Objectives: The main of this study was to examine the relationship between plasma homocysteine (Hcy), asymptomatic osteoporotic vertebral fractures (VFs) using vertebral fracture assessment (VFA) and prevalent abdominal aortic calcification (AAC) in Moroccan postmenopausal women.
Methods: The study cohort consisted of 188 consecutive postmenopausal women with no prior known diagnosis of osteoporosis or taking medication interfering with bone metabolism. Mean age, weight, height, body mass index and plasma homocysteine were determined. Lateral VFA images and scans of the lumbar spine and proximal femur were obtained using a Lunar Prodigy Vision densitometer (GE Healthcare Inc., Waukesha, WI). VFs were defined using a combination of Genant's semiquantitative approach and morphometry. VFA images were also scored for prevalent AAC using a validated 24 point scale.
Results: Fifty-eight (30.9%) patients had densitometric osteoporosis. VFs were identified using VFA in 76 (40.4%) patients: 61 women had grade 1 VFs and 15 had grade 2 or 3 VFs. One hundred twenty nine women (68.6%) did not have any detectable AAC, whereas the prevalence of significant atherosclerotic burden defined as AAC score of 5 or higher, was 13.8%. A significant positive correlation between AAC score and homocysteine was observed. Women with extended AAC, were older, had a lower weight, BMI and BMD, higher homocysteine levels and more prevalent VFs than women without extended AAC. Multiple regression analysis showed that the presence of extended AAC was significantly associated with Age and grade 2/3 VFs and not independently associated with homocysteine levels.
Conclusions: This study did not confirm that homocysteine is important determinant of extended AAC in postmenopausal women. However, this significant atherosclerotic marker is independently associated with VFs regardless of age.
Disclosure of Interest: None declared
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FRI0549 IMPACT OF CHEMOTHERAPY ON BONE MINERAL DENSITY IN POSTMENOPATHIC WOMEN WITH BREAST CANCER IN TREATMENT WITH AROMATASE INHIBITORS

J. Loarce-Martos [1], W.A. Sifuentes Giraldo [1], L.V. Maldonado Romero [1], M. Ahijón Lana [1], C. Velázquez Arce [1], N. Martínez Jañez [2], M. Vázquez Díaz [1]. *[1] Rheumatology; [2] Oncology, Ramon y Cajal University Hospital, Madrid, Spain*

Background: Aromatase inhibitors (AI) been related to an increased risk of bone loss and fractures in women receiving these drugs as adjuvant treatment, but few studies have assessed the impact of prior chemotherapy (CT) on bone mineral density (BMD) loss associated to AI.
Objectives: To assess the impact of CT prior to the initiation of AI on BMD in postmenopausal patients with breast cancer (BC) seen at a Spanish tertiary care hospital.
Methods: We perform a longitudinal study in patients who received AI after initial CT (CT group) or as adjuvant therapy without prior CT (non-CT group) followed up for 12 months. BMD was assessed by DXA in lumbar spine (LS) and femoral neck (FN) at baseline and after 12 months of AI treatment following the usual protocol of our center, with in vitro coefficient of variation of 1% in both locations and estimated minimal significant change (MSC) of 0.0223 g/cm^2 in LS and 0.0288 g/cm^2 in FN. Demographics, neoplastic disease data, and osteoporosis risk factors were also collected.
Results: 69 patients (CT group 39, non-CT group 30) attended at our center between August 2011 and December 2014 were included. Mean age at diagnosis was 59.9±7.7 years, most of them have BC stages I-II (84%). Most frequent AI in both groups was letrozole (95%). Baseline characteristics were similar, except for age at diagnosis that was significantly higher in the non-CT group, these data are presented in the table. Mean BMD at the start of AI was significantly lower in LS in the CT group (0.7793 g/cm^2) than in the non-CT group (0.8483 g/cm^2) (p=0.018), but no difference in FN (CT 0.6764 g/cm^2 and non-CT 0.7077 g/cm^2, p=0.123). A significant difference in LS (CT 0.7685 g/cm^2, non-CT 0.8397 g/cm^2, p=0.003) was found in the comparison of BMD means between the two groups at 12 months but not in FN (CT 0.6598 g/cm^2, non-CT 0.6689 g/cm^2, p=0.369). After 12 months of treatment with AI, mean BMD change in the CT group in LS was -0.0107 g/cm^2 (95% confidence interval [CI] -0.0269, +0.0055, p=0.189) and in FN -0.0165 g/cm^2 (95% CI: -0.0339, +0.0009, p=0.063), while in the non-CT group the means changes were in LS -0.0085 g/cm^2 (95% CI -0.0416, +0.0244, p=0.599) and FN -0.0388 g/cm^2 (95% CI -0.0707, -0.0068, p=0.019). During the study period there was a fracture in each group (CT 2.6%, non-CT 3.3%).

