<sup>(2)</sup> Fewer than 10 cases are found in the international literature.<sup>(2-8)</sup> This paper reports a case of tuberculous osteomyelitis affecting the patella in a young male aged 24 years.

**CASE REPORT:** A 24 year old young male of Indian origin, working in Australia for a period of 3 years as an engineer, presented to us with complaints of pain in the left knee since 3 months. Pain was continuous, aggravated by movements and progressively increasing in severity for the last 2 months. Patient noticed swelling of the left knee about 2-3 weeks following the onset of pain and gradual increase in pain led to limping of the left lower limb. There was no history of injury, fever, weight loss, constitutional symptoms, other bone or joint pains and there was no significant family history. Patient did not give any past history of tuberculosis or contact with a known case of tuberculosis.

On examination, there were no scars, sinuses, no signs of local inflammation or lymphadenopathy. Minimal swelling was present over the inferomedial quadrant of patella and tenderness over the medial border of patella. Patellar tap was positive, there was no joint line tenderness and movements were only terminally painful and restricted. There was no joint line tenderness ruling out the involvement of the knee joint.

Radiographs of the knee joint showed a solitary lytic area in inferomedial quadrant of patella (Figure 1 & 2). MRI confirmed the lytic lesion in the patella and showed synovial effusion (Figure 3). ESR at this time was 85mm/hr. An X-ray of chest was done to rule out a pulmonary focus.

Open surgery was done with a medial parapatellar approach and arthrotomy. Inflamed synovium was sampled for biopsy. The cavity in the patella revealed crumbly grayish-white tissue,

## CASE REPORT

---

which was entirely removed by curettage, leaving an unfilled bone space (Figure 4) and the specimen sent for histopathology report. The report came as tuberculous osteomyelitis of patella. Synovial biopsy report came as non-specific chronic synovitis.

On confirmation of the diagnosis, the patient was put on 4 drug regimen (INH, Rifampicin, Ethambutol and Pyrazinamide) for a period of 3 months and later on 3 drug regimen for another 6 months. Patient was advised to refrain from strenuous activities for a period of 4-6 weeks and followed up regularly.

There was complete relief from pain and ESR levels came down, and the last recorded value of ESR at one year of follow up was 12 mm/hr. Limp and minimal quadriceps wasting improved after physiotherapy.

**DISCUSSION:** Tuberculosis of the patella is a rare finding even in an endemic country like India. Osteo-articular tuberculosis affects the knee in about 8% of cases and the patella in less than 0.1%.<sup>(4)</sup> Osteomyelitis of the patella is an uncommon infection that is primarily a disease of childhood.<sup>(5)</sup> The diagnosis should be considered in patients with persistent peripatellar pain and swelling, cellulitis, septic prepatellar bursitis, and septic arthritis of the knee that does not respond to standard treatment.<sup>(7)</sup> Open biopsy may be sometimes necessary in doubtful cases to establish diagnosis.

Differential diagnosis of lesion in patella include tumors (e.g. Chondroblastoma, Osteoblastoma, Aneurismal bone cyst, metastatic lesion), tumor like condition (e.g. Brown tumor) and inflammatory lesion (e.g. Gout, pyogenic disease and osteomyelitis).<sup>(8)</sup>

Numerous modes of infection have been put forth, but by far the commonest is haematogenous spread from a distant focus. Hence it is mandatory to look for the primary focus in a suspected patient.<sup>(3)</sup>

Diagnosis once established, treatment with the standard ATT regimen for a period of nine months is adequate along with regular follow up.

**CONCLUSIONS:** Tuberculosis of the patella is a rare finding. Due to late clinical presentation, the rarity of the disease and lack of clinical suspicion make it prone to delay in diagnosis. Early institution of anti-tubercular drugs after debridement and curettage of patella minimizes the spread of disease inside the joint and produce better functional outcome with minimizing the patient morbidity.

