Background: In rheumatoid arthritis (RA), biological treatments is one of the effective treatment options. On the other hand, the effects of biologics cannot be uniformly satisfied to all patients, and therefore some cases in which treatment is interrupted due to ineffective or adverse events. However, the useful predictive markers of the biologics have not been found in the early phase of treatment in RA. Recently, ultrasound (US) has played a role of sensitive imaging modality in the diagnosis and follow-up of patients with RA.

Objectives: In this study, we investigated whether continuation of biologics treatment can be predicted by ultrasonographic findings in the early phase.

Methods: Fifty-four RA patients who started the first biologics from September 2016 to December 2018 were included. All the patients were performed clinical examination, blood tests and US examination of hand and foot at baseline, 4, 12, 24, 36 and 52 weeks. US examination was performed on MCP joints, PIP joints, wrist and MTP joints.

Results: Among 54 cases, 42 cases were able to continue treatment until one year and the continuation rate was 80.8%. Of the 12 patients who discontinued first biologics treatment, 5 were changes to other biologics due to inadequate response, 4 were their wishes, and 3 were adverse events. Multiple regression analysis was performed with treatment continuation as the dependent variable and improvement of CRP, MMP-3, DAS28-CRP, grayscale score and power Doppler score in 4 weeks as explanatory variables. Only improvement of power Doppler score at week 4 was 36% compared with the baseline, compared with 10% in the discontinuation group.

Conclusion: The early improvement of power Doppler score in 4 weeks could be a predictive factor for the continuation of 1-year biological treatment.

References:

Table 1. Multivariate regression analysis of predictive factors for continuation of biologics treatment in 1-year.

<table>
<thead>
<tr>
<th>Improvement ratio of 0 to 4 weeks</th>
<th>beta</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRP</td>
<td>-0.122</td>
<td>0.465</td>
</tr>
<tr>
<td>MMP-3</td>
<td>0.228</td>
<td>0.103</td>
</tr>
<tr>
<td>DAS28-CRP</td>
<td>0.280</td>
<td>0.103</td>
</tr>
<tr>
<td>Ultrasound grey scale score</td>
<td>-0.342</td>
<td>0.119</td>
</tr>
<tr>
<td>Ultrasound power Doppler score</td>
<td>0.442</td>
<td>0.045</td>
</tr>
</tbody>
</table>

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Disclosure of Interests: Tadashii Okano Grant/research support from: AbbVie, Eisai. He obtained satisfaction to all patients, and therefore some cases in which treatment is interrupted due to ineffective or adverse events. However, the useful predictive markers of the biologics have not been found in the early phase of treatment in RA. Recently, ultrasound (US) has played a role of sensitive imaging modality in the diagnosis and follow-up of patients with RA.
References:

Disclosure of Interests: Shunji Okita: None declared, Ryuichi Nakahara: None declared, Minami Matsuhashi: None declared, Masahito Watanabe: None declared, Yoshishia Nasu: None declared, Keiichiro Nishida Grant/research support from: K. Nishida has received scholarship donation from CHUGAI PHARMACEUTICAL Co., Eisai Co., Mitsubishi Tanabe Pharma and AbbVie G.K.; Speakers bureau: K. Nishida has received speaking fees from CHUGAI PHARMACEUTICAL Co., Eli Lilly, Jansen Pharmaceutical K.K., Eisai Co. and AYUMI Pharmaceutical Corporation, Toshiba Ozaki: None declared.

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AB0217 IMPACT OF THE BODY-MASS-INDEX ON DISEASE ACTIVITY, FUNCTIONAL ABILITY AND QUALITY OF LIFE IN PATIENTS WITH RHEUMATOID ARTHRITIS

L. Medjedovic1, J. Mirdja1,2, P. Ostojic2, *University Clinical Center, Department for Rheumatology, Banja Luka, Bosnia and Herzegovina;1Institute of Rheumatology, Belgrade, Serbia

Objectives: This study aims to assess differences in disease activity, functional ability and quality of life among underweight, normal weight, overweight and obese patients with rheumatoid arthritis (RA).

Methods: 715 patients with RA (609 women and 106 men) were included in this study. According to their Body-Mass-Index, all patients were divided into four subgroups: underweight (BMI <18.5), normal weight (BMI between 18.5 and 24.9), overweight (BMI between 25.0 and 29.9) and obesity (BMI ≥30.0). Mean values of DAS28, CDAI and SDAI (measures of disease activity), HAQ-disability index (measure of functional ability) and RAQoL index (measure of quality of life) were compared among four subgroups of patients.

Results: 28 (3.9%) RA patients were underweight, 310 (43.4%) had normal weight, 268 (37.3%) were overweight, and 109 (15.2%) patients were obese. Among these subgroups, no difference in mean age, disease duration, percentage of seropositive patients, and patients treated with glucocorticoids, csDMARDs or biologics, was noticed. There were no statistically significant differences in mean values of DAS28, CDAI and SDAI in four subgroups of patients. However, mean value of the HAQ disability index was significantly higher (p<0.05) in underweight (1.32) and obese patients (1.27), compared to normal (0.87) and overweight patients (1.08). The mean value of the RAQoL-Index was also somewhat higher in underweight and obese patients (8.8 and 8.1, respectively) than patients who are overweight or have normal weight (7.0 and 6.5, respectively), but the difference was not statistically significant.

Conclusion: Underweight and obese RA patients have worse physical function than normal and overweight patients. However, worse disability cannot be explained by higher disease activity.

