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**AB0343 MYOCARDIAL INVOLVEMENT IN PATIENTS WITH RHEUMATOID ARTHRITIS EVALUATED BY TWO-DIMENSIONAL SPECKLE TRACKING ECHOCARDIOGRAPHY BEFORE AND AFTER 18 MONTHS OF TREATMENT WITH ANTI-TNF DRUGS**

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**Background:** Cardiovascular (CV) mortality and morbidity is increased in rheumatoid arthritis (RA). Studies found a more than two- three-fold higher prevalence of ischaemic heart disease in RA patients compared to controls. However, a number of studies indicate that RA is also associated with various non-atherosclerotic CV manifestations. The inflammatory processes in RA may affect different structures of the heart: the most characteristic lesions are conduction defects, but other less frequent manifestations are pericarditis, cardiomyopathy and valve disease.

**Objectives:** The aim of this study was to evaluate left ventricular myocardial function with two-dimensional speckle tracking echocardiography (STE), in addition to conventional Doppler and tissue Doppler echocardiography, in order to detect subclinical left ventricular myocardial dysfunction in patients with RA.

**Methods:** The study involved 30 outpatients who fulfilled the 2010 ACR/EULAR criteria for RA (11 males and 19 females; mean age 54.63±9.36 years, median disease duration 2 years), at baseline at after 18 months of treatment with anti-TNF drugs and 30 healthy controls matched in terms of age, gender and other anthropometric characteristics. All patients underwent a complete physical examination and routine laboratory analysis. CV risk profiles were assessed by means of standard ECG, conventional and stress trans-thoracic echocardiography with the measurement of CFR, carotid ultrasonography and pulse wave velocity (PWV). Two-dimensional echocardiographic images were obtained using the apical 4-chamber view at a high frame rate of 70–80 frames/s, and three cardiac cycles were stored in cine-loop format for off-line analysis using commercially available QLAB 9 software (Philips Medical System, USA) in order to assess global longitudinal strain (GLS).

**Results:** None of the patients showed any signs or symptoms of CV disease, pulmonary involvement, or any other complication. The results of the speckle tracking analysis were significantly different between the two groups, with GLS being significantly lower in the RA patients compared to healthy controls (GLS%: 18.51±9.63 vs 20.23±2.71; p<0.05). Right and left PWV (PWV right, m/sec: 7.52±1.64 vs 6.85±2.02; p=0.06 and PWV left, m/sec: 7.56±1.60 vs 6.88±2.11; p=0.07) and right and left coronary intima media thickness (cIMT) (cIMT right mm: 0.90±0.22 vs 0.75±0.13; p<0.05 and cIMT left, mm: median 0.89±0.18 vs 0.75±0.09; p<0.05) values were all higher in the RA patients and the differences of cIMT were statistically significant. Furthermore, a significant improvement in GLS in RA patients at 18 months of anti-TNF treatment was observed (GLS%: 18.51±9.63 vs 19.09±9.72 p<0.01).

**Conclusions:** GLS measured by means of speckle tracking echocardiography was impaired in RA patients in the absence of any clinical evidence of CV disease and echocardiographic evaluations negative. This data suggests an early myocardial alteration.

**REFERENCE:**

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**AB0344 DOES THE PRESENCE OF ILD INFLUENCE THE CHOICE OF DMARD AND BIOLOGIC THERAPY IN RHEUMATOID ARTHRITIS?**

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**Background:** Interstitial lung disease (ILD) is a progressive fibrotic disease of the lung parenchyma. It is the only complication of rheumatoid arthritis (RA) reported to be increasing, accounting for around 7% of all RA deaths.<sup>1</sup> Prognosis of patients with RA-ILD is reported to be poor, with usual interstitial pneumonia (UIP) being the predominant pattern associated with poor survival.<sup>2</sup> It is a challenge to determine specific pattern of ILD and formulate an appropriate treatment plan to achieve stabilisation. Early use of Methotrexate (MTX) and biologics in RA has improved outcomes and quality of life. However, this causes difficulty when RA patients develop ILD. There are reports of ILD with biologics and DMARDs, although it is difficult to establish a causal relationship or if an exacerbation of pre-existing ILD. There are no evidence based guidelines regarding introducing biologics in such patients and clinicians face a dilemma as to whether they should be denied.

