THU0498

CORE ENDURANCE AND POSTURAL STABILITY IMPAIRMENTS IN OSTEOPOROTIC WOMEN: A CASE-CONTROL STUDY

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Background: Crosstalk between bone and muscle has been focused, lately.¹ Any impairment in bone quality may affect core muscle endurance and whole postural control.^{2,3}

Objectives: This study aimed to compare core muscle endurance and postural stability in women with and without osteoporosis.

Methods: Women with (n: 40, age: 59.16±6.83 years, body mass index (BMI): 31.46±5.44 kg/m²) and without osteoporosis (Controls, n: 36, age: 56.10±7.17 years, BMI: 33.81±5.32 kg/m²) were recruited. Core endurance was assessed with McGill's trunk muscle endurance tests in seconds.⁴ Postural stability were evaluated with Biodex Balance System SD in static-dynamic, eyes-open and closed conditions. Independent sample *t* and Mann Whitney U tests were used for analysis.

Results: The ages and BMI of the groups were similar (*p*>0.05). The following scores were found respectively in osteoporotic women and controls: the endurance of trunk flexor [15.0 (20.0)/17.5 (15.2) s]; back extensor [9.0 (16.0)/12.5 (22.2) s], right lateral [0.0 (7.0)/6.5 (20.0) s] and left lateral muscles [0.0 (8.0)/5.0 (20.0) s], static eyes-open [1.93±0.80/1.44±0.86] and eyes-closed [2.46±1.71/1.68±0.73], dynamic eyes-open [3.08±1.95/2.86±1.39] and eyes-closed [6.31±2.31/5.40±1.24] postural stability. Lateral trunk muscle endurance decreased, static and dynamic eyes-closed instability increased in women with osteoporosis in comparison to women without osteoporosis (*p*<0.05). No differences were found in trunk flexor and back extensor muscle endurance, and static and dynamic eyes open stability scores (*p*>0.05).

Conclusions: Lateral core muscle endurance and static and dynamic eyes-closed postural stability impairments were observed in osteoporotic women. It might be appropriate to be aware of these deficits for prevention programs.

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THU0499

THE EFFECT OF CONCOMITANT TYPE OF VITAMIN D, BIOLOGICAL DMARDS AND DISEASE ACTIVITY FOR THERAPEUTIC EFFECT OF DENOSUMAB IN OSTEOPOROTIC PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Osteoporosis is one of the major comorbidity in patients with rheumatoid arthritis (RA). There are a lot of evidence that denosumab increase bone mineral density (BMD) in patients with osteoporosis. However, there are few reports investigated the influence of denosumab in patients with RA.

Objectives: We evaluated the BMD change in patients with RA treated denosumab and assessed the effect of various factors, such as the type of vitamin D, biological disease-modifying anti-rheumatic drugs (bDMARDs) use, and disease activity.

Methods: This study included 100 RA patients (96 female, mean age 69.9±9.3 years) treated with denosumab. BMD at the lumbar spine and proximal femoral were evaluated by dual energy X-ray absorptiometry (DXA) at baseline and

1 year after treatment. We evaluated the influence of the type of vitamin D, bDMARDs and disease activity for BMD change.

Results: In all patients, BMD at the lumbar spine, proximal femoral and femoral neck were significantly increased in one years (6.2%: *p*<0.01, 4.0%: *p*<0.01, 2.2%: *p*=0.04, respectively). There were no significant differences in improvement ratio of BMD between 10 patients taking active form vitamin D and 71 patients taking native form vitamin D (7.7 vs 4.4%: *p*=0.55, 4.3 vs 4.0%: *p*=0.83, 1.4 vs 4.2%: *p*=0.52), between 30 patients treated with bDMARDs and 57 patients treated without bDMARDs (6.4 vs 6.2%: *p*=0.3, 2.7 vs 4.5%: *p*=0.95, 1.1 vs 2.5%: *p*=0.2), between 61 patients in remission or low disease activity and 26 patients in moderate or high disease activity (7.2 vs 4.0%: *p*=0.25, 3.3 vs 5.0%: *p*=0.87, 1.6 vs 3.8%: *p*=0.98) (figure 1).

Figure 1. BMD change

Conclusions: Denosumab improved BMD in patients with RA independently regardless of the type of vitamin D, bDMARDs use, disease activity.

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THU0500

EFFECTS OF LONG-TERM USE OF UNFRACTIONATED HEPARIN (UFH) OR LOW-MOLECULAR-WEIGHT HEPARIN (LMWH) ON BONE MINERAL DENSITY (BMD) IN PATIENTS WITH NEPHROTIC SYNDROME

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Background: Osteoporosis is a systemic skeletal disease characterised by decreased bone mass and micro- and macroarchitectural tissue alterations, resulting in bone fragility and increased fracture risk. Generalised osteoporosis is a result of different causes and pathogenic mechanisms, which often combine forces to become clinically relevant. Among the different exogenous factors, several drugs have been associated with increased risk of osteoporosis, when used chronically.

Objectives: The aim of this study is to determine the effects of UFH or LMWH therapy of at least 1 year duration on bone mineral density BMD in patients with nephrotic syndrome (NS).

Methods: All patients undergoing native renal biopsy for NS between 2006 and 2017 yielding a diagnosis of primary glomerulonephritis were identified. Baseline serum albumin, proteinuria, estimated glomerular filtration rate, date of biopsy and histological diagnosis were recorded. 465 (238 male, 227 female) patients with nephrotic syndrome received the prophylactic anticoagulation regimen were included. Mean age at biopsy was 43.8±19.2 years. Median follow-up was 5.3±2.4 years. In addition to the prophylactic anticoagulation regimen, patients received treatment for their underlying glomerulopathy. This included optimising blood pressure control, renin-angiotensin system blockade, and prescribing immunosuppressive therapy if indicated. Patients received corticosteroid treatment or with renal failure were excluded from the study. 312 patients (67.1%) received treatment with UFH and 153 - with LMWH at some point in the course of their disease. There was no difference in mean age, sex, or disease duration between both groups. 276 patients were switched from UFH or LMWH to acenocoumarol as a result of protracted hypoalbuminemia (serum albumin <2.0 g/dl) at a median time of 24.3±9.3 weeks' treatment. The anticoagulant control achieved in these patients was good. Bone mineral density (BMD) was measured at the lumbar spine and total hip region with dual x-ray absorptiometry.

Results: Results of Poisson regression analysis showed that LMWH therapy was associated with a lower risk of osteoporosis compared with UFH (0.7 vs 1.1 per 100 person-years). No statistically significant increase in the risk of fractures at 12 months was found for patients (RR = 1, 03; 95% CI: 0.27-3.34). UFH for 24