Lumbar OP was associated with the female sex (OR=3.6). The FN T-score (and, to a lesser extent, lumbar T-score), showed a correlation with age (r = -0.515, p < 0.01). No differences were found in the mean values of BMD, T-score, Z-score of FN and LS between positive or negative patients for FR or ACPA (t-student), neither between their possible combinations (one-way ANOVA). Association between positivity of RF, ACPA or their combinations and T-score < -1 (osteopenia) or T-score < -2.5 (OP) in LS or FN were not found. A negative weak correlation was found between the RF and lumbar BMD values (r = 0.121, p < 0.04) and a positive weak correlation between ACPA and FN (r = 0.136 with BMD, r = 0.131 with T-score and r = 0.138 with Z-score; p < 0.05 for all).

Conclusions: OP was very common in our RA population, especially in women and elderly. Any association was demonstrated between OP and the presence/ titer of autoantibodies (RF and ACPA) and low dose of corticosteroids treatment.

Disclosure of Interest: None declared

AB1006

BONE STATUS OF PATIENTS TREATED WITH ANTI-AROMATASE: RESULTS AT ONE YEAR

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Background: First cancer in Algeria, first cause of cancer mortality in women. One in 10 women will develop breast cancer in her lifetime. Its incidence is increasing with 55.8/100000 inhabitants. The majority of these cancers are hormone-dependent. The bone loss induced by anti-aromatase (AA) leads to an increase in bone resorption with bone loss 2 to 4 times greater than the physiologically loss.Randomised controlled trials (RCTs) including women under AA for 5 years have suggested an increased risk of fracture of 18% to 20% in 1 in 5 women will experience this risk.

Objectives: The aim of our work is to describe the initial bone status and after one year of follow-up in patients starting an anti-aromatase.

Methods: Three hundred and twenty seven (327) patients were recruited from the oncology department of Tizi Ouzou University Hospital, 292 patients were analysed in the initial phase of the study and only 250 patients were evaluated at one year. Of these patients, 157 non-osteoporosis patients received calcium and vitamin D (n=93) had stable bone mineral density (BMD) at the three parts in RA and HI from 2010 to 2017. Factors affecting % change in BMD were calculated for each seasonal period, establishing a mean level of 23 ng/ml by date in four seasons: winter, spring, summer, and autumn, assessing the mean seasonal oscillations of each variable and calculating correlation in each case. Different levels of 25OH-D3 were evaluated in order to identify differences in the grade of correlation.

Results: Serum samples from 6265 patients were collected. 59% of the patients had 25OH-D3 levels lower than 25 ng/ml. Patients’ correlation coefficient between both variables was –0.159 (p<0.01). The mean values of 25OH-D3 were calculated for each seasonal period, establishing a mean level of 23 ng/ml for winter, 25 ng/ml for spring, 31 ng/ml for summer and 29 ng/ml for autumn. Regarding PTH levels, the mean values for each season were 108 pg/ml, 101 pg/ml, 86 pg/ml and 84 pg/ml from winter to autumn respectively. PTH/Vitamin D correlation was also assessed for each period: Pearson’s correlation coefficient during winter was –0.018 (p<0.01), for spring –0.249 (p<0.01), for summer –0.21 (p<0.01) and for autumn –0.19 (p<0.01). At last, correlation calculated with deficiency levels of 25OH-D3 (<30 ng/ml) was –0.18 (p<0.01), and with levels inferior to 10 ng/ml was –0.12 (p<0.01).

Conclusions: Linear correlation between levels of 25OH-D3 and PTH could not be established in our study, not even using levels classified as vitamin D deficiency. 25OH-D3 levels tended to increase from winter to summer whereas PTH levels decreased inversely during these seasons, without any linear correlation.

Disclosure of Interest: None declared

AB1007

SEASONAL VARIATIONS OF 25-HYDROXYVITAMIN D3 LEVELS AND ITS RELATION TO PARATHYROID HORMONE LEVELS

M.A. Teran Tinedo, P. Cristina, Hospital Ramon y Cajal, Madrid, Spain

Objectives: To analyse the relationship between 25-hydroxyvitamin-D and parathyroid hormone levels and to determine its variation between the different seasons of the year.

