

CASE REPORT

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Bilateral acetabular fracture without trauma

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Summary In the absence of trauma fracture of the acetabulum is an extremely rare injury. We describe a 70 year old man who spontaneously developed fractures in both acetabulae due to bony insufficiency. It was successfully treated by bilateral total hip replacement.

Résumé La fracture acétabulaire en absence d'un traumatisme due à insuffisance de la structure osseuse est un événement extrêmement rare. On décrit un cas de fracture spontanée bilatérale traitée avec succès par prothèse de hanche.

Introduction

Bilateral acetabular fractures in the absence of trauma are rare. We have encountered a man with systemic osteoporosis who developed such injuries.

Case report

A 70-year-old man with systemic osteoporosis had a sudden onset of bilateral pelvic pain, in the absence of trauma, which became worse when he stood or walked. Standard radiographs were reported as not showing a significant bony lesion, and he was treated with bed rest. One month later, he was admitted to our ward with persisting pain and inability to walk. Radiographs and specific acetabular views were taken which showed bilateral fractures of the acetabulum (Fig. 1): Scintigraphy demonstrated an increase of acetabular uptake. A CT scan showed the extent of the lesions (Fig. 2). Surgical treatment was by bilateral hip replacement. There was complete resolution of pain and full functional recovery (Fig. 3). One year from operation (Fig. 4), the Harris hip score was 91 on the right side and 94 on the left. The osteoporosis has been

treated by biphosphonates. The efficacy of this treatment is being monitored by pyridine cross-links and galactosylhydroxylysine (Fig. 5).

Discussion

An acetabular fracture due to bony insufficiency in the absence of high or low energy traumas is extremely rare and usually seen in women [3, 6]. We have not found mention in the literature of a male patient. The diagnosis may be missed because clinical examination alone may be inconclusive, and standard films appear normal for a reasonable period [5, 7]. In our patient both fractures were initially missed.

Acetabular fractures should be considered, especially in elderly females, when there is a sudden onset of pain in the groin on weightbearing. Increased radionuclide uptake in the acetabulum will support this diagnosis, and computed tomography and MRI are useful if the diagnosis remains in doubt.

The treatment of these lesions is by total hip replacement. It should be performed as soon as possible in order to obtain the best functional result.

Treatment of osteoporosis with biphosphonates can be monitored with standard radiographs, computerised bone densitometry, and biochemical bone markers, such as hydroxyproline, pyridine cross-links and galactosylhydroxylysine. The capability of biphosphonates to reduce bone loss in osteoporosis and other bone diseases is well known [1, 2, 4].

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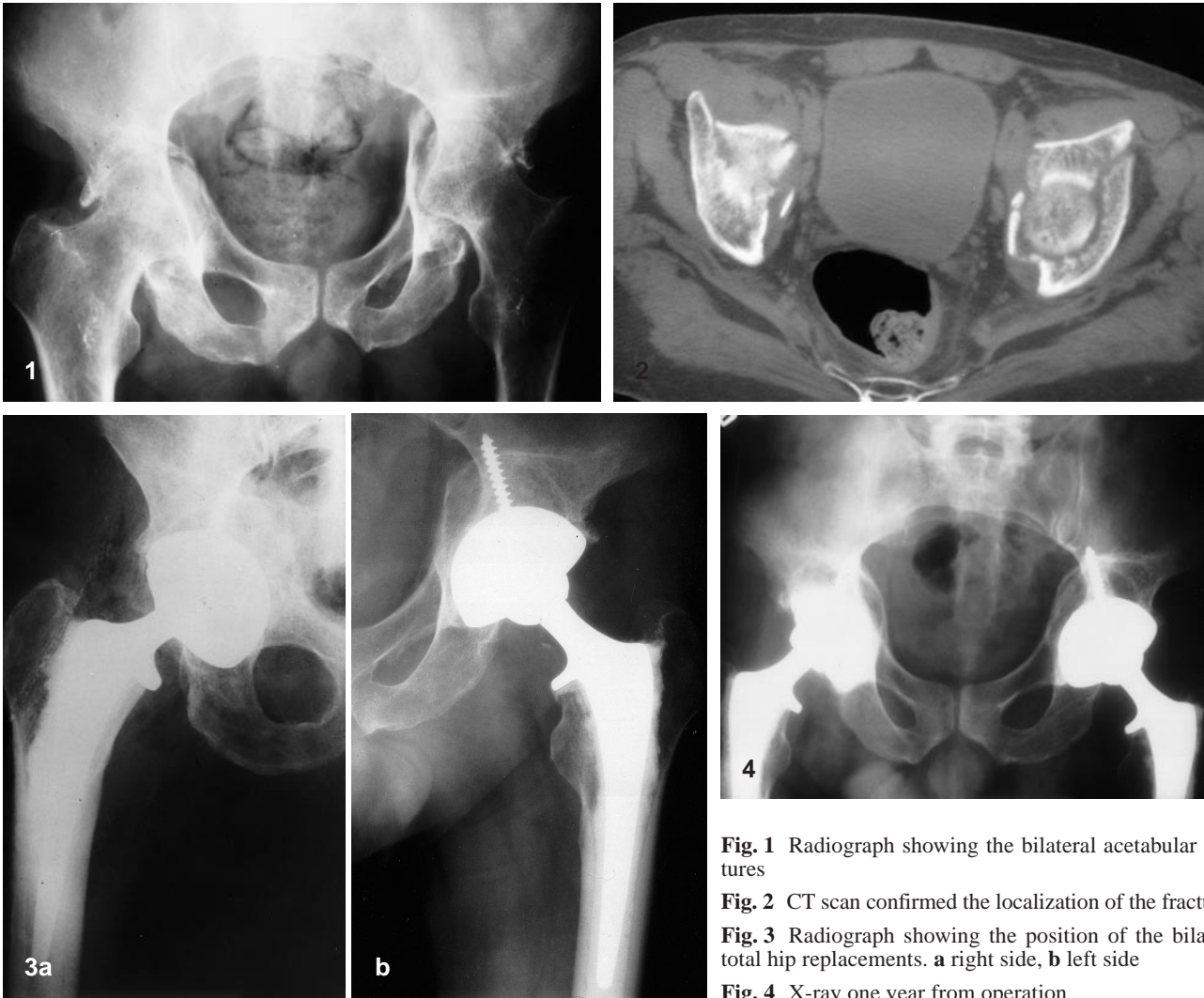


Fig. 1 Radiograph showing the bilateral acetabular fractures

Fig. 2 CT scan confirmed the localization of the fractures

Fig. 3 Radiograph showing the position of the bilateral total hip replacements. **a** right side, **b** left side

Fig. 4 X-ray one year from operation

Bone markers urinary excretion

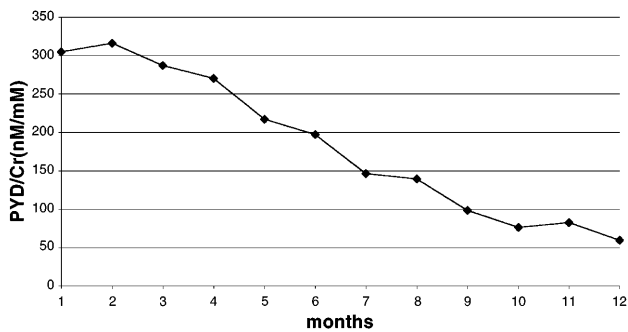


Fig. 5 Pyridine cross-link (PYD/Cr) urinary values in monitoring medical therapy with bisphosphonates

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