Rapidly progressive osteoarthritis presenting as acute limb shortening

William Dominic Marley, Angel Ruiz

Department of Trauma and Orthopaedics, Altnagelvin Area Hospital, Londonderry, UK

Correspondence to
Mr William Dominic Marley,
wmarley01@qub.ac.uk

DESCRIPTION

A 74-year-old woman was seen in outpatients with left hip pain in keeping with osteoarthritis. Clinical examination revealed an antalgic gait, decreased range of movement, marked crepitus within the joint and normal leg lengths. x-Ray revealed the cardinal signs of osteoarthritis (figure 1) and she was boarded for a total hip replacement.

On admission 9 months later, her main complaint was of a worsening limp with leg length discrepancy. Examination revealed a true leg length discrepancy of 3 cm. A repeat x-ray revealed total erosion of her left femoral head (figure 2). Inflammatory markers were normal and a myeloma screen was negative. Following work-up, she proceeded to total hip replacement (figure 3). Histology of the femoral head showed no evidence of malignancy.

Rapidly progressive osteoarthritis was initially described by Forestier in 1957.¹ Patients present with rapid destruction of the hip joint over a period of months. Radiographs show progressive destruction of both the femur and acetabulum with severe subchondral bone loss with minimal osteophyte formation, which may result in complete destruction of the femoral head as aforementioned.¹

Typically, patients are women with a mean age of 60–70 years. Differential diagnosis includes septic arthritis, neuropathic osteoarthropathy, seronegative arthritis, osteonecrosis and secondary osteoarthritis.^{2,3}

The authors would suggest that, due to the rapid progression of disease, these patients are not suitable for long waiting lists as increased bony destruction may lead to more technically demanding surgery with potentially less favourable outcomes.¹

Figure 1 Anteroposterior film of the pelvis showing osteoarthritic changes in the left hip.

Figure 2 Anteroposterior film of the pelvis showing severe bony destruction of the acetabulum and femoral head with minimal osteophyte formation.

Figure 3 Anteroposterior film of the pelvis demonstrating left total hip replacement with an effective 25 mm of shortening of the left femur.

Learning points

- ▶ Typically, patients with rapidly destructive hip osteoarthritis present with rapid destruction of the hip joint within months of the onset of symptoms.
- ▶ Sequential radiographs will show severe progressive joint destruction with marked joint space narrowing and extensive bone loss in both the femoral head and acetabulum.
- ▶ Owing to the rapid nature of disease progression, these patients should not be placed on a long waiting list. Delay to surgery can lead to severe bone destruction resulting in technically more difficult surgery with substantial depletion of bone stock.

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