	CT group (n=39)	Non-CT group (n=30)	p-value
Age at diagnosis, years (mean ± SD)	58.2±7.3	62±7.9	0.042*
Age of menarche, years (mean ± SD)	12.5±1.2	12.5±1.1	0.980
Age of menopause, years (mean ± SD)	48±4.2	48.9±4.1	0.394
Age >65 years	13 (33%)	9 (30%)	0.284
Body mass index (mean ± SD)	25.8±6	27.6±4.3	0.184
Osteopenia/osteoporosis before AI	35 (89%)	26 (86%)	0.692
Smoking	5 (13%)	2 (6%)	0.401
Previous fracture	2 (5%)	2 (7%)	0.786
Family history of fracture	2 (5%)	2 (7%)	0.786
Calcium + Vitamin D Supplements	26 (67%)	14 (47%)	0.095
Radiotherapy	27 (69%)	23 (77%)	0.493
Prior tamoxifen	5 (13%)	3 (10%)	0.717
Bisphosphonates	2 (5%)	1 (3%)	0,717

Conclusions: Our results do not demonstrate that CT prior to AI treatment significantly decreased BMD during the first year. Mean change in both LS and FN in CT group was not superior to MSC nor to the change in non-CT group, although they had a significantly lower mean BMD in LS than the latter group and this difference was maintained at the end of the study period.
Disclosure of Interest: None declared
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FRI0550 MALE PATIENTS WITH RHEUMATOID ARTHRITIS HAVE AN INCREASED RISK OF OSTEOPOROSIS: FREQUENCY AND RISK FACTORS

J.-H. Park [1], S.-G. Lee [1], E.-K. Park [1], S.-M. Kweon [1], D.H. Sohn [2], Y.-K. Kim [3], H.-S. Tag [3], G.-T. Kim [3], J.-W. Lee [4]. *[1] Internal Medicine, Pusan National University School of Medicine, Pusan National University Hospital; [2] Microbiology and Immunology, Pusan National University School of Medicine; [3] Internal Medicine, Kosin University College of Medicine; [4] Internal Medicine, Busan St. Mary's Hospital, Busan, Korea, Republic Of*

Background: Osteoporosis is a well-known extra-articular manifestation of rheumatoid arthritis (RA) and almost 2 times higher prevalence of osteoporosis was reported in female patients with RA than in healthy subjects. Accordingly, patients with RA are at increased risk of fragility fractures that lead to significant morbidity and mortality and higher healthcare cost. However, most previous epidemiologic studies regarding osteoporosis in RA have focused on female subjects, and little attention has been given to male patients with RA.
Objectives: To compare the prevalence of osteoporosis between male patients with RA and healthy subjects and to identify the risk factors of osteoporosis in male patients with RA.
Methods: By using a cross-sectional design, we recruited 76 male patients with RA aged 50 years and over and 76 sex-matched and age-matched healthy subjects at a university-affiliated rheumatology centre in South Korea from August 2014 to August 2016. We measured bone mineral density (BMD) at L1–4 levels of the lumbar spine and the hip (femoral neck and total hip) in all the subjects by using dual-energy X-ray absorptiometry (DEXA). We assessed the prevalence of osteoporosis defined as a T-score of ≤-2.5 according to the WHO criteria. We also investigated potential risk factors of decreased BMD and the presence of osteoporosis in male patients with RA using linear and logistic regression analyses, respectively.
Results: The mean age and body mass index (BMI) of the male patients with RA were 64.5 years and 22 kg/m^2, respectively, which were comparable with those of the healthy controls. The overall prevalence of osteoporosis at either the spine or the hip in the male patients with RA was significantly higher than that of the healthy controls (22.4% vs 10.5%, respectively; p=0.049). However, no significant differences in the prevalence of osteoporosis at the spine (19.7% vs 10.5%, respectively; p=0.113) and the hip (3.9% vs 0%, respectively; p=0.245) were found between the patients with RA and the controls. For the male patients with RA, the median disease duration was 37 months, the mean 28-joint Disease Activity Score using erythrocyte sedimentation rate (DAS28-ESR) was 3.28 and the median modified total Sharp score was 6. An increased titre of anti-cyclic citrullinated antibody showed a trend toward lower L1–4 BMD (β=-0.0007, p=0.057) in the multivariable linear regression analysis. In addition, DAS28-ESR of >3.2 was independently associated with the presence of osteoporosis (OR=3.85, 95% CI=1.13–13.17, p=0.032) after adjusting for confounding factors. The patients with RA whose BMIs were ≤22 kg/m^2 had a higher risk of osteoporosis (OR=3.43, 95% CI=1.04 -11.33, p=0.043).
Conclusions: Similar to their female counterparts, the frequency of osteoporosis in male patients with RA had an osteoporosis prevalence of about 2.1 times higher than that of the healthy subjects. Increased DAS28-ESR was an independent risk factor of osteoporosis. Our data suggest that appropriate management for osteoporosis in patients with RA is crucial not only for postmenopausal women, but also for men aged 50 years and over.
Disclosure of Interest: None declared
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FRI0551 USE OF GLUCOCORTICOID IS THE RISK FACTOR FOR INADEQUATE RESPONSE TO THE TREATMENT OF OSTEOPOROSIS BY DENOSUMAB

K. Orita [1], T. Koike [2]. *[1] Orthopaedic Surgery, Shirahama Hamayu Hospital, Shirahama Foundation for Health and Welfare; [2] Orthopaedic Surgery, 2. Search Institute for Bone and Arthritis Disease (SINBAD), Shirahama Foundation for Health and Welfare, Shirahama, Japan*

Background: In treating rheumatoid arthritis (RA), T2T (treat-to-Target) is the most reliable treatment strategy. Recent reports have indicated that reaching normal levels of bone mineral density (BMD) might be important for the prevention of fractures in osteoporosis treatment (reference 1 and 2).From this fact, there might be a possibility that T2T targeting BMD might be feasible also in osteoporosis treatment. In doing so, medicines with the ability to sufficiently increase BMD at a fast speed should be needed. Denosumab (DMAb) specifically inhibits the receptor activator for nuclear factor-kappa B ligand (RANKL) improves BMD rapidly at lumbar or hip. Therefore, DMAb is one of candidate drugs for T2T