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### ASSOCIATION OF SEROLOGICAL STATUS WITH THE FREQUENCY OF CLINICAL AND RADIOLOGICAL REMISSION IN RHEUMATOID ARTHRITIS

O. Iarenko<sup>1</sup>, G. Mykytenko<sup>2</sup>. <sup>1</sup>O.O.Bogomolets National medical university, internal medicine, Kyiv, Ukraine; <sup>2</sup>O.O.Bogomolets National medical university, internal medicine, Kyiv, Ukraine

**Background:** Achieving remission is one of the main goals in the management of patients (pts) with rheumatoid arthritis (RA). According to the literature, one of the determining predictors of the disease course is the serological variant of RA [1]. However, there are conflicting data in scientific publications concerning relationship between the presence/titre of antibodies to cyclic citrullinated peptide (ACCP) or rheumatoid factor (RF) and the frequency/rate of remission [1].

**Objectives:** To examine associations of ACCP- and RF-status with possibility and timing of clinical and radiological remission in Ukrainian pts with RA while taking the main non-biological disease modifying anti-rheumatic drugs (DMARD).

**Methods:** In enrolled pts RF titer was determined by the latex agglutination method (Humatec, Germany), reference values <20 IU/ml; ACCP level - by ELISA (IBL-Hamburg, Germany), the diagnostic limit of ACCP was ≥15U/ml, the maximum value ≥ 345U/ml. All pts received non-biological DMARD: methotrexate, leflunomide, sulfasalazine or its combination with hydroxychloroquine. At baseline and after 6, 12 and 24 months (mth) of treatment the disease activity and achievement of remission (by DAS28; Sharpe-van der Heide scale) in different subgroups of RA pts were analysed.

**Results:** 128 pts with RA were included in the study; the mean (SD) age was 54 (12.7) years and follow-up was for 2.0 (1.3) years. Most were women (72.4%), mean disease duration 18.4± 3.18 mth. ACCP-positive were 64.8% and RF - 57.1% pts. According to serological status at baseline, pts were stratified into four classes: ACCP+RF- (n=19), RF+ACCP- (n=9), dual positive (n=64) and dual negative (n=36). There were no significant differences between the analysed groups in age, sex, RA duration, disease activity, radiological changes and prescribed therapy (p>0.05).

During the 2-year follow-up, clinical remission was achieved in a total of 27 (21.1%) pts, including early remission (during first 6 mth) in 25 (19.5%). The percentage of pts in remission were 36.1, 33.3, 15.8, and 12.5 respectively for RF-/ACCP-, ACCP-/RF+, ACCP+/RF-, and ACCP+/RF+ ( $\chi^2 = 7.74$ , p<0.05 RF-/ACCP- vs ACCP+/RF+;  $\chi^2 = 4.55$ , p<0.05 ACCP-/RF+ vs ACCP+/RF+). The rate of remission (frequency of early remission in the structure of general remission) in four analysed groups did not differ significantly and was 75%, 66.6%, 66.6% and 84.6%, respectively. The ACCP titer in pts who achieved and didn't achieve remission were respectively 240.8 ± 38.5 U / ml and 187.8 ± 13.7 U / ml, p>0.05. There also wasn't difference between RF titer and the frequency of remission in these groups (257.9±233.8 IU / ml vs 293.2±257.3 IU / ml, p> 0.05). According to our data, there was no correlation between the level of RF / ACCP and the frequency of remission.

Radiological remission was achieved in 46.7% of ACCP-negative patients and only in 10.6% of ACCP-positive patients (p <0.01). The absence of RF in the blood was also associated with a more frequent achievement of radiological remission (in 34.2% of pts) compared with the RF-positive cohort of pts (in 15.4%, p <0.05). Double seronegative pts achieved remission three times more often (48.1% pts) than double seropositive (13.9%, p<0.01).

**Conclusion:** Our data suggest that the frequency of clinical remission, including early, is three times higher in patients with RA, negative for ACCP. The rate of clinical remission (ratio of early in the structure of the general) doesn't depend on the serological variant of RA: about two thirds of pts in all analysed groups achieve remission in the first 6 mth of DMARD therapy. ACCP- and RF-titers in the onset of the disease don't influence on the possibility of achieving clinical and radiological remission. Radiological remission is observed three times more often in seronegative (for ACCP or RF) pts. Double seropositivity has an additive effect on subsequent joint destruction.

#### REFERENCES:

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**Disclosure of Interests:** None declared

**DOI:** 10.1136/annrheumdis-2022-eular.2297

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### INDICATORS OF DISEASE ACTIVITY DURING HOSPITALIZATION IN A RHEUMATOLOGICAL HOSPITAL IN PATIENTS WITH DIFFICULT-TO-TREAT RHEUMATOID ARTHRITIS

E. Matianova<sup>1</sup>, A. Gordeev<sup>1</sup>, Y. Olyunin<sup>1</sup>, E. Galushko<sup>1</sup>. <sup>1</sup>V.A.Nasonova Rheumatology Research Institute, Rheumatoid arthritis evolution laboratory, Moscow, Russian Federation

**Background:** Patients (pts) with Difficult-to-Treat Rheumatoid Arthritis (D2T) (EULAR 2021 criteria) are distinguished by a history of failure of two or more biological disease modifying antirheumatic drugs (bDMARDs)/targeted synthetic

DMARDs (tsDMARD) with different mechanisms of action and a more aggressive course of RA generally. In this study, we wanted to identify differences in the manifestation of RA activity during an exacerbation of the disease in such pts, compared with similar pts, but not meeting the D2T EULAR criteria.