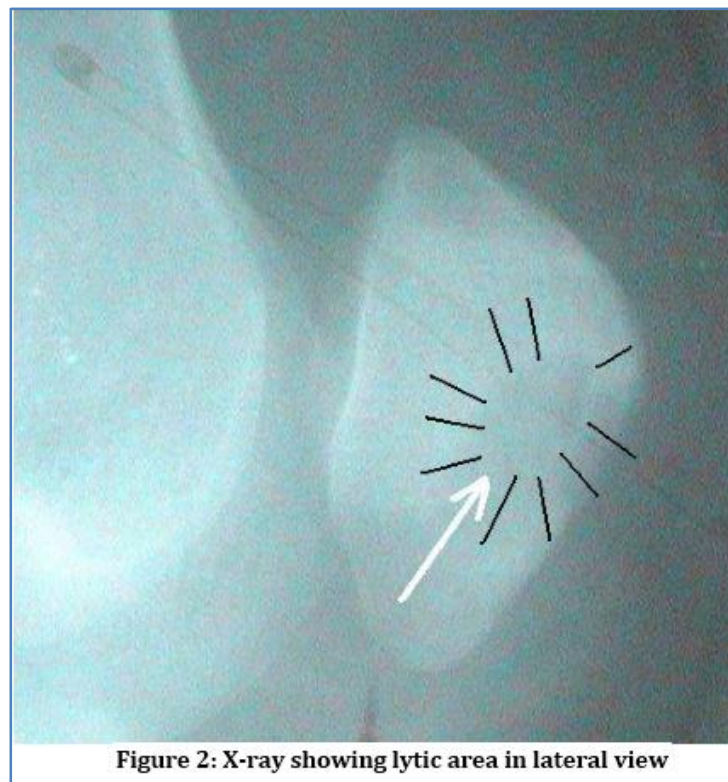
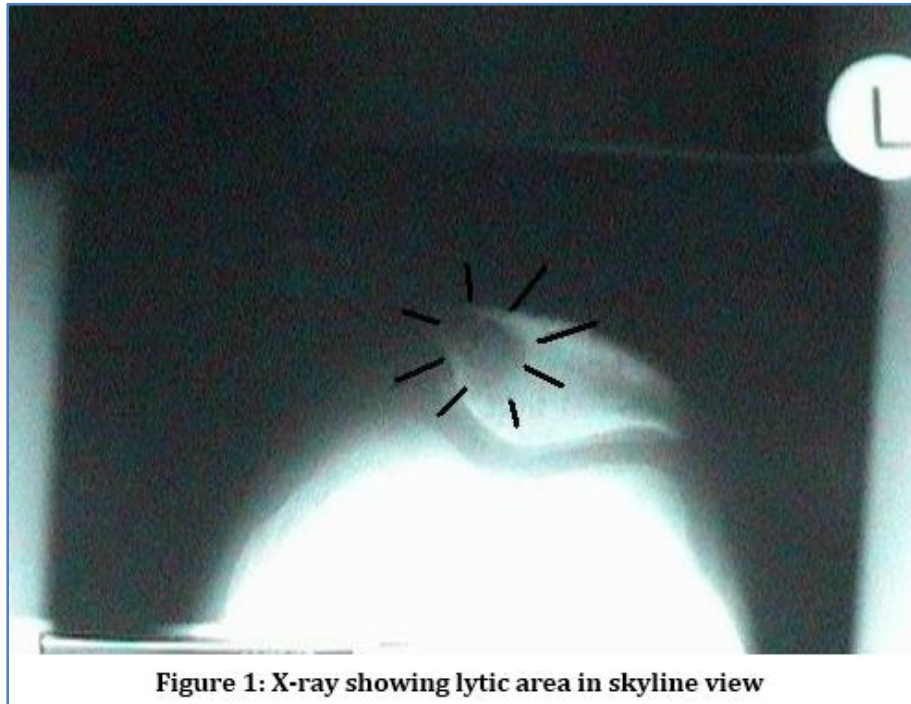
**CLINICAL MESSAGE:** In case of osteolytic lesions of patella with or without abscess, tuberculosis should always be considered, in spite of it being rare.

### REFERENCES:

1. Tuli S M. Tuberculosis of skeletal system. Jaypee Brothers Medical publishers, New Delhi.1991.
2. Mandeep S Dhillon, C Rajasekhar and ON Nagi, Tuberculosis of the patella: report of a case and review of the literature; *The Knee*, Volume 2, Issue 1, March 1995.
3. Evans DK. Osteomyelitis of the patella. *J Bone Joint Surg* 1962; 44B: 319-23.
4. Ravi Mittal, Vivek Trikha and S. Rastogi. Tuberculosis of patella; *the knee* Volume 13 Issue 1, January 2006.
5. Moore T. Acute osteomyelitis of the patella. *Lancet* 1938; i: 552-3.
6. AABYE R. Tuberculous osteomyelitis of the patella; report of three cases treated with antibiotics and surgical measures. *Acta Chir Scand*. 1956 Nov 12; 111(5): 409-16.

