Based on the multivariate study, a high CRP and SJC were found to be predictive factors to sleep disorders according to the PSQI score. On the other hand, the presence of extra-articular manifestations, female gender, and higher VAS were considered as predictive factors of the disorder, in conformity with the Eworth score. Conclusion: Sleep disorders are common among RA patients and they were essentially related to disease activity and functional disability, so it is important to guarantee the remission or low disease activity to improve sleep quality in these patients.

REFERENCES: NIL.

Disclosure of Interests: None Declared.

DOI: 10.1136/annrheumdis-2023-eular.4135

AB0348

DEPRESSION IN RHEUMATOID ARTHRITIS: PREVALENCE AND PHENOTYPIC CHARACTERISTICS - A SINGLE CENTER EXPERIENCE

Keywords: Rheumatoid arthritis, Mental health; C. E. Ionescu1, C. Popescu1, M. Agache1, G. Dinache1, C. Codreanu1.

1Rheumatic Disease Center DR Ion STOIJA Bucharest, Rheumatology, Bucharest, Romania

Background: Psychiatric comorbidities are frequent extra-articular manifestations in rheumatoid arthritis (RA) and depression is the most common [1]. A 2013 study estimated that 16.8 % of RA patients suffer from major depressive disorder, being more prevalent than diabetes, Parkinson’s disease or cancer [2-3]. Patients with RA have constitutional symptoms, frequently encountered in depression, like fatigue, weight loss, insomnia and lack of appetite. The overlap of depression in inflammatory immune mediated diseases is recognized for some time [4]. Studies show that immune mediated inflammation affects and modulates neurogenesis, neurotransmission, neuroendocrine activity and neuroplasticity [5]. Depression has important effects on RA patients: worse prognosis, pain, fatigue, functional deficit, more comorbidities, higher rate of mortality, increased healthcare resource utilization and lowered quality of life [6].

Objectives: The scope of this article is to highlight the importance of managing depression in RA. The primary objective was to estimate the prevalence of depression in a cohort of RA patients. The secondary objective was to describe the phenotypic characteristics of RA patients with depression.

Methods: RA patients from the Center of Rheumatic Diseases in Bucharest were included in the study if they were at least 18 years-old and if they had two or three follow-ups, after 2019. The protocol included collection of demographic, clinical and biological data. Prevalence of depression is derived from patients’ medical history, known depression. Demographical characteristics and RA phenotype were compared between the two groups. Disease activity was estimated with DAS28 and its components, tender joint count, swollen joint count, CRP and were followed over time to compare disease activity between patients with known depression and patients without depression.

Results: We collected data from 203 patients with RA, among whom 37 were known with depression, generating a prevalence of 18.2%. A meta-analysis from 2013 reported that 16.8 % of RA patients suffer from major depressive disorder, being more prevalent than diabetes, Parkinson’s disease or cancer [2-3]. Most of the patients with depression were women (67.2%). Female sex is a potential risk factor for depression [7]. The prevalence of active smoking among the depression subgroup was higher (8.1%, 1.8%, p = 0.041). Depression is a known risk factor for negative behaviors like smoking [8]. Patients had a longer disease duration (in median, 13 years compared to 10 years, p = 0.059) and also the seropositivity prevalence was lower. In 2022 a correlation between depression and seronegative RA was found [9]. DAS28 and the components of DAS28 were higher in the depression RA subgroup; DAS28 was higher at all time points (p < 0.001). Higher tender joint count was expected (p < 0.001), but swollen joint count was also higher among depressive RA patients (p < 0.001), as well as CRP (p = 0.009, Figure 1).

Conclusion: Depression is prevalent among RA patients and it has an important impact on the quality of life; so depressive symptoms should be addressed in clinical practice. The correlation between the prognosis of rheumatoid disease and depression is strong, regardless of the direction of causality. The assessment of depression could be a psychomarker for assessing RA prognosis. DAS28 is used to make therapeutic decisions, so given that depression scores increase DAS28, it follows that they also influence therapeutic decisions.

REFERENCES:

Disclosure of Interests: None Declared.