**Objectives:** Describe the features of manifestations of rheumatoid arthritis (RA) activity in pts with D2T.

**Methods:** In pts with RA, with ineffectiveness of bDMARD/tsDMARD taken before hospitalization, admitted to the V.A.Nasonova Research Institute of Rheumatology from January to December 2021 due to an RA exacerbation (n=113), the duration of morning stiffness in the joints, tender joint count (TJC), swollen joint count (SJC), VAS general health pt, ESR, blood CRP levels, and DAS28 calculated indices. Pts Patients Eligible for D2T RA EULAR 2021 were allocated to the D2T group (n=26/23%), the remaining pts were assigned to the C control group (n=87/77%). Pts at D2T and C were matched for sex, age (D2T: 44.6±14.1 years vs. C: 48.8±15.6 years; p>0.05) and duration of RA (D2T: 15.8 ±11.4 years vs. C: 13.7±8.6 years, p>0.05).

**Results:** Inflammatory activity in terms of CRP in D2T was significantly higher than in C (p=0.04). At the same time, the frequency of taking classical DMARDs in D2T was slightly lower (p>0.05), and systemic glucocorticoids (GC) was significantly higher (OR=3.7 [1.3-10.8]; p=0.01).

TJC, SJC, VAS general health pt, ESR, CRP, duration of morning joint stiffness, as well as the estimated DAS28 indices at the time of admission to the hospital in pts with D2T RA were comparable to those in C. (Table 1)

**Table 1. Indicators of disease activity and concomitant therapy in the study groups**

	D2T (n=26)	C (n=87)	p
TJC, M±SD	9.1±4.8	10.6±5.7	>0.05
SJC, M±SD	6±3.7	6.6±4.5	>0.05
VAS general health pt, M±SD, mm	66.2±11	66.9±12	>0.05
ESR, Me [25; 75%], mm/hr	53.5 [8;98]	27 [14;56]	>0.05
CRP, Me [25; 75%], mg/l	28.3[3.5;67.7]	7.9[5.7;44.2]	0.04
DAS28 <sup>CRP</sup> , M±SD	5.5±1.3	5.7±1.1	>0.05
DAS28 <sup>ESR</sup> , M±SD	5.2±0.9	5.3±1	>0.05
Duration of morning joint stiffness, min	120±79	135.5±94	>0.05
Taken classic DMARDs, n/%	18 / 69,2	74 / 85,1	>0.05
Taken GC per os n/%	21 / 80,8	46 / 52,9	OR=3,7 [1,3-10,8]; p=0,01
GC dose in terms of prednisolone, mg/day	7,6±4,1; 5 [5;10]	6,6±3; 5[5;10]	>0.05

**Conclusion:** Pts with D2T RA during an exacerbation of the disease differed from other RA patients with the ineffectiveness of previous bDMARD/tsDMARD by a higher inflammatory activity in CRP (p=0.04) with a higher frequency of systemic GCs (OR=3,7 [1,3-10,8]; p=0,01).

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**Disclosure of Interests:** None declared

**DOI:** 10.1136/annrheumdis-2022-eular.2353

AB0179

### PATIENT'S SATISFACTION WITH TREATMENT IN RHEUMATOID ARTHRITIS: AN UNMET NEED

W. Belhaj<sup>1</sup>, S. Miladi<sup>1</sup>, A. Fazaa<sup>1</sup>, H. Boussaa<sup>1</sup>, L. Souebni<sup>1</sup>, K. Ouenniche<sup>1</sup>, S. Kassab<sup>1</sup>, S. Chekili<sup>1</sup>, K. Ben Abdelghani<sup>1</sup>, A. Laatar<sup>1</sup>. <sup>1</sup>university of tunis el manar, faculty of medicine of tunis, mongi slim hospital, rheumatology department, tunis, Tunisia

**Background:** Shared decision between rheumatologists and their patients has become an overarching principle in current treatment recommendations in rheumatoid arthritis (RA). Therefore, assessing satisfaction with pharmacological therapy, among patients, is becoming increasingly important in clinical settings.

**Objectives:** In this study, we aimed to assess the satisfaction of patients with RA about their treatment and to investigate the predictive factors.

**Methods:** A cross-sectional study was conducted including adults diagnosed with RA for more than a year and receiving their current Disease-modifying anti-rheumatic Drug(s) (DMARD(s)) for at least 12 months.

We used the treatment satisfaction questionnaire for medication (TSQM v1.4) to assess the treatment satisfaction among patients. Multivariable regression analysis was applied to determine the factors associated with treatment satisfaction.

**Results:** We included 70 patients (63F/7M) with a mean age of 57.8 ±10.6 [29-81] years at the time of the study. The mean disease duration was 13.71±7.2 [2-30] years. Twenty-four (34,2%) patients were on a biologic DMARD (bDMARD).

Regarding the Disease Activity Score 28 (DAS28-ESR), 14.3% of patients had a low disease activity, 47.1% a moderate disease activity, 7.1% a high disease