

CASE REPORT

Ömer Akçalı · Can Koşay · İzge Günel
Emin Alıcı

Bilateral trochanteric fractures of the femur in a patient with chronic renal failure

Accepted: 29 November 1999

Abstract We report a spontaneous intertrochanteric fracture with bilateral avulsion of the greater trochanter in a patient with chronic renal failure.

Résumé Nous rapportons une cas de fracture intertrochantérienne spontanée avec avulsion bilatérale du grand trochanter chez un malade insuffisant rénal chronique.

Case report

A 73-year-old man suffered mild left hip pain, 5 years after being diagnosed as having chronic renal failure. Radiological examination revealed an undisplaced intertrochanteric fracture of the left femur. There was no history of trauma, seizure or steroid medication. He had a moderate anaemia and serum creatinine, urea and parathormone levels were 5.8 mg/dl (*N*: 0.5–1.6 mg/dl), 56 mg/dl (*N*: 7–21 mg/dl) and 60 pg/ml (*N*: 9–60 pg/ml), respectively. Serum levels of calcium and phosphorus were within normal limits. Internal fixation with a dynamic hip screw was performed and the patient was able to walk with crutches 2 weeks after the operation.

The patient was re-admitted 1 month later with pain in both hips, dominantly on the right side. Radiological examination showed an undisplaced intertrochanteric fracture of the right femur with bilateral avulsions of the greater trochanters (Fig. 1). A detailed history revealed an uncontrolled seizure during the preceding period. Serum creatinine, urea and parathormone levels were 5.2 mg/dl, 45 mg/dl and 54 pg/ml, respectively. The patient died from cardiopulmonary arrest during the preoperative period.



Fig. 1 Radiograph taken at the second admission. Note a right-sided intertrochanteric fracture and bilateral avulsions of the greater trochanters

Discussion

Bilateral fractures of the proximal femur are rare and most commonly occur in the femoral neck. Review of the literature revealed only one previous case of bilateral intertrochanteric fractures of the femur [7]. To our knowledge, this is the second report of such fracture.

Apart from trauma [4] and abnormal anatomy [1], all cases of bilateral fractures of the proximal femur are

Ö. Akçalı · C. Kosay · I. Günel · E. Alıcı
Department of Orthopaedics, Dokuz Eylül University,
School of Medicine, Izmir, Turkey

Ö. Akçalı (✉)
Korutürk Mh. Lodos Sk., Yorgancıoğlu Sitesi, 9. Blok,
K:1, D:3, Balçova/35330, Izmir, Turkey
e-mail: akcali@netone.com.tr
Tel: +90-232-2786282, Fax: +90-232-2772277

caused by osteoporosis [3, 5] or seizures [6–8]. In patients with chronic renal failure both osteoporosis and uraemic seizure are seen [2, 6].

At the first admission of our patient, a detailed history excluded seizures, but generalised osteoporosis was detected. At the second admission, there was a history of seizures and radiographs revealed bilateral avulsion fractures of the greater trochanter.

References

1. Annan IH, Buxton RA (1986) Bilateral stress fractures of the femoral neck associated with abnormal anatomy: a case report. *Injury* 17:164–166
2. Crutchlow WP, David DS (1971) Skeletal complications of kidney disease. *Clin Orthop* 74:209–219
3. Gerster JC, Charhon SA, Jaeger P, Boyvyn G, Briancon D, Rostan A, Meunier PJ (1983) Bilateral fractures of femoral neck in patients with moderate renal failure receiving fluoride for spinal osteoporosis. *BMJ* 287:723–725
4. Günel I, Gürsoy Y, Araç Ş (1991) Traumatic bilateral fractures of the femoral neck (a case report). *Hacettepe J Orthop Surg* 1:4
5. Köse N, Özçelik A, Günel I, Seber S (1998) Spontaneous bilateral hip fractures in a patient with steroid-induced osteoporosis – a case report. *Acta Orthop Scand* 69:195–196
6. Madhok R, Rand JA (1993) Ten-year follow-up study of missed, simultaneous, bilateral femoral-neck fractures, treated by bipolar arthroplasties in a patient with chronic renal failure. *Clin Orthop* 291:185–187
7. Powell HDW (1960) Simultaneous bilateral fractures of the neck of the femur. *J Bone Joint Surg Br* 42:236–252
8. Taylor LJ, Grant SC (1985) Bilateral fractures of the femoral neck during a hypocalcemic convulsion: a case report. *J Bone Joint Surg [Br]* 42:536–537