



:
 : , ,
 26 , , T1 가
 , T2
 : 26 가 14 , 가 12 46.2
 7 , 7 , 4 , 3 , 3 2 .
 15 (58%) 24 (92%) .
 23 (88%) 24
 (92%) . 가 17 (71%) .
 18 69% .
 : , , 69%

, 100 1 가 .
 2025 1980
 (human immunodeficiency
 virus) 가, 가 (4-6).
 가 (1).
 1990 8 (cause of
 death) ,
 (2).
 1-5% 26 (26)
 (3). 14 , 12 , 3 73
 (CT) 가 46.2 .
 가 21 ,

:

Philips, DA Best, Netherlands) 1.5 Tesla (Magnetom Vision, Simens, Elangen, Germany)

T1 (TR/TE, 350 - 650/11 - 25 msec) T2 (TR/TE, 4500 - 1800/140 - 90 msec) gadopen - tetate dimeglumine (Magnevist, Schering, Germany) 0.1 mg/Kg T1 3.0 - 10.0 mm 1.0 - 5.0 mm (field of view) 16.0 - 26.0 cm, (matrix) 256 × 256

2 .

26 24 (92.3%) T2 26 23 (88.5%) 17 (71.0%) (Fig. 1, 3).

가 24

18 (69.2%) 26 15 (57.7%)

1

(6 - 8)

가

가

(Fig. 2).

14

가

2

(9, 10) T1

, T2

가

(7)

7

가

7

가

가

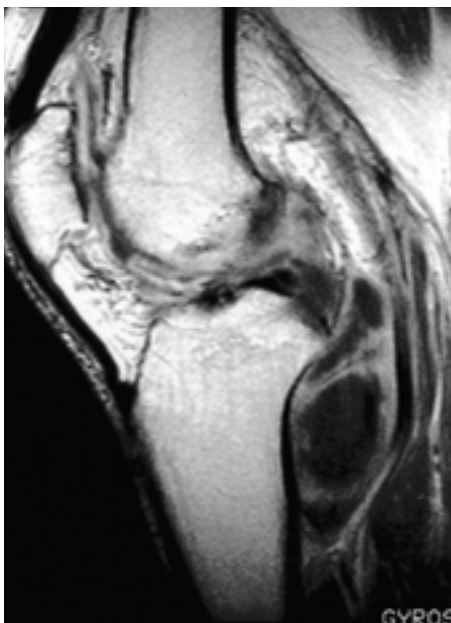
4 ,

3 ,

3

(M. tuberculosis)

50% - 94%



A

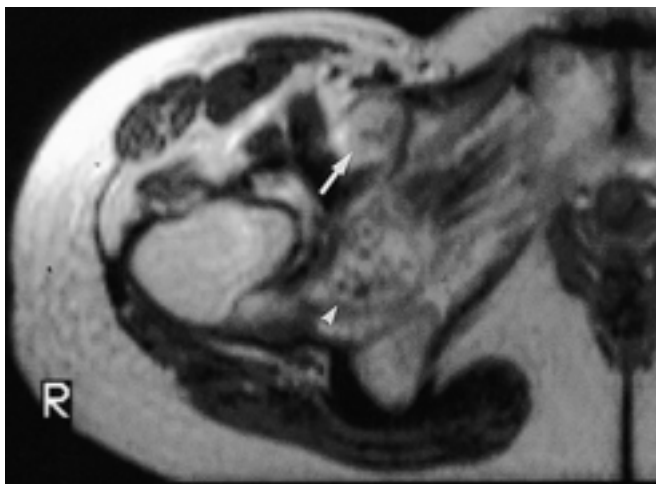


B

Fig. 1. Tuberculous arthritis of the knee in a 64-year-old man.

Enhanced T1-weighted (**A**) and T2-weighted sagittal (**B**) images of left knee joint. Joint effusion with synovial proliferation and subchondral bony erosions are noted. Soft tissue abscess at posterior aspect of proximal tibia shows irregular thick wall enhancement and central necrosis.

(11) 가 8 CT (16) CT 5
 가 , 가 가
 가 , 가 T1
 (12), T2
 가
 71% (17/24) (Fig. 1, 3).
 Phemister (13)가 , 가 T2
 가 (17).
 Valdazo (3)
 가
 가 71%
 (14),
 가 18 (69%)
 (10)가 T1
 (15). T2
 92% (16).
 CT 92% 가 ,



A



B

Fig. 2. Tuberculous arthritis of the right hip joint in a 32-year-old female.

Axial T2-weighted (A) image shows multiple, small conglomerated nodules in right inguinal area (arrow) and obturator externus muscle (arrowhead). These nodules reveal central low or intermediate signal intensity with peripheral high signal intensity rim. Minimal joint effusion is also noted.

