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.

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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 (Tbl 1). 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 (1.30)	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		NA	-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.

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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 malabsorptive 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 malabsorptive 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,

presented vitamin levels below the actual limits of 30ng/ml. These limits, used by most of the laboratories, tend to overestimate the vitamin D deficiency.

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AB0904

PERSISTENCE AND REASONS FOR DISCONTINUATION OF DENOSUMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Denosumab, a fully human monoclonal antibody to receptor activator of nuclear factor kappa B ligand, which inhibits osteoclast differentiation, activation and survival, not only increases bone mineral density but also inhibits the progression of bone erosion in patients with rheumatoid arthritis (RA)¹⁻³. Therefore, denosumab have been preferably prescribed for patients with RA recently. The persistence with denosumab, which is administered subcutaneously once every 6 months, was reported higher than with oral bisphosphonates⁴, and in the prospective cohort studies, the persistence rate for one year was reported to be 82-95%⁵⁻⁶. However, there have been no report about the persistence in patients with RA treated with denosumab, moreover the reasons for discontinuation of denosumab.

Objectives: The aims of this single center retrospective cohort study were 1) to assess the persistence with denosumab in a routine clinical setting and 2) to identify the reasons of discontinuation in patients with RA. And we also reviewed the clinical outcomes of osteonecrosis of the jaw in patients with RA during denosumab treatment.

Methods: The present study is based on databases from our hospital, which include age, gender, date of injection of denosumab, as well as information on patients' characteristics. Patients were included in this study when denosumab were newly started at our department during the period from June 1, 2013 and September 30, 2017. In this study, persistence was defined as patients with an interval between injections of no longer than 6 months plus 8 weeks. Patients were followed until censoring (death, transferring to another hospital) or the end of the study (August 3, 2018).

We investigated reasons for the discontinuation of denosumab. Major reasons for the discontinuation of denosumab were classified as adverse event, anxiety over adverse events, patient's transfer or request, doctor's careless lack of refilling an injection, and other reason.

We identified patients who had been diagnosed as osteonecrosis of the jaw, and demographic, pharmacological, and clinical data were collected from medical records.

Results: One hundred and seventy-five patients were identified. Kaplan-Meier analysis showed a slow decline of persistence after initiating denosumab therapy, dropping to 80.4 and 61.9 % after 1 and 2 years of follow-up. When analyzing the reason of discontinuation as adverse events, the persistence rate of denosumab was at 89.4, and 79.4% at 1, and 2 years of follow-up, respectively.

During 2-year period, 72 patients discontinued denosumab. A total of 27 adverse events occurred, of which five events were osteonecrosis of the jaw. The other

reasons for adverse event included death in four, fracture in three, and so on. Six patients discontinued due to anxiety over dental adverse event. Thirteen patients were in doctor's careless lack of refilling an injection. All five patients who were diagnosed as osteonecrosis of the jaw had received the treatment with prednisolone, and four were treated with biologic drugs. All patients stopped denosumab and switched to other drugs including teriparatide. All patients underwent surgical curettages of necrotic bone and cured.

Conclusion: Persistence of denosumab in patients with RA is comparable to that in postmenopausal women with osteoporosis. Dental screening and care should be important to continue denosumab treatment.

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AB0905

THE PREVALENCE AND RISK FACTORS OF OSTEOPOROSIS IN PATIENTS WITH INFLAMMATORY BOWEL DISEASES: A TUNISIAN STUDY

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Background: Osteoporosis is as known a chronic complication of inflammatory bowel diseases (IBD). Its etiopathogenesis is often multifactorial.

Objectives: The aim of our study was to describe the prevalence of reduced bone mineral density and to identify risk factors of osteoporosis in patients with inflammatory bowel diseases.

Methods: This is a retrospective study over three years, collecting patients suffering from IBD and having benefited from a bone densitometry. We have specified for each patient the clinical data and the IBD characteristics. Bone mineral density (BMD, g/cm) was assessed by dual X-ray absorptiometry. Osteoporosis was diagnosed when BMD was 2.5 standard deviations below the mean peak value in young adults (T score, 22.5 SD). Patients with other pathology that may change the bone metabolism were excluded.

Results: sixty-one patients were included with an average age of 38 ± 13 years [16-73]. The sex ratio M / F was 1.25. 69% of patients had ulcerative colitis. The bone density profile was normal in 49.2% of the cases. Osteoporosis and osteopenia were noted in 13.1% and 37.7% of patients, respectively. Osteoporosis was associated with advanced age (50.5 ± 16.5 years vs 36.26 ± 12.93 years; p = 0.007) and longer course disease (6.75 ± 7, 4 years vs 2.5 ± 4 years; p = 0.015). The cumulative dose of prednisone equivalent used in patients with osteoporosis was significantly higher than the other patients (2775 ± 3338 mg vs 706 ± 1449 mg; p = 0.003). Osteopenia was more frequently associated with crohn's disease (58% vs 28.6% p = 0.0029). There was no significant difference between the group with osteoporosis or osteopenia and the group with normal bone densitometry for sex and body mass index.

Conclusion: Osteoporosis during IBD is associated with advanced age, longer duration of illness and administration of high doses of corticosteroids. The high proportion of osteoporosis and osteopenia in our study underlines the importance of systematic BMD measurement in all IBD patients as a base for initiating the appropriate treatment.

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AB0906

PREVALENCE OF HYPOVITAMINOSIS D IN DIAGNOSTIC PATIENTS OF BREAST NEOPLASIA IS GREATER THAN EXPECTED FOR THE GENERAL POPULATION? SERIES OF 200 DIAGNOSTIC PATIENTS OF BREAST NEOPLASIA IN A TERTIARY HOSPITAL INITIATING TREATMENT WITH AROMATASE INHIBITORS

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