DOI: 10.1136/annrheumdis-2023-eular.4310

AB0349

ENDOCRINE DYSFUNCTION IN PATIENTS WITH RHEUMATOID ARTHRITIS AND THEIR RELATIONSHIP TO DISEASE SEVERITY

Keywords: Comorbidities, Rheumatoid arthritis, Descriptive Studies; M. K. Garg1,2, P. S Kumar1, S. Nandagopals3, K. Shukla3, M. Gopalakrishnan1, All India Institute of Medical Sciences, Internal Medicine, Jodhpur, India; All India Institute of Medical Sciences, Endocrinology and Metabolism, Jodhpur, India; All India Institute of Medical Sciences, Biochemistry, Jodhpur, India

Background: Rheumatoid arthritis (RA) is known to be associated with multiple endocrine dysfunctions including hypothyroidism, adrenal insufficiency, hyperprolactinemia, and hypoandrogenism. The link between endocrine system and synovitis in RA is attributed to the presence of functional receptors for glucocorticoids, androgens and estrogen in the synovocytes which function as an intracellular system [1,2].

Objectives: To describe endocrine dysfunction in patients with RA and to determine its relationship with disease severity and disease duration.

Methods: We studied RA patients diagnosed using ACR/EULAR 2010 at our clinic in Jodhpur, India from January 2021 to August 2021 after written informed consent and Ethical Committee approval. We collected the clinical, demographic, treatment history and calculated disease severity with Disease Activity Score (DAS28) and Simplified Disease Activity Index (SDAI). Serum samples for thyroid profile, prolactin, dehydroepiandrosterone sulphate (DHEAS), testosterone, cortisol, Tumor Necrosis Factor alpha (TNF-α) and Interleukin 6 (IL-6) were collected and stored at -80°C and analysed by chemiluminescent immunoassay (Siemens Advia Centaur® immunoassay system, USA) as per the standard hospital protocol. Spearman’s correlation was used to determine the relationship between endocrine dysfunction with disease severity scores and total disease duration.

Results: Among the 160 patients included in the study, 4 were on levonorgestrel supplementation for hyperprolactinism. Thirteen patients (8.6%) had primary hypothyroidism, 2 patients (1.3%) had subclinical hypothyroidism with no cases of central hypothyroidism and 31 patients (20.9%) had sick euthyroid syndrome (Table 1). Hyperprolactinemia was seen in 24.3% patients and the mean level of serum prolactin increased as the disease severity increased but it was not statistically significant (Figure 1). DHEAS levels were below the accepted age and gender cut-offs in 58.4% patients while 56.6% had low testosterone. Among the 99 patients who had random cortisol sol values, 36 patients (36.4%) had adrenal insufficiency (random cortisol range<3 μg/dl). Serum cortisol was negatively correlated with serum TNF-α but had no relationship with serum IL-6. None of the endocrine parameters were correlated with disease severity scores (SDAI/ DAS) or their individual components.

Conclusion: Considerable percentage of patients with RA have endocrine dysfunctions compared to the general population, likely secondary to raised inflammatory cytokines produced at synovial tissues. However, they do not correlate to disease activity or disease duration in RA.

REFERENCES:
**Table 1. Endocrine dysfunction in patients with Rheumatoid arthritis.**

<table>
<thead>
<tr>
<th>Endocrine Abnormality</th>
<th>No of Patients/Total patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary hypothyroidism</td>
<td>13/148 (8.8%)</td>
</tr>
<tr>
<td>Subclinical hypothyroidism</td>
<td>2/148 (1.3%)</td>
</tr>
<tr>
<td>Sick Euthyroid cases</td>
<td>31/148 (20.9%)</td>
</tr>
<tr>
<td>a. low fT3 and low fT4</td>
<td>13/148 (8.7%)</td>
</tr>
<tr>
<td>b. low fT3 and normal fT4</td>
<td>14/148 (9.5%)</td>
</tr>
<tr>
<td>c. low fT3 with increased fT4</td>
<td>4/148 (2.7%)</td>
</tr>
<tr>
<td>Hyperprolactinemia</td>
<td>37/152 (24.3%)</td>
</tr>
<tr>
<td>Low DHEAS</td>
<td>88/156 (56.4%)</td>
</tr>
<tr>
<td>In males</td>
<td>15/21 (71.4%)</td>
</tr>
<tr>
<td>In females</td>
<td>73/335 (54.1%)</td>
</tr>
<tr>
<td>Low Testosterone</td>
<td>86/152 (56.6%)</td>
</tr>
<tr>
<td>In males</td>
<td>13/21 (61.9%)</td>
</tr>
<tr>
<td>In females</td>
<td>73/335 (55.7%)</td>
</tr>
<tr>
<td>Primary Adrenal insufficiency</td>
<td>36/99 (36.4%)</td>
</tr>
</tbody>
</table>

