Osteoporosis

AB0820 FREQUENCY OF OSTEOPOROSIS AND ASSOCIATED RISK FACTORS IN MEXICAN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: The risk of osteoporosis in patients with rheumatoid arthritis (RA) is well described and may be associated with genetic and environmental factors. The frequency of generalized osteoporosis in different studies is variable.
Objectives: The aim of the study was to investigate the frequency of osteoporosis as well as to describe the risk factors in RA population.
Methods: Retrospective study, including patients with RA who had at least 2 densitometries in their follow up. We collected demographic characteristics, use of glucocorticoids (GC), other medications and antibody profile. Variables were compared between groups with or without osteoporosis. The frequency of osteoporosis was calculated according to the T-score and logistic regression was performed to explore the association of osteoporosis and relevant variables. Statistical analysis was performed using R software version 3.2.1. Baseline characteristics were compared between groups of patients (osteoporosis in the lumbar spine, femoral neck and hip) defined according to the T-score results. We used x^2 or Fisher test for categorical variables as appropriate and Wilcoxon test for continuous variables. A logistic regression model was used to explore the relationship between osteoporosis and variables that could contribute as risk factors.
Results: One hundred and five patients were included, 96.2% were women, RA evolution of 7 (IQR 8) years. The frequency of osteoporosis was: lumbar spine 55.2%, hip 12%, and femoral neck 25.7%. Patients with lumbar spine osteoporosis had higher age (62 vs 58 years, p=0.13), lower weight (57 vs 63.8 kg, p=0.00004) and higher FRAX scores (26.5 vs 11.5, p=0.004; 8.5 vs 2.4, p=0.02). The associated risk factors were: weight (OR 1.09, 95% IC 1.03–1.15, p=0.001), GC use (OR 4.36, 95% IC 1.0–19.89, p=0.049), menopause (OR 22.78, 95% IC 2.73–190.12, p=0.003). There was no association with disease activity (DAS28-ESR) (OR 0.64, 95% IC 0.42–0.96, p=0.049).

Multivariate logistic regression analysis of osteoporosis associated factors

	OR	95% IC	P value
Age	1.01	0.96–1.07	0.553
Weight	1.09	1.03–1.15	0.001
DAS28-ESR	0.64	0.42–0.96	0.034
Glucocorticoids	4.36	1.00–18.89	0.049
Menopause	22.78	2.73–190.12	0.003
ACCP	2.00	0.38–10.47	0.409

OR: odds ratio, IC: confidence interval, DAS28-ESR: Disease Activity Score, ESR: erithrosedimentation rate.

Conclusions: The frequency of lumbar spine osteoporosis in our population was similar to that reported in previous studies (38.9%>50%). In our study only significant association with weight, GC use and menopause was observed
References:
[1] Deodhar AA, Woolf AD. Bone mass measurement and bone metabolism in rheumatoid arthritis: a review. Br J Rheumatol. 1996;35:309–22.
[2] Haugeberg G, et al. Bone mineral density and frequency of osteoporosis in female patients with rheumatoid arthritis: results from 394 patients in the Oslo County Rheumatoid Arthritis register. Arthritis Rheum. 2000;43:522–30.
[3] Guler-Yuksel M, et al. Bone mineral density in patients with recently diagnosed, active rheumatoid arthritis. Ann Rheum Dis. 2007;66:1508–12.
[4] Peng J, et al.Bone Mineral Density in Patients With Rheumatoid Arthritis and 4-Year Follow-up Results.J Clin Rheumatol 2016;22: 71–74.
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AB0821 HIGH PREVALENCE OF VITAMIN D3 DEFICIENCY IN PATIENTS WITH RHEUMATIC DISEASES AND MUSCULOSKELETAL DISORDERS IN CYPRUS