Disclosure of Interests: None declared

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AB0218 FUNCTIONAL DISABILITY AND PAIN BUT NOT DISEASE ACTIVITY ARE ASSOCIATED WITH POOR HEALTH-RELATED QUALITY OF LIFE IN A COHORT OF RHEUMATOID ARTHRITIS PATIENTS

A. R. Prata1, H. Assunção1, M. Luis1, L. Brites1, F. Costa1, J. Dinis de Freitas1, S. Silva1, J. A. P. Da Silva1,2, C. Duarte1,2 on behalf of ‘Promoting Happiness Through Excellence of Care’ Group.

Background: Rheumatoid Arthritis (RA) is a systemic autoimmune disease that presents with joint pain and inflammation leading to significant disability and poor health-related quality of life (HRQoL). (1,2). Optimizing long-term HRQoL is the primary goal of disease management in RA (3).

Objectives: To evaluate HRQoL and identify its influencing clinical and demographic factors in a Portuguese RA population.

Methods: This is a cross-sectional study including consecutive patients fulfilling the ACR/EULAR 2010 and/or ACR 1987 RA classification criteria, followed at a tertiary Rheumatology Department. Sociodemographic and clinical variables were collected. HRQoL was assessed using the EuroQol 5-Dimensional Descriptive System (EQ-5D) total score (normal range from -0.496 to 1.00, lower values indicating poorer HRQoL), Independent-test and Pearson’s correlation coefficient were performed to evaluate EQ-5D differences between groups and examine its relationships with continuous variables, respectively. Variables with p<0.1 in univariate analysis were included in a stepwise multiple linear regression analysis to evaluate the independent association of variables with the EQ-5D score.

Results: 358 RA patients were included (80.20% female, mean age ± SD: 63.22± 0.66 years old). Mean EQSD total score ±SD was 0.48 ± 0.01. Based on EQ-5D domains, 0.60% reported extreme problems with mobility, 3.40% extreme problems with self-care, 2.50% extreme problems with usual activities, 12.0% extreme pain or discomfort, and 7.30% extreme anxiety or depression symptoms (Fig. 1). There was a significant difference in EQ-5D scores between male (M=0.55, SD=0.24) and female gender (M=0.46, SD=0.27); t(356) = -2.41, p=0.016. EQ-SD was weakly correlated with DAS-28-CRP (r=-0.32; p<0.001), moderately correlated with patient’s global assessment of disease activity (r=-0.54; p<0.001) and pain-visual analogue scale (pain-VAS) scores (r=-0.58; p<0.001) and strongly with Health Assessment Questionnaire (HAQ) score (r=-0.72; p< 0.001). After multivariate analysis, HAQ-score (β=-0.57 [95% CI -0.24 to -0.17]; p<0.001) and pain-VAS (β=-0.25 [95% CI -0.003 to -0.002]; p<0.001) remained as independent predictors of EQ-5D (R²=0.56, p<0.001).

Conclusion: Greater functional impairment and pain are associated with poor HRQoL in RA patients, and thus special attention must be given to treatment strategies providing the best patient-centred outcomes.

References:

Disclosure of Interests: Ana Rita Prata; None declared, Helena Assunção; None declared, Mariana Luis; None declared, Luisa Brites: None declared, Flavio Costa: None declared, João Dinis de Freitas: None declared, Stefanie Silva: None declared, José Antonio P. da Silva Grant/research support from: Pfizer, Abbvie, Consultant of: Pfizer, Abbvie, Roche, Lilly, Novartis, Catia Duarte: None declared

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AB0219 PREDICTIVE FACTORS FOR THE PROGRESSION OF EARLY INFLAMMATORY ARTHRITIS TO RHEUMATOID ARTHRITIS

F. Rehail1, R. Chetouane1, S. Bencheikh1, S. Haid1, N. Khaidoun1, N. Brahimi1, A. Ladjouze-Rezig1, F. Hanni1, 1Ben Aknoun Hospital, Rheumatology, Algeria;2Beni Messous Hospital, Rheumatology, Algiers, Algeria

Objectives: To identify factors predicting the progression of early inflammatory arthritis (EIA) to rheumatoid arthritis (RA)

Methods: This was a prospective longitudinal study of inflammatory rheumatism that could not be classified according to defined rheumatism criteria. Demographic, biological, immunological and radiographic data were collected at the time of inclusion in the study. Disease activity as determined by the Disease Activity Score 28-CPR (DAS28-CPR: 4 variables), functional handicap as calculated by Heath Assessment Score (HAQ), and bone and joint damage as evaluated by Sharp-Van der Heijde (SVDH) score. ultrasound joint imaging were evaluated at the beginning of the study and then 1 year later. Logistic regression was performed to identify predictive factors for progression to RA.

Results: One hundred seventy two patients were included (24 men, 148 women), with an mean age 43.13±14.07 years and an mean time to diagnosis 10.24±6.84 months The mean ESR was 46.81±31.16 mm/1st hour, and the mean CRP level was 22.84±39.8 mg/l. Rheumatoid factors (RFs) and anti-citrullinated protein antibodies (ACPA) were present in 48.8% and 53% of patients, respectively. The erosion, joint space narrowing, and total SVDH scores were 3.38±3.48, 5.08±3.32, and 5.95±4.94, respectively. One hundred sixty one patients were followed up for 12 months. Multivariate regression analysis showed that a DAS28-CRP level ≥5.2 (OR=28.6; CI95% 8.7-94.5), an RF level >60 IU/L (OR=11.2; CI95% 4.3-87.5), and an ACPA

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