AB0889

SARCOPENIA AND HIP FRACTURE IN GERIATRIC POPULATION

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Background: Sarcopenia is a loss of skeletal muscle mass, muscle strength, and function, with an impact on the quality of life, increased risk of bone loss and fracture, which is associated with normal aging.

Objectives: To determine the effect of sarcopenia on the recovery of patients after hip fracture, their fitness, functionality, and quality of life

Methods: A prospective study had 60 patients with hip fractures of both sexes, > 65 years of age (70.8), in the experimental group of patients with sarcopenia and the control group without sarcopenia. All anthropometric measurements were performed: BMI (kg / m²), waist circumference, the volume of the upper arm and lower leg muscle mass, handgrip force (kg) - dynamometry. The following questionnaires were used to assess functionality, mobility, and quality of life: Health assessment questionnaire (HAQ), Harrison hip score (HHS), Sarcopenia and Quality of life (SarQoL)

Results: Muscle mass (BMI) was significantly lower in the experimental group patients (p <0.005) compared to the control group. The clamp strength measured by the dynamometer was significantly lower in patients with hip fractures (p <0.005) compared to the control group. About 2/3 of the subjects with sarcopenia and hip fracture have a severe and complete physical disability. There was a significant difference in all domains of quality of life between subjects with hip fractures and the control group due to the presence of sarcopenia (p <0.005).

Conclusion: The presence of sarcopenia indicates consequently reduced functionality and a degree of disability in patients with hip fractures, slows recovery and increases the need for mobility aids, thus extending hospital stay and patient recovery.

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VITAMIN D PROMOTES BONE MINERAL DENSITY ACCRUAL AFTER DISCONTINUATION OF ALENDRONATE.

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Background: Vitamin D repletion is known to maximize the response to bisphosphonates (BPs) in terms of both bone mineral density (BMD) changes and anti-fracture efficacy. The contribute of vitamin to BMD after discontinuation of BPs has been poorly investigated.

Objectives: To explore whether change of vitamin D status may contribute to the tail effect of alendronate (ALE) on BMD.

Methods: Participants in this retrospective study were postmenopausal osteoporotic women exposed to ALE. Either cholecalciferol or calcitriol have been administered, as vitamin D supplementation in accordance to good clinical practice, during ALE treatment and after ALE discontinuation. BMD was evaluated by Dual-energy X-ray absorptiometry (DXA) at lumbar spine and femoral site. Vitamin D status has been checked by measuring 25(OH)D serum levels through HPLC. Surrogate bone formation and resorption markers (i.e. C-terminal telopeptide of type I collagen (CTX) and alkaline phosphatase (ALP), respectively) were also evaluated. The Fracture Risk Assessment Tool (FRAX) served to estimate the participants' 10-year fracture risk for major osteoporotic and hip fracture.

Results: 88 postmenopausal osteoporotic women (age 61.14 ± 6.96 yr.) were included in the final analysis. The 10-year probability of major and hip fractures was 18.31±11.51 and 8.60 ± 10.55 %, respectively. Participants were exposed to ALE treatment for 31.27 ± 20.69 months; then they stopped treatment for 33.33 ± 18.97 months. Change of BMD was inversely related to drug holiday (r=-0.27, p=0.005). Modification of 25(OH)D was inversely associated with change of ALP (r=-0.22, p=0.018) and CTX levels (r=-0.3, p=0.06). By distributing participants in tertiles according to variation of 25(OH)D levels over time, women allocated in the tertile with the higher increase of 25(OH)D showed a 5.7% BMD gain that was two times larger in comparison with participants with lower increase of 25(OH)D. At a multiple regression analysis, after correcting for ALE treatment duration, bone turnover marker modifications, BMI and age at menopause, BMD change at lumbar spine was significantly associated with time since menopause (β=2.28, SE 0.44, p<0.0001), FRAX score (β=-0.65, SE 0.29, p=0.03), drug holiday duration (β=-2.17, SE 0.27, p<0.0001) and change of 25(OH)D levels (β=0.15 SE 0.03, p=0.0007).

Conclusion: After ALE discontinuation, modification of BMD are strictly associated with change of vitamin D status.

Disclosure of Interests: None declared

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AB0891

BARE TO THE BONE - AN AUDIT OF RENAL BONE DISEASE AGAINST KDIGO GUIDELINES

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Background: Chronic kidney disease-mineral and bone disorder (CKD-MBD) is complex and management can be difficult. We aimed to compare management of our CKD patients to 2018 KDIGO guidelines. The guidelines suggest checking calcium and phosphate (Ca/PO₄) within 12 mths in CKD 3a and 3b, within 6 mths for CKD 4, and within 3 mths for CKD 5. Parathyroid hormone (PTH) should be checked at baseline in CKD 3a-b, within 12 mths in CKD 4 and within 6mths in CKD 5. Alkaline phosphatase (ALP) should be measured within 12 mths in CKD 4 and 5. 25-(OH)D levels 'might' be measured at baseline in CKD 3a to 5D. BMD scanning is suggested if the result will impact treatment decisions. Lateral abdominal X ray is recommended as an alternative to CT for detection of vascular calcification. Calcitriol and vitamin D analogues are no longer routinely advised in CKD 3a-5; 25-(OH)D insufficiency should be corrected as in the normal population.

Objectives: To compare management of our CKD patients to 2018 KDIGO guidelines

Methods: We randomly selected 70 patients in whom data was available from renal clinics between May and September 2019.

Results: Mean age was 67.3 yrs. 41 male, 29 female. 33 patients had CKD 3a-b; 31 had CKD 4; 6 had CKD 5. Mean duration of CKD was 10.6 yrs. 10 patients were taking activated vitamin D analogues; 13 were taking 25-(OH)D analogues. 25-(OH)D levels ranged from 24-158 nmol/L (mean 65nmol/L). PTH levels ranged from 2- 69pmol/L (mean 23pmol/L). 3 patients were taking bisphosphonates. 44 had previous lumbar spinal imaging; vertebral fractures were evident in 4 (9%). 12 patients had had DXA scans; lowest T score was -2.5. Table 1 - tests within suggested time frames:

	CKD 3a-3b	CKD 4	CKD 5
Ca/ PO ₄	33 (100%)	29 (93%)	6 (100%)
ALP	33 (100%)	31 (100%)	6 (100%)
PTH	14 (42%) (ever)	8 (26%)	3 (50%)
25-(OH)D	8 (24%) (ever)	8 (26%) (ever)	1 (14%)(ever)

Conclusion: Optimum PTH levels in CKD patients are not known, and therapeutic options in CKD-MBD often limited. Nevertheless, our results suggest that bone biochemistry could be checked more consistently in CKD patients. Although detection of vascular calcification may not alter renal management, abdominal imaging provides an opportunity to screen for vertebral fracture, present in a