## CASE REPORT

7. Roy DR Osteomyelitis of the patella. Clin Orthop Relat Res, 2001 Aug; (389): 30-4.
8. Roop Singh, Rakesh Gupta. Tuberculosis of Patella- A case report. Indian journal of Orthopaedics 2004.38(3):189-90.



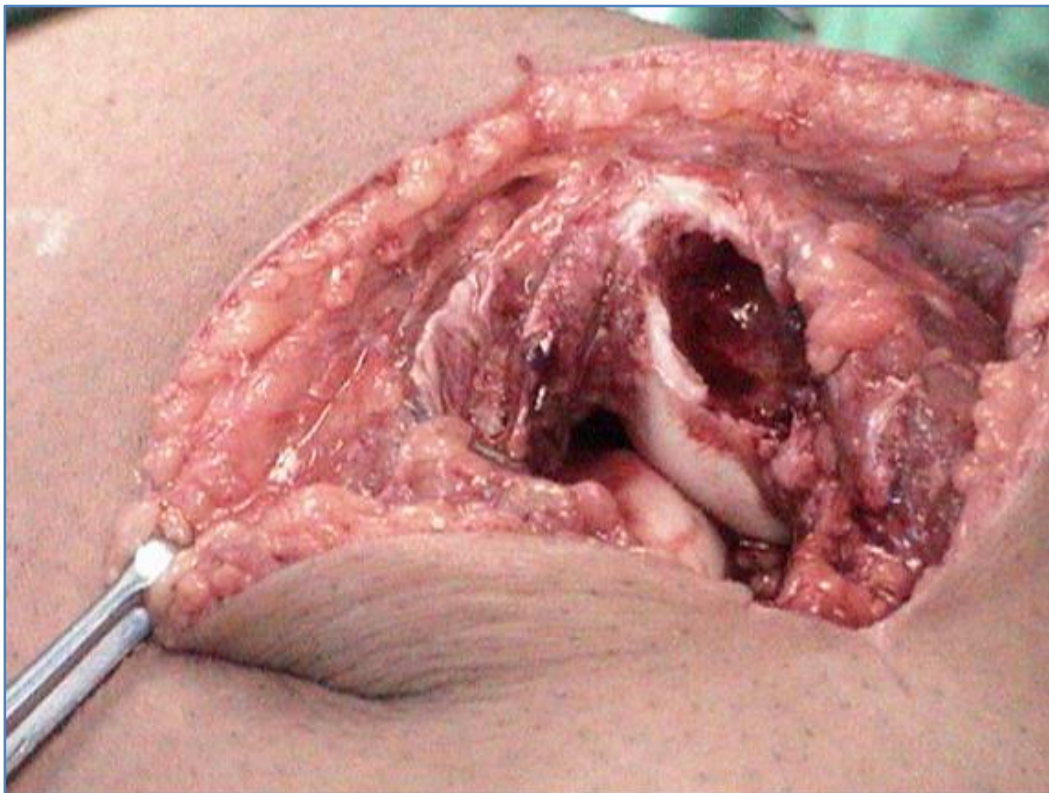


## CASE REPORT

---



**Figure 3: MRI showing lytic lesion in the patella and synovial effusion**



**Figure 4: Clinical photograph showing the Lytic area in patella after curettage**

## CASE REPORT

---

**AUTHORS:**

1. Babu B. Hundekar

**PARTICULARS OF CONTRIBUTORS:**

1. Associate Professor, Department of Orthopaedics, Hind Institute of Medical Sciences, Lucknow, Uttar Pradesh.

**FINANCIAL OR OTHER**

**COMPETING INTERESTS:** None

**NAME ADDRESS EMAIL ID OF THE  
CORRESPONDING AUTHOR:**

Dr. Babu B. Hundekar,  
Associate Professor,  
Department of Orthopaedics,  
Hind Institute of Medical Sciences,  
Lucknow-225003, Uttar Pradesh.  
E-mail: bbhundekar@gmail.com

Date of Submission: 11/09/2015.

Date of Peer Review: 12/09/2015.

Date of Acceptance: 23/09/2015.

Date of Publishing: 01/10/2015.