Methods: An observational descriptive study was carried out, collecting and analysing 25-hydroxyvitamin-D (25OH-D3) and parathyroid hormone (PTH) serum levels of patients from January to December of 2017. The frequencies distribution analysis of both variables was compared and Pearson’s correlation coefficient (PCC) was used to analyse linear relationship between them. The results were classified by date in four seasons: winter, spring, summer, and autumn, assessing the mean seasonal oscillations of each variable and calculating correlation in each case. Different levels of 25OH-D3 were evaluated in order to identify differences in the grade of correlation.

Results: Serum samples from 6265 patients were collected. 59% of the patients had 25OH-D3 levels lower than 25 ng/ml. Patients’ correlation coefficient between both variables was –0.159 (p<0.01). The mean values of 25OH-D3 were calculated for each seasonal period, establishing a mean level of 23 ng/ml for winter, 25 ng/ml for spring, 31 ng/ml for summer and 29 ng/ml for autumn. Regarding PTH levels, the mean values for each season were 108 pg/ml, 101 pg/ml, 86 pg/ml and 84 pg/ml from winter to autumn respectively. PTH/Vitamin D correlation was also assessed for each period: Pearson’s correlation coefficient during winter was –0.018 (p<0.01), for spring –0.249 (p<0.01), for summer –0.21 (p<0.01) and for autumn –0.19 (p<0.01). At last, correlation calculated with deficiency levels of 25OH-D3 (<30 ng/ml) was –0.18 (p<0.01), and with levels inferior to 10 ng/ml was –0.12 (p<0.01).

Conclusions: Linear correlation between levels of 25OH-D3 and PTH could not be established in our study, not even using levels classified as vitamin D deficiency. 25OH-D3 levels tended to increase from winter to summer whereas PTH levels decreased inversely during these seasons, without any linear correlation.

Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.5557
Results: Participants comprised 172 HI and 119 RA, after excluding those who dropped out (HI, n=21; RA, n=19) or underwent implant surgery (HI, n=12; RA, n=60). Height and weight reduced significantly over 7 years (p<0.001 each) in both groups (table 1). The%BMDs of RA were −2.6% (whole body), −3.6% (lower limb), and 1.8% (lumbar spine), compared to −2.0%, −2.7%, and 0.6%, respectively, for HI. No significant differences in BMD for the whole body or lower limb were seen during 7 years, while BMD of the lumbar spine was significantly increased in both groups (p<0.0001). No significant differences between groups were identified. In patients with RA, DAS28ESR improved significantly over 7 years (p=0.008; table 1) and%BMD of the lumbar spine correlated significantly with cumulative period of treatment for osteoporosis (r=0.341, p<0.001). The cumulative period of osteoporosis treatment was identified as a regulatory factor for increasing BMD of the lumbar spine (odds ratio: 1.36; p=0.003) adjusted by cumulative period of osteoporosis treatment (r=0.34, p<0.001). The patients with RA had osteopenia and 4 (12.9%) had normal BMD. The indications for VFA practice were: age over 60 years with T scores<−2 SD, historical height loss >4 cm, a history of VF, a long-term corticosteroid therapy, and aromatase inhibitors therapy in 25.8%, 12.9%, 8.5%, 45.2% and 9.7% respectively.

CONCORDANCE BETWEEN VERTEBRAL FRACTURE ASSESSMENT AND CONVENTIONAL RADIOGRAPHY IN DETECTION OF VERTEBRAL FRACTURE


Background: Vertebral fractures (VFs) are considered as severe fractures, but often asymptomatic. The VFA (Vertebral Fracture Assessment) performed at the thoraco-lumbar spine X-ray in the diagnosis of VFs.

Objectives: Our objective is to compare the contribution of VFA and the standard thoraco-lumbar spine X-ray in the diagnosis of VFs in patients at risk.

Methods: This is a cross sectional study, including women referred in rheumatology department for measure of bone mineral density (BMD). During the same examination, a standard thoraco-lumbar spine X-ray was performed by an X-ray of dorsal and lumbar spine was done. The interpretation of the two methods was to diagnose asymptomatic vertebral fractures (VFs) which are defined according to Genant’s semi-quantitative classification.

