In the Pearson correlation analysis, TBS was associated with BFM ($p = 0.04$), AFM ($p = 0.001$), TFM ($p = 0.007$), and VFM ($p < 0.0001$). However, there was no correlation with LFM ($p = 0.262$), and GFM ($p = 0.469$). At multivariate analysis, only VFM ($p = 0.005$, $\beta = -0.355$, 95%IC [-0.0002; -0.00004]), and AFM ($p = 0.02$, $\beta = -0.395$, 95%IC [-0.00007; -0.000006]) were associated with TBS, when adjusted on age, menopause, disease duration, disease duration under treatment, lumbar BMD, BMI, HAQ, CRP, and triglycerides level.

Conclusion: In RA patients, TBS was negatively associated with visceral and android fat mass. This result may explain the intriguing coexistence of high BMD and vertebral fractures in RA obese patients.

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POS0167

SECONDARY PREVENTION OF VERTEBRAL FRACTURES IN REAL PRACTICE

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Background: Vertebral fractures increases the risk of new fractures and deaths. There are different antiresorptive medications to prevent a secondary fracture, as bisphosphonates, teriparatide or denosumab, but little is known about the effects of secondary fracture appearance in real life.

Objectives: To evaluate the appearance of new vertebral fractures depending on the treatment used for secondary prevention.

Methods: We conducted a prospective descriptive study of patients with a first diagnosis of vertebral fracture from 2010 to 2017 and assessed the subsequent finding of new fractures. We selected patients with at least 3 years of secondary prevention with antiresorptive drugs or with sequential treatment (anabolic followed by, at least, 1 year with antiresorptive drugs), and excluded those who experienced new fractures within the first 6 months of treatment.

Results: A total of 400 patients were selected from an initial base of 1018 patients. The average age of onset of the first fracture was 69.7 years, 84% of female patients and 16% of male patients. 38.5% suffered dorsal fractures, 33.75% lumbar fractures and 27.75% dorsolumbar fractures. We classified the secondary prevention strategies according to the different therapeutic options, as we can see in Table 1.

We analysed the association between the appearance of new vertebral fracture corrected by sex with the age of the initial fracture its location. No association was found.

We also performed a multivariate Bayesian model of logistic regression, in order to analyze the association between the appearance of new vertebral fracture and factors as the age of the initial fracture, its sex and the pharmacologic option used as secondary prevention. No statistically significant differences were observed between the different antiresorptive treatments and their efficacy as a secondary prevention of vertebral fractures. However, there was a tendency for a smaller occurrence of new fractures in patients undergoing sequential treatment. On the other hand, similar results were observed between denosumab and oral bisphosphonates, observing somewhat worse data with zoledronate (figure 1), probably due to patients under zoledronate treatment showed high osteoporotic risk and worse prognosis.

Pharmacologic option	Patients (%)	New fractures (%)
Denosumab	192 (48%)	10 (5.21%)
Teriparatide (up to 2 years) + Denosumab (at least 1 year)	86 (21.5%)	0 (0%)
Oral bisphosphonate (alendronate, risedronate or ibandronate)	58 (14.5%)	3 (5.17%)
Zoledronate	33 (8.25%)	4 (12.12%)
Teriparatide (up to 2 years) + oral bisphosphonate (at least 1 year)	28 (7%)	2 (7.14%)
Teriparatide (up to 2 years) + Zoledronate (at least 1 year)	3 (0.75%)	0 (0%)

Conclusion: No differences between the different secondary prevention options in terms of the appearance of new fractures were observed.

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POS0168

BONE MINERAL DENSITY IN PATIENTS WITH MULTIPLE SCLEROSIS. A DESCRIPTIVE STUDY FROM A UNIQUE CENTER FROM THE EAST OF SPAIN

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Background: Several studies have suggested that multiple sclerosis (MS) patients have low bone mineral density (LBMD) compared to healthy adults of same age. This fact, combined with the functional impairment of the disease, increases the risk of fractures. However, information about the prevalence and the risk factors of LBMD in Spanish patients with MS is still quite limited¹⁻³.

Objectives: To evaluate the prevalence of LBMD and low vitamin D in patients with MS from a unique center from the east of Spain, describing the clinical features of these patients.

Methods: Type of study: observational, cross-sectional, descriptive. Patients with MS from a local cohort have been consecutively recruited for this study since Apr-2020. A cross-sectional visit which included a clinical interview, analytic test (blood and urine) and a dual-energy X-ray absorptiometry (DXA) was performed. We defined LBMD as T score ≤ -1 SD in postmenopausal women and men over 50 years and a Z score ≤ -2 SD in premenopausal women and men under 50 years. Low levels of vitamin D were defined as < 20 ng/mL. A descriptive and associative analysis of these data was carried out using the SPSS software.

Results: From a cohort of 288 MS patients, due to the COVID-19 pandemic, we have only been able to assess 60 patients, and only 48 out of them have undergone all the tests required. These were 30 women and 18 men, with a mean age of 49 (SD 11.6) years. The main type of MS was relapsing-remitting (77.1%) and 25% of them were not taking any maintenance treatment. Some of the classical factors related to a LBMD are shown in table a1. A 43.8% of the patients had a LBMD and 40.5% had low levels of vitamin D. Despite these results, as far as 89% of patients had never received any specific treatment, not even calcium and/or vitamin D supplementation. Furthermore, 13 patients (27.1%) must have received specific treatment, according to latest guidelines⁴, and only 4 of them (8.5%) were being adequately treated.

Table 1.

Women/Men (n)	30/18
Mean age; SD (years)	49; 11.6
Non smokers/Smokers (%)	58,4/41,7
Alcohol abuse (%)	8,3
Personal history of fracture (%)	10,4
Personal history of nephrolithiasis (%)	14,6
Normal/Reduced mobility (%)	77,1/22,9
Sedentary lifestyle (%)	66,7

Conclusion: These preliminary results show that almost half of the MS patients have LBMD and a low vitamin D, most of them without taking any specific treatment. Taking this in mind, it is necessary to integrate the early diagnosis of LBMD