

Letters to the Editor

Imaging of pelvic fracture in a patient with psoriatic arthritis

SIR, We read with interest the recent article by Dasgupta *et al.* [1] illustrating the diagnostic and therapeutic difficulties involved in the management of sacral fracture. We report similar problems in the assessment of a patient with psoriatic arthritis, osteoporosis and pelvic fracture.

The patient was a 51-yr-old male in-patient with a 32 yr history of psoriatic arthritis. He had been treated in the past with methotrexate, sulphasalazine and cyclosporin. For the previous 2 yr, he had been maintained on oral prednisolone, at an average dose of 10 mg daily. He had a past history of Colles' fracture in the previous year. He denied excess alcohol intake.

He was admitted for control of his psoriasis. During his stay, he developed a large right femoral deep vein thrombosis for which he was warfarinized. Following this, he had several low-impact falls and developed a gradual onset of right groin pain radiating down the centre of the right leg. The pain was exacerbated by standing and sitting, but relieved by lying flat. Examination of the hips was normal and there was no pain on springing the pelvis. He developed severe groin and leg pain when asked to stand for more than 15 s. Neurological examination of the legs was normal.

A plain X-ray of the pelvis and hips was reported as normal (Fig. 1). Wedge fractures of D12 and L1 were seen on the lumbar spine films. An MRI scan of the pelvis, performed to exclude intra-pelvic pathology causing pelvic vein obstruction and pain, was performed next. This too was normal (Fig. 2). A ⁹⁹technetium bone scan was performed. This showed several areas of increased uptake in the pelvis (Fig. 3). A hotspot was also seen in the sternum, together with several in the

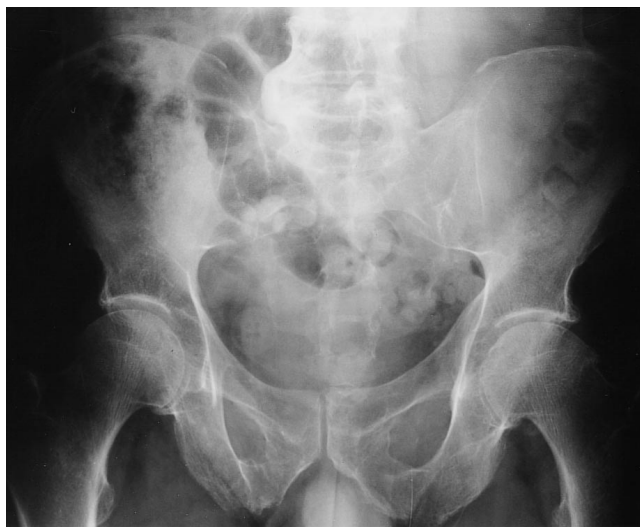
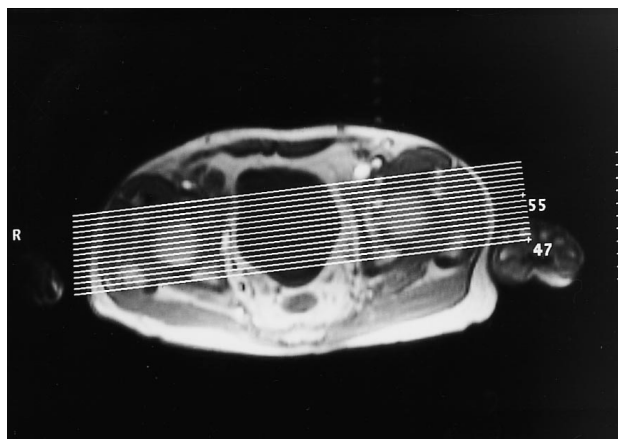
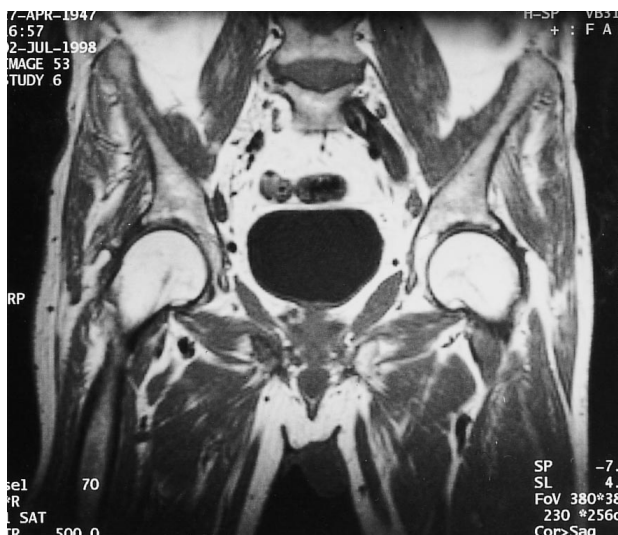