Results: The mean age of our patients (31 patients) was 61.3±11.3 years with an average body mass index (BMI) of 27.65±4.8 Kg/m²; [17.8–40.1]. According to the WHO classification, 17 women (54.8%) had osteoporosis, 10 (32.3%) had osteopenia and 4 (12.9%) had normal BMI. The indications for VFA practice were: age over 60 years with T scores<−2 SD, historical height loss >4 cm, a

### Table 1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Healthy Individuals (n=172)</th>
<th>Patients with RA (n=119)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 2010</td>
<td>56.6±12.7</td>
<td>57.1±12.3</td>
<td>0.431</td>
</tr>
<tr>
<td>Height 2010 (cm)</td>
<td>157.3±7.8</td>
<td>156.5±7.9</td>
<td>0.107</td>
</tr>
<tr>
<td>Body weight 2010 (kg)</td>
<td>56.1±10.0</td>
<td>55.6±9.7</td>
<td>0.418</td>
</tr>
<tr>
<td>Body weight 2017 (kg)</td>
<td>55.1±10.4</td>
<td>54.0±9.9</td>
<td>0.145</td>
</tr>
<tr>
<td>DAS28 ESR 2015</td>
<td>-</td>
<td>3.17±1.27</td>
<td></td>
</tr>
<tr>
<td>DAS28 ESR 2017</td>
<td>-</td>
<td>2.86±1.24</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>Factor</th>
<th>Odds ratio</th>
<th>95% CI</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period of osteoporosis treatment</td>
<td>1.36</td>
<td>1.11−1.66</td>
<td>0.003</td>
</tr>
<tr>
<td>Period of biologics</td>
<td>1.02</td>
<td>0.92−1.13</td>
<td>0.683</td>
</tr>
<tr>
<td>Change of glucocorticoid</td>
<td>1.01</td>
<td>0.83−1.25</td>
<td>0.933</td>
</tr>
<tr>
<td>Change of DAS28ESR</td>
<td>1.04</td>
<td>0.76−1.44</td>
<td>0.798</td>
</tr>
</tbody>
</table>

Conclusions: BMD of the whole body and lower limb tended to decrease slightly over 7 years in both groups. However, BMD of the lumbar spine increased significantly. Continued osteoporosis treatment is important for increasing BMD at the lumbar spine in patients with RA.

REFERENCE:


Disclosure of Interest: None declared


### AB1009

CONCORDANCE BETWEEN VERTEBRAL FRACTURE ASSESSMENT AND CONVENTIONAL RADIOGRAPHY IN DETECTION OF VERTEBRAL FRACTURE

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Background: Apart from Denosumab effects on bone, there are some promising data on its inhibitory effect on structural damages patients with rheumatoid arthritis (RA). Despite some clinical concerns on its potential harm for increasing risk of infections, Denosumab is officially approved for the treatment of postmenopausal osteoporosis. Still there are even greater debates on its use and predisposing patients to infections in cases receiving immunosuppressive therapy. Considering the importance of infection in such cases, lack of sufficient convincing safety data has prevented, at least in part, the current guidelines to recommend Denosumab in treatment of osteoporosis in patients on immunosuppressive agents.

Objectives: We aimed to compare the infection risk in patients with RA taking biologic Disease Modifying Anti Rheumatic Drugs (bDMARDs) alone or concurrent with Denosumab.

Methods: Using records from the files covering January 2013 to May 2016, a retrospective comparative study was performed on two groups of postmenopausal RA patients, group A including 40 patients receiving Denosumab+bDMARDs (Etanercept, Rituximab, Adalimumab), and group B consisting of 44 patients receiving bDMARDs alone. Patients were included if the current therapeutic regimen was used for at least one year. All patients were also on a daily dose of prednisolone (2.5–7.5 mg) and folic acid, and a weekly dose of Methylene. Occurrence of serious bacterial or viral infections was extracted from recorded files of the patients’ routine visits.

Results: The mean age of the patients was 63.1±12 years and 62.6±11.7 years in group A and B, respectively (p=0.42). The mean disease duration was 7.2±2.9 years and 7.1±1.6 years in group A and B, respectively (p=0.039). The mean duration of biologic use was 15±4.32 months and 15.8±4.6 months in group A and B, respectively (p=0.28). Type 2 diabetes mellitus was present in four and five patients of group A and group B, respectively (p=0.35). In total, four infections occurred in our study groups, two in each group (p=0.94). In group A, the first one was an osteomyelitis of the first metatarsal bone in a diabetic patient receiving Etanercept+Denosumab. The second one was a herpes zoster infection in a patient receiving Adalimumab+Denosumab. In group B two cases of herpes zoster were recorded in two patients receiving Adalimumab.

Conclusions: This study showed that the potential infection risk of concurrent use of Denosumab and bDMARDs was not significantly different from using bDMARDs alone. Based on this finding, Denosumab seems safe in the treatment of osteoporosis in RA patients receiving bDMARDs.

REFERENCES:


Disclosure of Interest: None declared