of the persistent pain of vertebral body injury, mainly the aggressive hemangioma, the tumoural processes (myeloma and metastasis) and also in the osteoporotic vertebral collapse. We present our experience in this technique.

Methods We show seven clinical cases, with radiology pictures, about PVP guided by TAC, under local anaesthesia and general sedation, which first indications were to relieve the pain. There are 5 women with an average age of 65 years (40–80) and osteoporotic collapse vertebral. one of them with an hemangioma located in D12 also, a man 72 years old with an hemangioma in L3 and a man 85 years old with a metastasis in L2 secondary to renal tumour.

Results In the seven cases we got to relieve the pain before, the consolidation of the vertebral body, the reduction of the hospitalisation period and saving to have analgesic drugs. In none of them we had complications, except for a case that we caused leakage of cement into adjacent disks, without secondary effects. In the case of the vertebral metastasis the posterior wall was fractured and pushed in the channel, but we didn't cause leakage of cement into the channel.

Conclusion The PVP has been an effective technique in the treatment of the persistent pain in the osteoporotic vertebral collapse, vertebral hemangioma and tumoural process in our patients. It could be an alternative good treatment, and besides it allows an earlier mobilisation, as it prevents the apparition of deformities and possible secundaries complications about this. This is not an expensive procedure, with some possible risk derivated from the technique. Results for long-term follow-up are not yet known and we should make controlled studies to specify which patients could be benefited by technique.

AB0188 BONE MINERAL DENSITY(BMD), SERUM CALCIDIOL AND KNEE OSTEOARTHRITIS

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Background Relationship between knee osteoarthritis (OA) and bone mass has brought a great interest. Serum calcidiol (CS) low level has been associated with a higher incidence and faster progression of OA in elderly women, but this relation has not been defined in young postmenopausal women.

Objectives The aim of the study was to determine the prevalence of knee OA in postmenopausal women and its relationship with bone density and CS levels.

Methods Prospective study realised in 89 women (mean age $\pm$ 5 years: range:47–66), all of them being diagnosed of natural menopause for at least 2 years before they were included in this study.(mean value of 7.9 ± 2). They were recruited at a rheumatology consultancy. CS levels were determined by RIA, along the winter time because of the lest sunny hours during that period. Two critical values were established (<10 , to calculate deficit prevalence. BMD was measured in lumbar spine and hip with DEXA (Hologic QDR 1000). Patients had to fulfil the WHO criteria to be diagnosed of osteoporosis. Knee OA was defined by a grade >2 in Kellgren-Lawrence radiologic scale. Prevalence difference was analysed by contingency tables.

Results A total of 58 women had OP while 31 had normal BMD. SC mean value was 13 ± 7.1 ng/ml and there were no significant differences comparing osteoporotic (OP) women with non-OP women. Knee OA prevalence was 65 (73%). In the OP

group and 80.6 in the non-OP. group. <10 and 20 ng/ml CS deficit prevalence was 38.7% and 61.3% respectively women with knee OA and 39% and 78.3% respectively in women without knee OA.

Conclusion No inverse relationship was found between OP and knee OA in our group. CS deficit was not associated with a higher prevalence of knee OA in young postmenopausal women.

AB0189 BONE TURN-OVER AND THE INFLUENCE OF LOW DOSE GLUCOCORTICOSTEROIDS ON BONE MASS IN RHEUMATOID ARTHRITIS PATIENTS

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Background

Objectives The present study has been undertaken to evaluate bone turn-over in rheumatoid arthritis (RA) patients as well as the influence of low dose glucocorticosteroids (GCS) on bone mass loss.

Methods Ninety patients with establish RA has been investigated. The patients have been divided into two groups: 44 patients treated with GCS (age 52.5 ± 12.4 years, disease duration 122 ± 102 months, total dose of GCS, equivalent to prednisone -7.4 ± 8.3 g) and 46 patients who were not treated with GCS (Age 54.3 ± 9.7 years, disease duration 134 ± 120 month). Fifty patients have been assessed twice (after 12 month). Bone mineral content and bone mineral density have been determined in all patients in distal forearm. Additionally, some biochemical markers of osteoporosis: osteocalcin, alkaline phosphatase-bone formation, carboxyterminal telopeptides of type I collagen (CTx), procollagen type I carboxyterminal propeptide (PICP), deoxypyridynoline and some proinflammatory cytokine: IL-1a, IL-6, TNF-alpha, GM-CSF has been determined. No difference in bone metabolism between RA patients receiving GCS treatment and those treated without GCS was shown.

Results

Conclusion It is concluded that anti-inflammatory effect of GCS may balance the direct effect of GCS on bone mass in RA patients, particularly those with short term treatment.

AB0190 IS BONE MASS AND BONE LOSS RELATED TO LONG-TERM GLUCOCORTICOSTEROIDS IN RHEUMATOID ARTHRITIS AND LUPUS ERYTHEMATOSUS PATIENTS?

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Background

Objectives The purpose of this study was to determine the correlation between chronic active inflammatory process and long-term glucocorticosteroids therapy (GCS) and bone loss in patients (pts) with rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE).

Methods We have studied a sample of 128 women (90 RA pts and 38 SLE pts). All SLE pts and 44 RA pts were on chronic GCS (disease duration and duration of GCS therapy was: 108 ± 82 months and 122 ± 102 months, respectively). Total dose of GCS was 25.3 ± 28.19 g in SLE group and 7.4 ± 8.3 g in RA

group. BMD of the forearm was measured by DXA using DTX-200 and QUS parameters by DTU-ONE. BMD of lumbar spine and the hip were measured by DXA using ECLIPSE densitometer. Disease activity was assessed by measuring serum levels of proinflammatory cytokines (IL-1a, IL-6, TNF-alpha, GM-CSF) and acute phase markers (ESR, CRP, AGP, AGP-RC, ACT).

