AB0255

RISK OF FRAGILITY FRACTURE IN A COHORT OF PATIENTS WITH RHEUMATOID ARTHRITIS.

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Background: Rheumatoid Arthritis (RA) is associated with low bone density and high risk fracture compared to general population.

Objectives: The aim of this study is to assess the effect of some variables on fragility fractures in patients with RA.

Methods: We perform an observational study in a cohort of patients diagnosed of RA according to 1987 and 2010 ACR criteria, to determine the frequency of osteoporotic fractures and associated clinical and densitometric variables. All patients diagnosed of RA were invited to participate in the study between 2013 and 2019, and to perform BMD DXA (GELunarProdigy®). SPSS25 was used to compare variables between patients with fracture and without fracture.

Results: 376 patients with RA were included (78,7% women), mean age 63,3 (±13,2) years old and a mean of evolution of the RA of 118,7(±96,7) months at the moment the BMD was performed. We found bone fracture in 47 (12,6%) patients. Fractures were associated to female gender (OR: 2,93 (1,08-7,93); p=0,02), lower height and weight (p<0,05) and older age (p=0,007).

Table 1 shows the characteristics and differences between patients with and without fragility fractures. Women presented high risk of osteoporosis in lumbar spine [OR=3,89(1,46-10,37); p=0,002] than men, but any differences between gender were found in BMD of femoral neck. Of the fractured patients, BMD T-score was normal in 2 (4,3%), <-1 in 45 (95,7%) and <-2,5 en 25 (54,3%). In the multivariate analysis, the values of T score <-1 and <-2.5 of the hip were associated with fragility fracture, but not the value of T-score in lumbar spine. The risk of fracture decreases 0.008 with each mg/cm² that increases BMD. The use of corticosteroids was associated with the development of femoral osteopenia [OR 2.04 (1.3-3.2); p = 0.002] but not with an increased risk of fractures. No significant association was found between fractures and the presence of RF, ACPAs, smoking, or treatment with biological therapy.

Table 1.

Characteristics	Patients with fractures (n=47)	Patients without fractures (n=327)	OR (IC 95%); p value
Females	43 (14,7%)	250 (85,3%)	2,9 (1,1-7,8); p=0,02
Age	67,7 (±10,6)	62,7 (±11,6)	P=0,005
Height	152,4 (±9,4)	157,3 (±8,8)	P=0,001
Weight	66,2 (±16)	73,3 (±14,4)	P=0,003
Smokers	8 (12,1%)	58 (87,9%)	0,9 (0,4-2,1) p=0,89
RF (+)	35 (12,2%)	252 (87,8%)	0,9 (0,4-1,7) p=0,66
ACPA+	30 (12,3%)	213 (87,7%)	1,3 (0,6-2,8) p=0,44
Steroids	36 (14,4%)	214 (85,6%)	1,7 (0,8-3,5) p=0,13
Biologics treatment	16 (16,2%)	83 (83,8%)	1,5 (0,8-2,9) p=0,22
Bone mineral density (BMD) in lumbar spine<-1	34 (16,8)	168 (83,2)	2,6 (1,3-5,2) p=0,006
BMD femoral neck CF<-1	43 (17,8)	198 (82,2)	9,0 (2,7-29,6) p<0,001
BMD lumbar spine<-2.5	17 (26,6)	47 (73,4)	3,4 (1,7-6,7) p<0,001
BMD femoral neck<-2.5	20 (29,4)	48 (70,6)	4,4 (2,3-8,5) p<0,001
Major osteoporotic risk (FRAX)	37 (23,6)	120 (76,4)	7,4 (3,2-17,2) p<0,001
Hip fracture risk (FRAX)	34 (24,5)	105 (75,5)	5,9 (2,8-12,5) p<0,001

Conclusion: Women with RA present higher risk of fracture than men. The most sensitive indicator for fracture risk seems to be MBD in femoral neck.