FIG. 1. Plain X-ray of the pelvis.



(a)



(b)

FIG. 2. (a) MRI of the pelvis (scout view). (b) MRI of the pelvis (coronal view).

ribs. Increased uptake was seen in the left wrist, corresponding to clinical evidence of arthritis here. A CT scan of the pelvis showed an obvious fracture of the inferior pubic ramus (Fig. 4). A DXA scan confirmed severe osteoporosis, with *T* scores of -3.7 s.d. at the hip and -3.9 s.d. at the spine. Further investigations showed a normal full blood count, ESR 105 mm/h, calcium 2.4 mmol/l, alkaline phosphatase 178 IU/ml (normal range 38–126), 25-hydroxyvitamin D 15 nmol/l (normal range 40–195) and parathyroid hormone 18 ng/l (normal range 10–64). A myeloma screen was negative.

Treatment with salmon calcitonin 100 IU on alternate days was commenced and an i.v. infusion of pamidronate 45 mg given. The patient was commenced on calcium and vitamin D supplements. Opiate analgesia was required for a further 6 weeks, over which time the

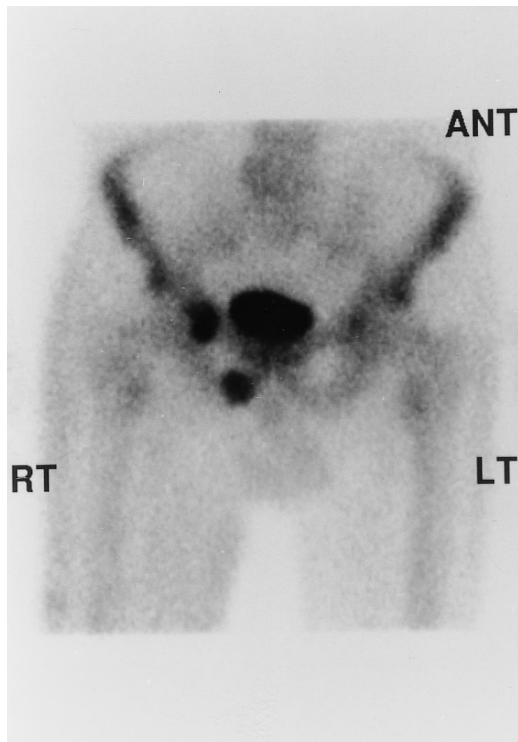


FIG. 3. ^{99}Tc bone scan of the pelvis.



FIG. 4. CT scan of the pelvis.

diagnosis of pelvic pain, and confirms the value of bone scintigraphy and CT scanning in making the diagnosis.

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1. Dasgupta B, Shah N, Brown H, Gordon TE, Tanquary AB, Mellor JA. Sacral insufficiency fractures: an unsuspected cause of low back pain. *Br J Rheumatol* 1998;37:789–93.
2. Schapira D, Militeanu D, Israel O, Scharf Y. Insufficiency fractures of the pubic ramus. *Semin Arthritis Rheum* 1996;25:373–82.

patient's pain subsided sufficiently for him to be discharged.

It is likely that our patient sustained pelvic fractures secondary to trauma to his osteoporotic skeleton. Like sacral fractures, pubic rami fractures can be difficult to detect clinically and may not be apparent on plain X-ray. MRI imaging has been used to detect sacral insufficiency fractures, but its use in pubic rami fractures remains unproven [2]. The normal MRI scan arose in this case because the cuts did not extend to the pubic rami; this in turn arose because of failure to identify the site of interest clinically. Our case illustrates the importance of considering pelvic fracture in the differential