Results In RA pts on GSC therapy the disease activity was lower and also bone turnover was decreased. Moreover, in SLE pts with the highest dosage of GCS and the longest duration of the therapy the decrease in bone mass and the bone loss was the lowest.

Conclusion Our results show questionable correlation between bone mass and bone loss in patients with chronic connective tissue diseases on long-term and low-dose corticosteroids therapy. Nevertheless, in long-term GCS treatment of RA pts and SLE pts bone decomposition is probably higher than anti-inflammatory effect.

AB0191 PREVALENCE OF OSTEOPOROSIS AMONG FEMALE SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background It has been reported that bone mineral density (BMD) is significantly reduced in premenopausal SLE patients as compared to controls and that 12–25% of such patients are considered to have osteoporosis (OP). Furthermore, SLE patients have a 5-fold probability of sustaining a fracture as compared to the normal population. Long term glucocorticoids (GC) and immunosuppressive drugs are likely to play a major role in the pathogenesis of bone loss.

Objectives Aim of the present study was to assess BMD and OP prevalence among ambulatory female SLE patients with respect to a normal population.

Methods Thirty-two pre- (mean age 36 ± 9 years) and 14 postmenopausal (mean age 57 ± 8) patients have been enrolled so far. Exclusion criteria were: any other disease known to affect bone mass, renal insufficiency (serum creatinine > 2 mg/dl for > 6 months), any treatment for > 1 month for the prevention and treatment of bone loss, excluded calcium and vitamin D supplementation. Lumbar and femoral BMD were measured by dual x-ray absorptiometry (DXA). All patients were receiving GC at the time of the study. Variables included were: body mass index, disease duration, activity (ECLAM) and damage (SLICC), duration of GC treatment, cumulative dose of GC (either by pulse therapy and daily oral dose), and use of the immunosuppressive agent cyclophosphamide.

Results In premenopausal patients mean lumbar BMD was 0.96 ± 0.13 g/cm² (mean T-score -0.8 ± 1.2), and femoral BMD was 0.87 ± 0.19 g/cm² (T-score -0.8 ± 1.1); in postmenopausal patients lumbar BMD was 0.85 ± 0.13 g/cm² (T-score -1.8 ± 1.2) and femoral BMD 0.84 ± 0.11 (T-score -1.2 ± 0.9). OP, defined as a T-score below 2.5 SD compared to a reference population of young healthy women in at least one region of measurement, was detected in 4 (12.5%) premenopausal and in 3 (21.4%) postmenopausal patients. Comparison to the normal population and the correlations between BMD and the variables included will be evaluated only after the completion of the recruitment.

Conclusion These preliminary results show in our SLE patients a prevalence of OP which is similar to that reported in other series. The role of the variables included in the analysis will help understand the pathogenesis of bone loss.

AB0192 INFLUENCE OF EXERCISE ON BONE MINERAL DENSITY

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Background Parameters of the ideal exercise programs, such as type, frequency, intensity and duration of activity are unknown. When women with sedentary way of life (< 30 min of exercise per week) began a strenuous training program, bone mass increased significantly. Regular physical activity may help to maintain skeletal integrity throughout life and possibly reduce the long-term risk for fracture. Exercise intervention may provide modest increases in bone mass, but after one year period of detraining, BMD had returned to baseline, indicating that exercise must be sustained for bone mineral improvements to persist.

Objectives The aim of study was to assess the effects of our exercise program on bone mineral density in the prevention and treatment of osteoporosis.

Methods We developed a exercise program in Institute of Rheumatology and the patients with low bone mineral density (BMD) exercised 3 times a week (for 4 weeks). After that period patients continued regularly with exercise at home. BMD was measured by dual x-ray absorptiometry (Lunar DXA system).

Results Group of 24 pts who only exercised without taking any drugs for osteoporosis, mean age 57.38 ($46-73$) years and mean BMD 0.915 ± 0.12 gr/cm² with average T score -2.40 ± 0.98 . The control DXA was done after average period of 10, 3 months. BMD was increased to mean 0.925 ± 0.10 gr/cm² (1.5%), and T score to -2.28 ± 0.88 (3.7%), (N. S.) Sixteen patients with BMD 0.923 ± 0.07 gr/cm² did not continued with exercising, and after average 11,7 months BMD was decreased to 0.904 ± 0.06 gr/cm² (2.1%); ($t = 2.21$; $p < 0.05$)

Conclusion Our result suggests that exercise have a positive effect on BMD even without medical therapy. It is necessary to continue with exercise at home because BMD decreased more than returned to baseline.

OP0111 TREATMENT OF ESTABLISHED CORTICOID-INDUCED OSTEOPOROSIS BY 3-MONTHLY INTRAVENOUS IBANDRONATE INJECTIONS

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Background Long-term anti-inflammatory therapy with corticosteroids (CS) leads to decreased formation and increased resorption of bone, i.e. to corticoid-induced osteoporosis (CIO). Several recent studies with etidronate, alendronate and risedronate has proven the efficacy of oral bisphosphonate (BP) treatment to increase bone mineral density (BMD) and reduce fracture risk in these patients. Since chronically ill patients with CIO often take multiple oral medications, an injectable BP may improve compliance and therapeutic results.

Objectives