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Background: Vitamin D3 (vitD) deficiency has been associated with an increased risk of a wide range of acute and chronic diseases including rheumatic diseases. Low serum 25(OH)D levels has been reported in mediterranean countries but little is known about the sunny island of Cyprus.[1,2]
Objectives: To assess vitamin D status among Cypriot patients with various rheumatic diseases (RD) and non-inflammatory musculoskeletal disorders (MSD).
Methods: Serum levels of 25(OH)D were randomly measured in 277 Cypriot patients with RD and MSD who attended the rheumatology outpatient clinics at the General hospitals of Larnaca and Ammochostos in 2016. 84/277 patients were receiving vitD supplements and excluded from analysis. From the rest 193 patients (female/male [F/M]:151/42, mean age:58, rage:21–89), 69 had rheumatoid arthritis (RA) (F/M:54/15, mean age:62, range 27–83), 31 seronegative spondyloarthropathies (SpA) (F/M:13/18, mean age:54, rage:21–73), 65 MSD (e.g. osteoarthritis, back pain, neck pain, arthralgia) (F/M:61/4, mean age 56, range 21–82), 16 autoimmune diseases (lupus, sjogren's, scleroderma) (F/M:15/1, mean age:61, rage:45–79)) and 12 various other RD (F/M:8/4, mean age 55, rage 21–89). 20 patients had additionally Hashimoto's thyroiditis (F/M:18/2, mean age:56, rage:28–73).
Results: The mean serum vitD levels in all patients were 20.4 ng/ml (range 3.2–56.8 ng/ml). VitD deficiency (<20 ng/ml) was found in 122/193 patients (63%), insufficiency (21 to 29 ng/ml) in 49/193 patients (25%) and sufficiency (>30 ng/ml) in 22/193 patients (11%).[3] The mean values (range) of vitD levels and the percentage of patients that had vitD deficiency, insufficiency and sufficiency per disease category were; RA: 19.8 ng/mL (8.1–53.3 ng/ml), 64%, 28% and 9% respectively, spa: 21.9 ng/ml (7.2–54.0 ng/mL), 48%, 35% and 16% respectively, MSD: 20.3 ng/ml (6.6–48.0 ng/ml), 63%, 28% and 9% respectively, autoimmune diseases: 17.9 ng/ml (3.20–37.00 ng/ml), 81%, 6% and 13% respectively, other RD: 22.7 ng/ml (9.0–56.8 ng/ml), 75%, 0%, 25% respectively and Hashimoto's thyroiditis: 18.8 ng/ml (7.2–37.0 ng/ml), 80%, 5% and 15% respectively. Analysis of the total number of patients showed significant differences in vitD levels and rates of vitD deficiency among females and males (19.3 ng/mL, [range 3.2–54.0 ng/mL], vs 23.7ng/mL, [range 7.2–56.8 ng/mL] [p=0.009] and 70% vs 43% respectively). Seasonal variations or age-related differences in vitD levels were not observed in this study.
Conclusions: High rates of vitD deficiency were observed in patients with RD and MSD in the island of Cyprus despite the sunny climate. Avoidance of sun exposure is presumed to be the main reason. Further studies are needed.
References:
[1] Kolokotroni et al. Public Health Nutr. 2015;18(1):112–21.
[2] González-Gross et al. Br J Nutr. 2012;107(5):755–64.
[3] Hossein-nezhad et al.Mayo Clin Proc. 2013;88(7):720–755.
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AB0822 CLINICAL FEATURES AND PREDICTIVE FACTORS OF ORAL BISPHOSPHONATE-RELATED OSTEONECROSIS OF THE JAW: AN ANALYSIS OF 8 CASES IN A SINGLE INSTITUTION

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Background: Oral bisphosphonates (BPs) have been increasingly prescribed for the treatment of and prophylaxis for osteoporosis over the past decade. More than 190 million prescriptions for oral BPs have been dispensed worldwide, and, thus, the number of patients that develop oral BP-related osteonecrosis of the jaw (BRONJ) is expected to increase in the future. Although previous studies have investigated oral BRONJ, predictive factors have not yet been identified [1].
Objectives: The aim of the present study was to clarify the clinical features and predictive factors of oral BRONJ.
Methods: We included 8 patients who had taken oral BPs and were diagnosed with BRONJ at Mitsui Memorial Hospital (Tokyo, Japan) between 2011 and 2016. The following details were collected for each patient from a review of medical charts: sex, age, type of BP used, duration of BP administration, co-morbidities, laboratory values at presentation including hemoglobin, albumin, and serum creatinine values, clinical stage of the lesion, site affected, and pathological findings. Laboratory values of patients with BRONJ were compared with those of 242 patients (as a control group) who were prescribed BPs in October 2016 at our hospital. The Mann-Whitney U-test and chi-squared test were used for statistical comparisons between the oral BRONJ and control groups. Risk factors for BRONJ were assessed using multivariate analyses with a logistic regression analysis. All analyses were performed using SPSS ver. 21.
Results: The mean age and female ratio in the oral BRONJ and control groups were 74.5±13.8 years and 75.0%, and 71.1±12.7 years and 66.1%, respectively (p=0.26, p=0.61). The mean interval between the initiation of BP therapy and a confirmed diagnosis was 45.9±35.5 months. Seven patients had lesions in the mandibular bones and alendronate was used in six cases. Oral BPs were administered to three patients with rheumatoid arthritis or multiple sclerosis, all of whom were given a maintenance dose of corticosteroids. The remaining three out of 5 oral BP users developed BRONJ after dental extraction. Regarding laboratory results, serum albumin values were significantly lower in the oral BRONJ group than in the control group (3.7±0.3 g/dl and 4.2±0.4 g/dl, respectively, p<0.01). Serum hemoglobin levels were slightly lower in the oral BRONJ group than in the control group (11.3±1.3 g/dl and 12.4±1.7 g/dl, respectively, p =0.06). A multiple logistic regression analysis identified serum albumin levels as the only significant predictive factor for oral BRONJ (OR=0.14; 95% CI 0.03–0.71, p<0.05). A pathological examination was available in six patients, with Actinomycetes being identified as the causative species in 4.
Conclusions: Oral BRONJ mainly developed in patients with long-term corticosteroid use for an underlying illness or those who underwent dental extraction, and hypoalbuminemia was the only laboratory marker identified as a predictive factor for BRONJ.