Ultrasonography (B) shows well demarcated and round heterogeneous nodule with lateral sonic shadowing at right inguinal area, which was confirmed as tuberculoma by ultrasonography guided fine needle biopsy.

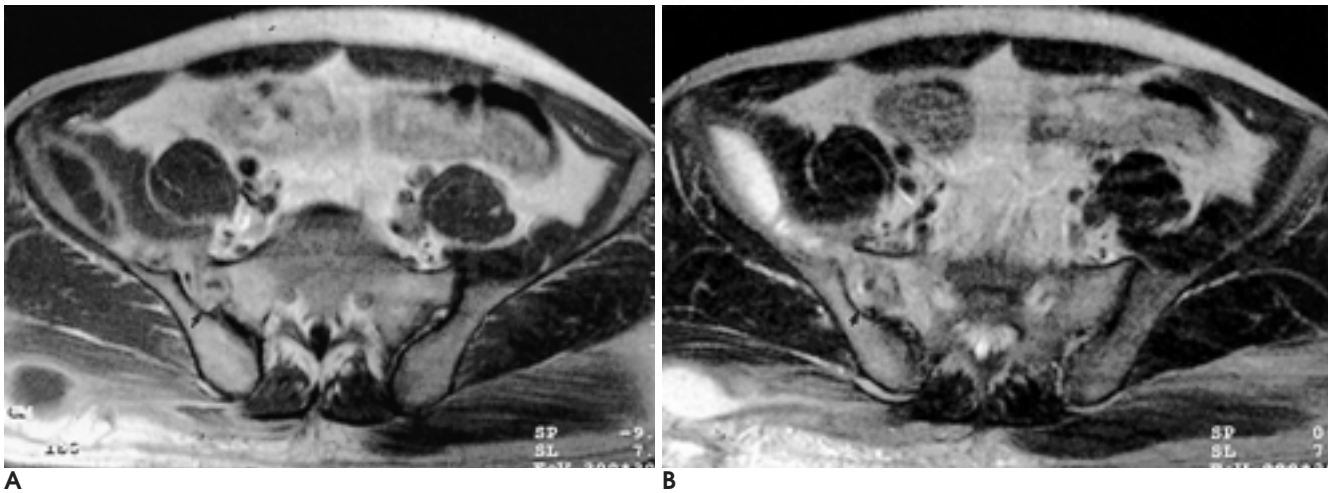


Fig. 3. Tuberculous arthritis of right sacroiliac joint in 46-year-old man.

Enhanced T1-weighted (A) and T2-weighted axial (B) image at sacroiliac joint level. Small nodule at right sacroiliac joint (arrow) shows peripheral high signal with central low signal intensity (T2WI) and only peripheral rim enhancement (T1- enhanced) suggesting tuberculoma. Adjacent right iliacus muscle area shows irregular peripheral wall enhancement with central necrosis suggesting abscess.

- Schultz (4) T2 가 8 1
- (5) 2 가 (6) 가
- 3 9 , 가 1 1:1
- 3 -9 T2 가
- (immobile) (free radical) T2
- (10, 17). 8 (6) 6 , 가 T1
- 1 6 가
- 4 , T2 T2 가
- T2 가
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MR Findings of Tuberculous Arthritis: Significance of Tuberculoma¹

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Purpose: To determine the magnetic resonance (MR) imaging findings of tuberculous arthritis, and the frequency in such cases with which tuberculoma occurs.

Materials and Methods: MR images of 26 patients (M:F, 14:12; mean age, 46.2 years) with pathologically proven tuberculous arthritis were retrospectively reviewed. The presence of joint effusion, subchondral erosion, synovial proliferation and soft tissue abscess, and whether the inner wall of this abscess was smooth, were assessed. In particular, we determined whether a nodular lesion which showed low SI on T1WI, central low SI with peripheral high SI on T2WI, and rim enhancement on contrast study, was a tuberculoma.

Results: The joints involved were those of the knee (n = 7), hip (n = 7), shoulder (n = 4), sacroiliac region (n = 3), elbow (n = 3), and ankle (n = 2). Joint effusion was noted in 15 cases (58%), and subchondral erosion in 24 (92%). synovial proliferation was found in 23 cases (88%), and soft tissue abscess in 24 (92%). The inner wall of this abscess was irregular in 17 cases (71%). A tuberculoma was present in intra- or extra-articular soft tissue in 18 cases (69%).

Conclusion: The MR findings of tuberculous arthritis were subchondral erosion, synovial proliferation, and soft tissue abscess. The presence of a tuberculoma in intra- or extra-articular soft tissue, a specific finding in tuberculous arthritis, was noted in 69% of our cases.

Index words : Tuberculosis, musculoskeletal

Joints, MR

Arthritis

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