

AB0901 **PREVALENCE OF OSTEOPOROSIS IN ITALIAN POSTMENOPAUSAL WOMEN ACCORDING TO DEFRA ALGORITHM**

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Background: Osteoporosis is a recognized health problem and the burden of the disease is mostly associated with the occurrence of hip and vertebral fracture.

Objectives: This study was aimed at evaluating the prevalence of osteoporosis in Italian postmenopausal women, defined by DeFRA calculation as a 10 years fracture risk equal or higher than 20%.

Methods: This is a monocenter cohort study evaluating 1850 post-menopausal women aged 50 years and older. All the participants were evaluated as far as anthropometrics. Defra questionnaire was administered and calculated with bone mineral density (DXA) measured at lumbar spine and femoral neck.

Results: The prevalence of osteoporosis as assessed by DeFRA was 29.8% in the whole population, according to literature. The frequency of a risk fracture equal or higher than 20% varied from 7.9% in the group aged 50-59 years to 35% in subjects aged >80. Among clinical risk factors for fracture, the presence of a previous fracture (spine primarily) was the most commonly observed.

Conclusion: Our data showed that about one third of post-menopausal women aged 50 and older in Italy has osteoporosis on the basis of DeFRA algorithm, with a high 10 years fracture risk. A previous fracture is the most common risk factor. The data should be considered in relation to the need to increase prevention strategies and therapeutic intervention.

Disclosure of Interests: None declared

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AB0902 **BONE HEALTH IN PATIENTS WITH JUVENILE ONSET DERMATOMYOSITIS ASSESSED AFTER LONG-TERM FOLLOW-UP; A CASE CONTROL STUDY**

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Background: Patients with juvenile dermatomyositis (JDM) are at risk of developing low bone mineral density (BMD) and not reach peak bone mass, mainly due to prednisolone (pred) treatment [1], making them prone to osteoporotic fractures later in life

Objectives: To compare BMD in longterm JDM patients (Pts) with that of controls (Ctr); and in Pts explore how disease variables affect BMD.

Methods: Pts (n=59) were clinically examined median 16.8y (range 6.6 - 27.0 y) after disease onset and compared 1:1 with age/sex matched Ctr. Dual-energy X-ray absorptiometry (DXA) was used to measure BMD and Z-scores in whole body (WB), lumbar spine at L2-L4 (spine). In those ≥ 20y; also proximal (PR) and distal 1/3 radius (DR), and total hip were examined. Pred at follow up was reported, and cumulative dose calculated. Bone remodeling factors: C-terminal telopeptide (CTX), amino-terminal propeptide (P1NP) and 25(OH)Vitamin D (VitD), were measured in serum.

Results: BMD WB was lower in Pts than Ctr, and both WB and spine BMD and Z scores were lower in Pts than Ctr <20 years (Tb1). DR BMD and Z-score were both lower in Pts ≥20y. Serum analysis showed lower VitD was lower in Pts than Ctr. In Pts ≥ 20y Vit D was lower and eSR was higher compared to Ctr.

In Pts ≥ 20y: moderate negative associations were found between both BMD WB and spine, and pred use at follow up (R^s = -0.43), and between BMD PR and VitD (R = -0.34). There was a positive moderate association between Z-score PR and CTX (-0.45) not found in Ctr, and between Z-score total hip and cumulative pred dose (R = 0.38). All p <0.05.

In Pts <20y moderate negative associations were found between Z-score for spine and months of pred use and cumulative pred doses (R^s = -0.40 and -0.48, p<0.05). Other associations found in Pts <20y were also found in respective Ctr.

Conclusion: We found that Pts bone health was affected differently in young and adult JDM-Pts. Association analysis between BMD, Z-scores and medication and/or bone remodeling factors were not conclusive. We will perform linear regression analysis to determine if and how BMDs and Z-scores are dependent on pred use, time and doses, and factors important for bone remodeling.