Disclosure of Interests: None declared

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INCREASED SERUM PROCALCITONIN CONCENTRATION IN PATIENTS WITH RHEUMATOID ARTHRITIS FREE OF ACTIVE INFECTION

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Background: Rheumatoid arthritis (RA) is the most common inflammatory arthritis, affecting 0.5-1% of the general population worldwide. Patients with RA are often in a relatively immunocompromised status. Previous study have

evaluated procalcitonin (PCT) application among autoimmune and autoinflammatory diseases for the diagnosis of systemic bacterial infection (1, 2). To date, the correlation of baseline PCT levels and RA disease activities, different treatment, or the expression of proinflammatory cytokines in patients with RA remained unknown.

Objectives: To investigate the baseline PCT levels among patients with RA without active infection compared with healthy controls and to understand the relationship of PCT with RA disease activity, treatment received by patients, and the expression of proinflammatory cytokines.

Methods: Patients aged 20 years and above, with clinician-confirmed diagnosis of RA were included during regular outpatient visits. RA disease activity was measured using the DAS28-ESR.

Results: A total of 623 patients with RA and 40 healthy subjects were recruited in this study. The mean PCT were significantly higher in patients with RA ($6.90 \pm 11.81 \times 10^{-3}$ ng/mL) compared with healthy controls ($1.14 \pm 3.26 \times 10^{-3}$ ng/mL) ($p = 0.002$). After adjusted for age and sex, the PCT levels remain significantly associated in patients with RA ($p = 0.001$). PCT was not significantly correlated with biologic agent, age, sex, disease duration, disease activity, C-reactive protein, conventional synthetic disease-modifying antirheumatic drugs (csDMARD), and comorbidities. Multiple linear regression analysis showed that PCT was inversely associated with the expression of IL-1 β ($B = -0.883$; CI 95% $-1.388, -0.378$, $p = 0.001$) and IFN- α ($B = -1.197$; CI 95% $-2.153, -0.242$, $p = 0.014$) after adjusted for age and sex.

Conclusion: Patients with RA have significantly higher baseline PCT compared with healthy controls. The treatment received by patients with RA did not affect the level of PCT. Further investigation is required to determine the optimal cutoff value of PCT among patients with RA before applying it in daily clinical practice.

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AB0257

ASSESSMENT OF PHYSICAL DYSFUNCTION IN PATIENTS WITH RHEUMATOID ARTHRITIS WHO PLANNED PREGNANCY FROM THE IORRA COHORT.

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Background: It has been reported that female rheumatoid arthritis (RA) patients have a longer time to pregnancy than healthy women (1), and that high Disease Activity Score with 28 joint count (DAS28) -CRP in preconception increases the frequency of infertility (2). Before the era of biologics, RA treatment tended to be inadequate from pregnancy planning to the end of lactation. And it was not uncommon for female RA patients to be unable to get pregnant or develop physical dysfunction as a result of insufficient control of the disease. There are some reports of disease activity during pregnancy and postpartum in RA patients, and the effects of RA disease activity on pregnancy and childbirth outcomes (3-5), but there are few reports focusing on the physical function during pregnancy planning of RA patients.

Objectives: To investigate disease activity and physical function in female patients with RA who planned and didn't plan pregnancy.

Methods: The IORRA cohort is a large, single institute-based, observational cohort of RA patients established at the Institute of Rheumatology, Tokyo Women's Medical University, in 2000. We identified female RA patients aged 20-49 years who answered 'pregnant' or 'delivered' in the IORRA survey in 2010-2015 and whose pregnancy and the pregnancy planning time was confirmed in the medical records, and defined them as the pregnancy planning (PP) group. Matched control was extracted at 1:3 ratio from patients without pregnancy plan based on entry time, age, RA disease duration, DAS28-CRP, Japanese version of Health Assessment Questionnaire (J-HAQ) score, and comorbidities. The primary endpoint was J-HAQ at 3years from the baseline,