**Conclusion:** To our knowledge this is the first study evaluating drug safety and pregnancy outcome in Indian RA patients. Most RA patients can have successful pregnancy. SSZ, HCQ, Azathioprine and low dose prednisolone are safe during pregnancy. Limited data indicates patients can have successful pregnancy without MTX washout but more data is required.

**REFERENCES:** NIL.

**Disclosure of Interests:** NIL.

**Acknowledgements:** NIL.

**AB0351**

**RELATIONSHIP BETWEEN NUTRITIONAL STATUS AND OSTEOPOROSIS IN ELDERLY PATIENTS WITH RHEUMATOID ARTHRITIS**

**Keywords:** Osteoporosis, Diet and Nutrition, Rheumatoid arthritis


1Fattouma Bourguiba Hospital, Rheumatology, Monastir, Tunisia

**Background:** Malnutrition is a recognised risk factor for osteoporosis. These two conditions are frequent comorbidities in rheumatoid arthritis (RA), especially in elderly patients.

**Objectives:** The aim of our study was to evaluate the association between malnutrition and osteoporosis among elderly patients followed for RA.

**Methods:** This is a cross-sectional study including patients followed for RA aged 65 years or older. Nutritional status was assessed by body mass index (BMI) and the Mini-Nutritional Assessment (MNA) questionnaire. Patients were divided into 2 groups according to the MNA: an “impaired nutritional status” group with an MNA score ≤ 23.5 and a “normal nutritional status” group with an MNA ≥ 24.

**Results:** There were 63 patients (52 women and 11 men). The mean age was 68.17±4.35 years. The median duration of RA was 11 years with an IQR of [4-16]. The mean DAS28-MS was 3.72±1.48. The mean total MNA score was 20.19±4.71 (8-27.5). According to the MNA, 76.2% of the patients had an “altered nutritional status” and 23.8% of the patients had a “normal nutritional status”. The mean BMI was 27.97±5.44 kg/m². Osteoporosis was found in 25 patients (39.7%). In the “impaired nutritional status” group according to the MNA, there were significantly more osteoporotic patients (p=0.05). The mean T-score at the lumbar spine site was significantly lower in patients with MNA indicating “impaired nutritional status” (<2.36±1.17 SD vs -1.53±0.81; p=0.04), as was the mean T-score at the femoral site (-1.89±1.18 SD vs -1.03±0.76; p=0.001). A lower BMI was significantly associated with the T-score at the femoral site (p=0.04) but not at the lumbar spine site (p=0.18).

**Conclusion:** Our study showed that in elderly patients followed for RA, malnutrition diagnosed with the MNA score was significantly associated with osteoporosis and lumbar and femoral T-scores, and low BMI was associated with the femoral site T-score.

**REFERENCES:** NIL.

**Disclosure of Interests:** NIL.

**Acknowledgements:** NIL.

**AB0352**

**FREQUENCY, CLINICAL AND FUNCTIONAL IMPACT OF FOOT INVOLVEMENT IN RHEUMATOID ARTHRITIS**

**Keywords:** Descriptive Studies, Inflammatory arthritides, Rheumatoid arthritis

C. Pinto Oliveira1, S. F. Azevedo1, S. P. Silva1, A. R. Prata1, A. Barcelos1, 1Centro Hospitalar do Baixo Vouga, Rheumatology Department, Aveiro, Portugal