# Disabling iatrogenic disorder

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## DESCRIPTION

A 74-year-old woman presented with a 9-month history of progressive groin and shoulder pain. She was prescribed a course of prednisolone by her general practitioner, for suspected polymyalgia rheumatica (PMR), with little benefit; C reactive protein (CRP) was 7 prior to starting steroids. The pain had become so severe that the patient was a wheelchair user when she attended the rheumatology clinic. She had a medical history of a meningioma excision, performed 18 months previously, which was followed by a prolonged course of high-dose steroids; she also had a history of treated hypothyroidism.

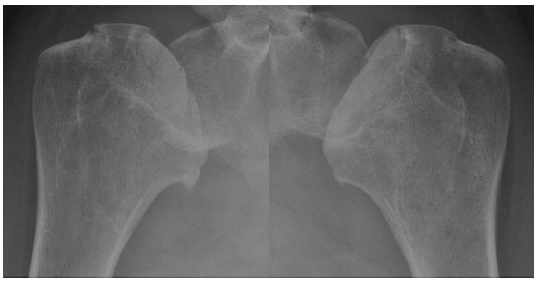

**Figure 1** X-rays of both shoulders demonstrating fragmentation and collapse of the humeral heads.

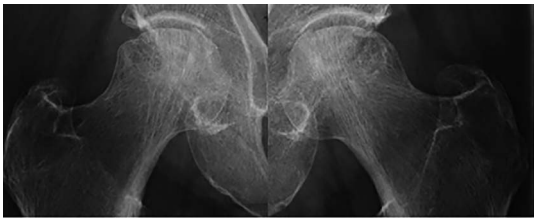

**Figure 2** X-rays of both hips with subtle evidence of femoral head collapse bilaterally.

Examination revealed a markedly restricted, and painful, range of hip and shoulder joint movement. Shoulder X-rays revealed deformities of the humeral heads (figure 1); pelvic X-ray was reported to show degenerative changes of the hips (figure 2). Blood tests demonstrated normal erythrocyte sedimentation rate, CRP, thyroid function tests and total protein; serum electrophoresis and urine Bence-Jones proteins were also negative. Neither PMR nor minor degenerative arthritis was felt to be sufficient to account for the patient's severe symptoms. The history of high-dose steroid use and humeral 'deformity' on X-ray prompted a diagnosis of avascular necrosis (AVN) to be considered.

Subsequent imaging, including MRI of the right hip (figure 3), confirmed the diagnosis of bilateral shoulder and hip AVN. In retrospect, collapse of the humeral heads is evident on X-ray (figure 1) and similar, but more subtle, changes are also evident on hip X-ray (figure 2).

Avascular necrosis of large joints is a relatively rare condition with an incidence in England of 1.4–3 cases per 100 000 people.[1] Of these cases, ~3% are thought to be multifocal,[2] involving three or more joints. Corticosteroids are the second most common cause of AVN, after trauma,[3] but account for 90% of multifocal AVN cases.[2]

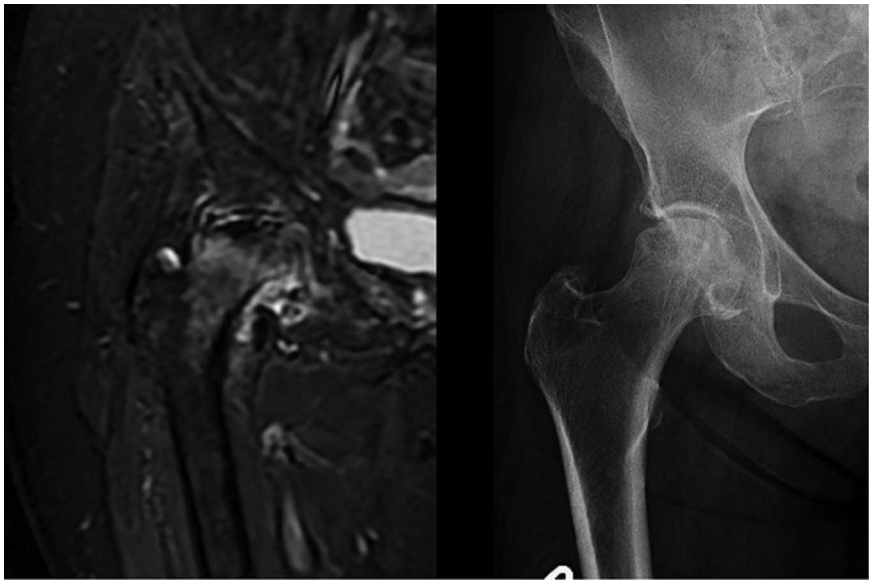

**Figure 3** X-ray and short T1 inversion recovery MRI of right hip clearly demonstrating collapse of the femoral head, as well as oedema.

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## Learning points

- Avascular necrosis (AVN) can cause an oligoarthropathy.
- Multifocal AVN should be considered as part of the differential diagnosis in patients presenting with severe large joint pain.
- X-ray features can be subtle in early AVN, and MRI or CT scanning should be considered in suspected cases.

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**Patient consent** Obtained.

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