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THE EFFECT OF RHEUMATOID ARTHRITIS ON FEMALE FERTILITY

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Background: Infertility is a disease of the reproductive system defined by the failure to achieve clinical pregnancy after 12 months or more of regular unprotected sexual intercourse. Although rheumatoid arthritis (RA) tends to have a late onset, the disease also occurs during child-bearing years and may interfere with procreation.

Objectives: The aim of this study was to compare fertility rates in women with RA with birth-year-matched references from the general population.

Methods: This is a case-control study. Menopausal married women who were diagnosed in the department of Rheumatology at Hedi Chaker Hospital before the age of forty were recruited into this study as cases and apparently healthy age matched married women were recruited as controls. Demographic, clinical, immunological, radiological and therapeutic data were collected from each case using the medical record of patient. Data obtained included age, age of RA onset, duration of RA, extra-articular manifestations, Rheumatoid factor (RF), anti-cyclic citrullinated peptide antibody (ACPA), the presence of erosions on radiographs of hands and feet and the therapy.

Rheumatoid arthritis and controls women were asked to state their menstrual regularity, age at menarche, age at menopause, gestity, parity, number of living children, time to first pregnancy, presence of primary or secondary infertility, the interpregnancy interval, presence of miscarriage or in utero foetal death (IUFD) or preterm delivery and their number.

Results: The mean ages of the cases and controls was $54 \pm 8,11$ years [39, 69]. The median duration since onset of RA in the patients was $22,5 \pm 10,53$ years [1, 47]. The mean age of onset of the disease was $31,4 \pm 6,3$ [18, 39] years. Forty-nine percent (49%) of patient had extra-articular manifestations: ocular sicca syndrome in 43,8% of cases, pulmonary fibrosis in 5,3% of cases and rheumatoid nodules in 1,8 % of cases. Rheumatoid factor (RF) was present in 61,4% of cases while anti-CCP anti-body was present in 59,6% of cases.

Erosive polyarthritis was found in 80,7% of patients. The mean rate of RF was $319,7 \pm 462,4$ UI/ml and the mean rate of anti-CCP was $185,8 \pm 264$.

Women with RA had a statistically significant mean time to pregnancy longer than the control group. Primary infertility was seen in 15 (26,3%) patients and 2 (3,5%) controls, whereas secondary infertility was seen in 31 (54,5%) patients and 2 (3,5 %) controls. The patients were significantly more likely to have primary and secondary infertility. There were no significant differences in the age at menarche, the number of children, the gestity and the parity between the two groups. The age at menopause was statistically significant lower in the group patients than controls.

Conclusion: Our study showed that RA women are more likely to have reduced fertility than general population. Although this study cannot definitively address the issue of impaired fertility among women with RA, the results are suggestive enough to warrant further research into the link between RA and fertility that takes women's childbearing choices into account.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.3055

AB0165

CENTRAL SENSITIZATION IN RHEUMATOID ARTHRITIS

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Background: Central Sensitization (CS) is a proposed physiological phenomenon in which dysregulation in the central nervous system causes neuronal

dysregulation and hyperexcitability, resulting in hypersensitivity to both noxious and non-noxious stimuli. The term Central Sensitivity Syndrome (CSS) describes a group of medically indistinct (or nonspecific) disorders, such as fibromyalgia (FM) (1, 2).

The prevalence of FM has been estimated at 2-7% in general population, but 10-30% patients with several rheumatic diseases fulfill the FM criteria, which suggests that they have not only nociceptive pain, but signs of CS or nocyplastic pain. (3)

Objectives: to identify the signs of central sensitization (CS) in patients with rheumatoid arthritis (RA) with the central sensitization inventory (CSI).

Methods: We examined 43 RA patients (mean age 45.5 [29.0; 53.0] years) with chronic pain. The patients underwent rheumatological examinations; CS was diagnosed using the CSI(4); inflammation severity (DAS28 index), pain intensity (VAS), affective disorders (HADS), and quality of life (EQ-5D) were assessed.

Results: We recruited 36 women and 7 men, mostly with moderate and high disease activity according to the DAS28 index.

Using the CSI subclinical CS was found in 9 patients (20.9%), mild in 7 (16.3%), moderate in 8 (18.6%), severe in 16 (37.2%), and extremely severe sensitization in 3 (6.7%). Thus, 62.5% of patients with RA had had clinically significant CS (CS>40 points according to the CSI questionnaire).

Patients with the presence of CS were characterized by more severe anxiety (10.0 [7.0; 11.0] vs 5.0 [3.0; 6.0], $p=0.001$) and lower quality of life (0.52 [-0.02; 0.52] vs 0.52 [0.52; 0.69], $p=0.02$).

The CSI tests not only pain but also other diseases associated with CS. Comorbid disorders associated with CS were found in patients with RA: 34.9% had cognitive impairment, 39.5% had signs of depression.

Conclusion: Central sensitization was detected in 62.5% of patients with RA using the CSI questionnaire. CS is associated with anxiety and depression and negatively affects the patients' quality of life. Chronic pain in RA can be of a mixed nature: nociceptive and neoplastic, which must be taken into account in the selection of personalized therapy.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.3074

AB0166

MORTALITY AND COMORBIDITIES IN A COHORT OF PACIENTS WITH ESTABLISHED RHEUMATOID ARTHRITIS

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Background: Patients diagnosed with Rheumatoid Arthritis (RA) have an increased risk of comorbidities and secondary mortality, in a large extent due to cardiovascular events.

Objectives: To identify the frequency of comorbidity, mortality and variables related to its increase in a cohort of patients with rheumatoid arthritis established (RAE).

Methods: Controlled cross-sectional observational study of a cohort of 188 patients with RAE a 10 year follow-up (5 years if not complete this period).

Results: 62.8% were women, mean age of patients at the time of inclusion was high 73.3 (+/-13.8) years and mean duration of disease was 12,8 (+/-6,99) years. Regarding CV risk factors, 26.6% smoked, 60.6% hypertension and 52.1 % diabetic. Regarding comorbidities, the most frequent were serious infections (45.2%), CVD (35.1%), Osteoporosis (31.9%), Depression (31.9%) and Kidney disease (26.6%). During follow-up, an improvement was observed inflammatory parameters and activity levels ($p < 0.001$) Table 1. Mortality was associated to CVD and severe infection, and depression to lower mortality ($p 0.05$). Overall mortality was 32.4%. A logistic regression was performed in the group of patients with time greater evolution 10 years of our cohort, to be able to better represent the influence of disease carrying with her for longer, whose results are shown in Table 2. Analysis survival, men, CVD, severe infections, and Positive Rheumatoid Factor were associated with higher mortality, while treatment with Methotrexate was associated with increased