Background Insufficiency fractures may occur in patients with long-standing inflammatory joint diseases (IJD). Activity of the disease, immobilisation and prolonged corticosteroid treatment are the main predisposing factors. In most cases the fractures are easily diagnosed, in others the diagnosis is delayed, as they may mimic exacerbation of the underlying disease or other pathological conditions.

Objectives To evaluate the clinical profile of patients with initially misdiagnosed insufficiency fractures and to investigate the causes of the diagnostic delay.

Methods The files of 12 patients with IJD who were referred for presumed exacerbation of the rheumatic disease and were subsequently diagnosed as suffering from insufficiency fractures were reviewed and relevant parameters were analysed.

Results Most of the patients were aged (mean 68.5 years) and were suffering from IJD for long periods of time (mean 16.6 years). All of them received prolonged corticosteroid therapy (mean 9.5 years) in doses up to 15 mg prednisone a day). Five patients had previous insufficiency fractures. The new fractures were located in the distal tibia, femoral neck, head of humerus, lesser trochanter of the femur, sacrum, pubic rami, acetabulum and metatarsus. The initial diagnosis was: acute synovitis (8 patients), trochanteric bursitis (1), radiculopathy (1), tendinitis (1) and avascular necrosis of bone (1). The diagnostic delay was one to eight weeks (mean 2.7). In seven patients the correct diagnosis was reached by initial radiographs and in five by bone scintigraphy and CT. Treatment with bed rest, non weight bearing, NSAID (all patients) and calcitonin (7 cases) resulted in partial (8 patients) or complete recovery (4 patients).

Conclusion Insufficiency fractures can mimic disease activity or other musculoskeletal pathological conditions in patients with IJD. Clinician's awareness may prevent unnecessary investigations and therapy.

REFERENCES

- 1 Lingg GM, Soltesz I, Kessler S, Dreher R. Insufficiency and stress fractures of the long bones occurring in patients with rheumatoid arthritis and other inflammatory diseases, with a contribution on the possibilities of computed tomography. *Eur J Radiol.* 1997;**26**:54-63
- 2 Alonso-Bartolome P, Martinez-Taboada VM, Blanco R, Rodriguez-Valverde V. Insufficiency fractures of the distal tibia and fibula. *Semin Arthritis Rheum.* 1999;**28**:413-20

AB0185 EVALUATION OF PHYSICAL CAPACITY AND DISABILITY IN OSTEOPOROTIC WOMEN

I Lombardi Junior, LM Oliveira, CR Monteiro, YQ Confessor, TL Barros, J Natour. Departamento de Medicina, Universidade Federal de São Paulo, São Paulo, Brasil

10.1136/annrheumdis-2001.624

Background The vertebral osteoporotic fractures result in increased kyphosis angle. This alteration could led to disturbance in physical capacity.

Objectives Our objective was to evaluate the physical capacity and disability in a group of osteoporotic patients.

Methods Fifteen women with osteoporosis and vertebral fracture (G1), 20 women with osteoporosis without vertebral fracture (G2) and 20 normal women (G3) were selected. The variables of physical capacity were measured in the belt conveyor. The patients stayed 4 min in standing quietly, 4 min walking at 3 Km/h and 10 min walking at 4 Km/h. It was also applied the questionnaire SF-36.

Results Our results showed that women with osteoporosis and vertebral fracture had increased kyphosis angle (median = 60 degrees) and the G2 was 43.5 degrees and G3 was 37 degrees.

G1 showed oxygen consumption (VO₂ (Kg)), METS and energy expenditure (Kcal/h) in standing quietly bigger than G2 (G1 vs. G2, p = 0.016; p = 0.017 and p = 0.02, respectively). There wasn't significant difference in the energy expenditure during the walking between three groups.

The energy expenditure during walking at 3 Km/h and at 4 Km/h, showed correlation with thoracic kyphosis in G1 (p = 0.01 and p = 0.017, respectively).

It wasn't find difference in SF-36 between three groups.

Conclusion Energy expenditure showed correlation with the angle of thoracic kyphosis. Patients with or without osteoporosis had the same energy expenditure during the walking. The SF-36 score was similar between three groups.

AB0186 CHANGES IN BONE TURNOVER MARKERS AND VITAMIN D RECEPTOR (VDR) GENOTYPE DURING GLUCOCORTICOID THERAPY

¹M Gantes, ¹A Arteaga, ²Y Barrios, ¹I Ferraz, ¹A Alvarez, ¹B Rodríguez-Lozano, ¹D Batista, ¹E Trujillo, ¹T González. ¹Rheumatology, ²Research Unit, Hospital Universitario de Canarias, La Laguna, Spain

10.1136/annrheumdis-2001.625

Background Adverse effects of glucocorticoids (GCT) upon the skeleton and markers of bone turnover have been documented but the mechanisms remain unclear.

Objectives To test of early changes in markers of bone turnover for three months of GCT and the influence of VDR.

Methods In fifty three patients (age 41,7 SD 12,6) with inflammatory diseases who received a dose greater than 5 mg of prednisone or equivalent (mean dose 1,9 g) for 3 months, the serum levels of parathyroid hormone (PTHi), 25-dihydroxyvitamin D, (Vit D), osteocalcin, alkaline phosphatase, and urine ratios of calcium/creatinine and deoxypyridinoline/creatinine, were determined baseline and 3 months after GCT. VDR genotypes were determined by PCR to demonstrate the presence (b) or absence (B) of a restriction target for Bsm I, in intron 7.

Results The patients with high baseline levels of PTHi showing lower levels of baseline VitD, (p = 0,003) and 3 months after of GCT the patients with lower levels of PTH have the higher levels of Vit D, (p = 0,001, r = 0,54). There were no significant differences in biochemical markers of bone remodelling between the three genotypes: bb, BB, and Bb VDR before and 3 months after GCT.

Conclusion These preliminary results suggest not effect of VDR genotype in the changes of the biochemical markers of bone remodelling for glucocorticoid therapy.

AB0187 PERCUTANEOUS VERTEBROPLASTY IN RHEUMATOLOGY

MC García Gómez, C Galisteo, N Navarro, M Castellanos, C Alegre, M Rovira, J Serra, LL Mebarak. *Rheumatology, Hospital Malalties Reumàtiques, Barcelona, Spain*

10.1136/annrheumdis-2001.626

Background

Objectives The percutaneous vertebroplasty (PVP) consists in the percutaneous injection of a biomaterial, plimethylmethacrylate, inside of vertebral body, with the idea of consolidating the vertebral body and to relieve the pain. It is indicated in the treatment