Table 1. Characteristics, disease variables, BMD and Z-scores in JDM Pts and Ctr

	Pts (n=59)	Pts < 20y (n=28)	Pts ≥ 20y (n=31)	Ctr (n=59)	Ctr < 20y (n=28)	Ctr ≥ 20y (n=31)
Age, y	21.5 (6.7-55.4)	15.3 (6.7-19.8)	34.3 (20.4-55.4)	21.6 (6.2-55.4)	14.4 (6.2-20.1)	34.2 (20.5-55.4)
Female	36 (61)	20 (71.4)	16 (51.6)	36 (61)	20(71.4)	16 (51.6)
BMI, kg/m ²	22.3 (4.8)	20.3 (4.6)	24.0 (4.4)	22.7 (4.5)	21.4 (5.2)	23.9 (3.5)
Height, cm	164.9 (14.7)	157.1 (15.9)	171.8 (9.1)	167.3 (15.8)*	159.8 (18.3)	174.0 (9.2)
Fracture any	19 (32.2)	NA	NA	21 (36.8)	NA	NA
BMD, g/cm²						
Whole body	1.10 (0.15)	1.01 (0.13)	1.18 (0.10)	1.13 (0.14)*	1.06 (0.16) †	1.19 (0.08)
Spine, L2-L4	1.12 (0.23)	0.99 (0.21)	1.24 (0.18)	1.17 (0.22)	1.07 (0.27)†	1.26 (0.11)
Distal radius		NA	0.87 (0.09)		NA	0.93 (0.11) ††
Z-score						
Whole body	-0.07 (1.08)	-0.39 (0.99)	0.21 (1.10)	0.27 (0.90)	0.28 (1.01) ††	0.26 (0.71)
Spine, L2-L4	-0.16 (1.2.)	-0.39 (1.01)	0.06 (1.34)	0.4 (1.02)	0.25 (1.21) †	0.24 (0.84)
Distal radius			-0.76 (1.03)		NA	-0.05 (0.87)**

y: years, BMI: Body mass index, NA: not applicable. Values are: median age (range), median (IQR), n (%) or mean (SD). p-values *p<0.05, **p<0.01 when comparing Pts and Ctr and † p<0.05, †† p<0.01 when comparing Pts and Ctr < and ≥ 20 years.

References:

[1] Stewart, W.A., et al., Bone mineral density in juvenile dermatomyositis: assessment using dual x-ray absorptiometry. *Arthritis Rheum*, 2003. 48(8): p. 2294-8.

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AB0903 **VITAMIN D LEVELS IN PRIMARY CARE AND RHEUMATOLOGY PATIENTS**

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Background: Although many studies are calling into question the benefits commonly attributed to the vitamin D out of the bone sphere, in the recent years its determination and supplementation has been generalized in the population. Causes of this trend are not clear, but generalist media pressure or even specialized over patients and doctors, along with overrated normality levels could be contributing to this fact. Actual literature¹²³ indicates that 25-OH vitamin D levels of 30ng/ml or higher are not necessary, and most of the authors agree that 20ng/ml levels are enough for the general population, and only levels below 12.5ng/ml must be considered deficient and subsidiaries of supplementation.

Objectives: Obtain the vitamin D levels distribution from a sample of individuals with no bone pathology, or supplementation prescription in Tenerife's North Area.

Methods: Retrospective descriptive study of the 25-OH vitamin D levels requests from the Tenerife's North Area, made for any reason by the Primary Care Doctor or the rheumatologist, both in the Primary Care Centers and the Hospital Universitario de Canarias (HUC). 25-OH vitamin D values were gathered from 2662 blood samples from a total of 2635 patients, from September to November of 2018 (2241 from Primary Care and 421 from rheumatology). In order to determine the use of calcium and vitamin D supplements, and the presence of bone pathology, either renal or from a malabortive process, 400 individuals were randomized (250 from primary care and 150 from rheumatology). Demographic data (age and gender), calcium serum, phosphor and 25-OH vitamin D levels were gathered for the individual records. With regards to the treatment, data about vitamin D supplements, calcium with vitamin D, or the sum of both, that the patient may have in electronic prescriptions at that time; as well as osteoporosis treatment (biphosphonates, denosumab or teriparatide) were gathered.

Results: Using the age, gender, male/female relation, the levels of vitamin D, calcium and phosphor, as comparison factors; the characteristics of the random population were statistically indistinguishable from the global population. Regarding the random sample characteristics, from the 150 rheumatology patients, 11 were men (7.3%) and 139 women (92.7%). While from the 250 primary care patients, 66 were men (26.4%) and 184 were women (73.6%). The average age of the primary care sample was 55.76±19.72 years and 65.16±13.84 years in the rheumatology sample.

In the total random healthy population: without bone pathology, renal or malabortive and without calcium, vitamin D or antiresorptive drug (n=181) treatment, the levels of vitamin D were 31±14ng/ml with a normal distribution and without clear differences between the primary care and rheumatology patients. When the healthy population distribution was studied by vitamin D levels, the 55% presented values below 30ng/ml, 12% below 20ng/ml and 4% showed levels under 12.5ng/ml: levels agreed as deficient (see graph).

Conclusion: The 55% of the patients studied in primary care and rheumatology, without renal, digestive or bone disease and without vitamin D supplement,