

**Case Report**
**Open Access**

## Two Musculoskeletal Complications of HIV Infection

Mohammed Awad Eltoum Ahmed and Bridget Hodkinson

Division of Rheumatology, Department of Medicine, University of Cape Town and Groote Schuur Hospital, Cape Town, South Africa

**\*Corresponding author**

Mohammed Awad Eltoum Ahmed, Division of Rheumatology, Department of Medicine, University of Cape Town and Groote Schuur Hospital, Cape Town, South Africa, Mobile no: +27 (0)82 395 0503, Email Address: drbridget@gmail.com

**Received:** September 07 2020; **Accepted:** September 12, 2020; **Published:** October 16, 2020

**Keywords:** Reactive Arthritis, Osteonecrosis, HIV

**Introduction**

Human immune virus (HIV) infection is associated with a spectrum of rheumatological pathologies. We present this case report and discuss the two diagnoses.

**Case**

A 38-year HIV positive male, with a background of heavy alcohol use, presented with two weeks of pain and difficulty walking. Examination revealed a bedridden male with synovitis of the Right (R) shoulder, R knee and left (L) ankle, tender R sacroiliac joint (SIJ), and reduced L hip movements with severe pain. There was no enthesitis, dactylitis or skin changes.

Investigation revealed raised inflammatory markers, negative blood cultures, CD4 387 cells/mm<sup>3</sup> and negative Rheumatoid Factor. X-ray of the hips was normal; ultrasound excluded psoas collections. R knee fluid aspirate showed no crystals, and no organisms on microscopy or culture. Magnetic Resonance Imaging (MRI) showed R SIJ inflammation and L Hip Grade 1 osteonecrosis. R SIJ aspiration revealed no bacteria and negative tuberculosis (TB) smear and culture. Bedrest, analgesia, bisphosphonate infusion, and statin therapy together with intra-articular steroid injections resulted in marked improvement in pain and gait, and this was sustained at two months. Antiretroviral therapy was initiated.

**Conclusion**

This complex case of hip osteonecrosis together with an HIV-associated reactive arthritis demonstrates the spectrum of musculoskeletal complications of HIV infection, and the usefulness of MRI imaging to elucidate pathology when conventional radiography is normal.

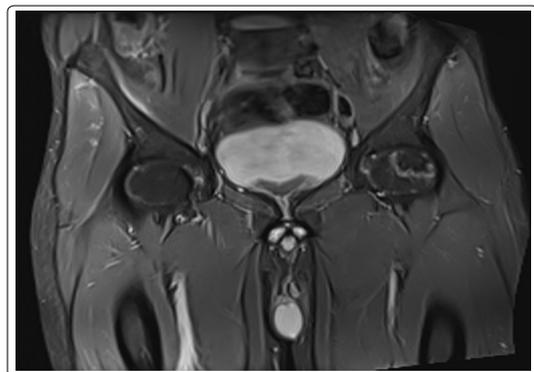
**Case Report**

A 38 year old male recently diagnosed with human immune virus (HIV), presented with two weeks of difficulty walking, and right (R) shoulder, ankle, hip and lumbosacral pain. His background history included pulmonary tuberculosis (TB) seven years earlier, treated for 6 months with combination antiTB therapy; cigarette smoking (10 pack-year history) and heavy alcohol use (>15 units per week). He reported no redness of the eyes, no bowel symptoms, no urinary symptoms or urethral discharge, no skin rashes, no sicca or Raynaud's phenomenon, no respiratory or cardiac symptoms and no significant family history.

Examination revealed a middle age male with normal vital signs but in significant pain. He was not pale, jaundiced or cyanosed, and chest, cardiovascular, abdomen, skin, fundoscopy and urine analysis were normal. There was synovitis of the right shoulder, knee and ankle, with very painful and restricted movement of the sacroiliac and hip joints. There was no rash, enthesitis or dactylitis. This patient gave consent for his case and images to be discussed and published in the scientific community.

**Investigations**

Blood investigations revealed a normocytic, normochromic anemia (haemoglobin 11.5 g/dl), leukocytosis (11.44 x 10<sup>9</sup>/L), platelet 380 X 10<sup>9</sup>/L, raised inflammatory markers with CRP 297 m/L and ESR 120 mm/h, CD4 count 387 cells/ mm<sup>3</sup>, normal uric acid and negative for rheumatoid factor (RF), anti-citrullinated protein antibody (ACPA). Human Leukocyte Antigen B27 (HLA B27) was negative. Blood, stool and urine culture were negative but specific tests for Chlamydia trachomatis were unfortunately not performed. Fluid aspirated from the right knee showed no bacterial or fungal growth and no crystals. Plain X-ray of the hips and pelvis was normal, and ultrasound examination showed no psoas abscess. Magnetic Resonance Imaging (MRI) of the pelvis showed right sacroiliitis and left hip osteonecrosis (figure 1). Aspiration of the sacroiliac joint showed no bacteria and no acid-fast bacilli, and cultures were negative.



**Figure 1:** Magnetic Resonance Imaging (MRI) of the hip and pelvis

**A:** Fatty infiltration and oedema of left femoral head consistent with grade 1 osteonecrosis



**B:** Right sacroiliac joint oedema with fluid in joint space representing unilateral sacroiliitis

### References

1. Mody GM, Parke FA, Reveille JD (2003) Articular manifestations of human immunodeficiency virus infection. *Best Pract Res Clin Rheumatol* 17: 265-287.
2. Adizie T, Moots RJ, Hodkinson B, French N, Adebajo AO (2016) Inflammatory arthritis in HIV positive patients: A practical guide. *BMC Infect Dis* 16: 100.
3. Shah KN, Racine J, Jones LC, Aaron RK (2015) Pathophysiology and risk factors for osteonecrosis. *Curr Rev Musculoskelet Med* 8: 201-209.
4. Pierce TP, Jauregui JJ, Cherian JJ, Elmallah RK, Mont MA (2015) Imaging evaluation of patients with osteonecrosis of the femoral head. *Curr Rev Musculoskelet Med* 8: 221-227.
5. Caramaschi P, Biasi D, Dal Forno I, Adami S (2012) Osteonecrosis in systemic lupus erythematosus: an early, frequent, and not always symptomatic complication. *Autoimmune Dis* 2012: 725249.
6. Borges AH, Hoy J, Florence E, Sedlacek D, Stellbrink HJ, et al. (2017) Antiretrovirals, Fractures, and Osteonecrosis in a Large International HIV Cohort. *Clin Infect Dis* 64: 1413-1421.
7. Mehta P, Nelson M, Brand A, Boag F (2013) Avascular necrosis in HIV. *Rheumatol Int* 33: 235- 238.
8. Luo RB, Lin T, Zhong HM, Yan SG, Wang JA (2014) Evidence for using alendronate to treat adult avascular necrosis of the femoral head: a systematic review. *Med Sci Monit* 20: 2439-2447.
9. Klumpp R, Trevisan C (2015) Aseptic osteonecrosis of the hip in the adult: current evidence on conservative treatment. *Clin Cases Miner Bone Metab* 12: 39-42.
10. Martinot P, Dartus J, Leclerc JT, Putman S, Girard J, et al. (2020) Hip survival after plain core decompression alone versus bone morphogenetic protein and/or bone marrow reinjection with core decompression for avascular osteonecrosis of the femoral head: a retrospective case control study in ninety two patients. *Int Orthop*.
11. Issa K, Pivec R, Kapadia BH, Banerjee S, Mont MA (2013) Osteonecrosis of the femoral head: the total hip replacement solution. *Bone Joint J* 95: 46-50.
12. Sigaux J, Semerano L, Nasrallah T, Nunes H, Bouvry D, et al. (2019) High prevalence of spondyloarthritis in sarcoidosis patients with chronic back pain. *Semin Arthritis Rheum*. 49: 246-250.
13. Ebrahimpour S, Bayani M, Moulana Z, Hasanjani Roushan

- MR (2017) Skeletal complications of brucellosis: A study of 464 cases in Babol, Iran. *Caspian J Intern Med* 8: 44-48.
14. Merjanah S, Igoe A, Magrey M (2019) Mimics of axial spondyloarthritis. *Curr Opin Rheumatol* 31: 335-343.
15. Tamaro G, Pastore S, Gortani G, Gregori M, Taddio A (2020) A fascinating rheumatologic association. *Rheumatology (Oxford)* 59: 1463.
16. Selmi C, Gershwin ME (2014) Diagnosis and classification of reactive arthritis. *Autoimmun Rev* 13: 546-549.
17. Rudwaleit M, van der Heijde D, Landewe R, Akkoc N, Brandt J, et al. (2011) The Assessment of SpondyloArthritis International Society classification criteria for peripheral spondyloarthritis and for spondyloarthritis in general. *Ann Rheum Dis* 70: 25-31.
18. Espinoza LR, Garcia-Valladares I (2013) of bugs and joints: the relationship between infection and joints. *Reumatol Clin* 9: 229-238.
19. Youssef PP, Bertouch JV, Jones PD (1992) Successful treatment of human immunodeficiency virus- associated Reiter's syndrome with sulfasalazine. *Arthritis Rheum* 35: 723-724.
20. Rudwaleit M, Braun J, Sieper J (2000) Treatment of reactive arthritis: a practical guide. *BioDrugs* 13: 21-28.

**Copyright:** ©2020 Mohammed Awad Eltoum Ahmed. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.