**Objectives:** The aim of this retrospective study is to:

- Check the overall management of RA and ILD.
- Examine whether ILD diagnosis influences treatment of RA.

**Methods:** We reviewed 37 patients with RA-ILD from 3 hospitals (2001–2017). We collected data on demographics, clinical, Pulmonary function tests, imaging, time from diagnosis to treatment and outcomes.

**Results:** The majority developed ILD after RA except for 3 patients. Mean age of onset of RA was 67 years, 22 (60%) were female. 32 (87%) were RF or ACPA positive, 25 (68%) patients smoked. 29 (78%) patients had baseline PFTs. HRCT showed 13 had NSIP, 20 UIP and 4 were unclassified. Following the diagnosis of ILD, MTX was stopped in 16 patients, reduced in 3 and unchanged in 2. Leflunomide was stopped in 4 and SLZ stopped in 4, of which 1 had definite alveolitis. Infliximab was stopped in 2 patients.

**Specific Treatment for ILD:** 12 patients received Rituximab, of those 8 were for ILD and 4 for RA. 4 Patients continued Anti-TNF. 26 patients received steroids, 4 received MMF and 2 Cyclophosphamide. 2 received Abatacept for ILD with active RA and one received Etanercept. 3 were on Carbocysteine, 2 on NAC and 3 on oxygen.

**Outcomes:** 20 ILD patients were stable and 8 (21%) progressed and died despite treatment. RA disease activity was low to moderate in 23 patients. RA progressed in 8 patients and 1 who received Etanercept was in remission. MTX was stopped in the majority of patients. Steroids were the commonest treatment for RA in the presence of ILD. Rituximab was the drug of choice for RA with severe ILD, followed by MMF and Cyclophosphamide. DMARDs such as HCQ, Leflunomide and SLZ were used for RA in milder ILD and biologics were generally avoided.

**Conclusions:** There appears to be significant variation in the treatment of RA in the presence of ILD. However Rituximab seems to be the preferred option for severe ILD. There is a need for stratified and standardised guidance for management of RA-ILD.

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**AB0345 DOES IRON DEFICIENCY CONTRIBUTE TO FATIGUE OF PATIENTS WITH RHEUMATOID ARTHRITIS WITHOUT ANAEMIA?**

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**Background:** Iron deficiency (ID) without anaemia is a cause of fatigue, which is itself a recurring complaint of patients with rheumatoid arthritis (RA).

**Objectives:** The objective of the study was to determine the prevalence of ID in patients with RA without anaemia and to analyse the relationship between ID with fatigue, disease activity and depression.

**Methods:** This study included patients with RA according to the ACR/<sup>EULAR</sup> 2010 classification criteria (American College of Rheumatology/European League Against Rheumatism) followed up in the Rheumatology Department of Rouen University Hospital and who had a haemoglobin >12.5 g/dl. Patients were either from the single-centre monocentric longitudinal cohort or from the seventh visit of the VERA (Very Early Arthritis) High-Norman regional cohort. For each patient of the longitudinal cohort, DAS 28 ESR (Disease Activity Score – erythrocyte sedimentation rate) the FACIT – version 4 fatigue score (Functional Assessment of Chronic Illness Therapy) and a depression score (Hospital Anxiety and Depression Scale) were collected. Serum ferritin, transferrin, serum iron and saturation coefficient of transferrin were measured for each patient. ID was defined as serum ferritin <50 µg/L.

**Results:** One hundred and forty-one patients were included in the longitudinal cohort (78.7% women, mean age 13.50±9.51 years, positive rheumatoid factor and anti-citrullinated peptide antibodies in 83.6% and 86.5% of patients) and 74 RA patients from the VERA cohort (70.3% women, mean disease duration 2.74 ±0.24 years). The prevalence of ID was 15.6% in the longitudinal cohort (n=22/141) and 14.9% in the VERA cohort (n=11/74). In the longitudinal cohort, there were no significant differences between ID patients and non-deficient patients in fatigue (mean FACIT of 27.80±12.4 vs. 32.3±12.0; p=0.14), disease activity (mean DAS 28 VS 2.85±1.38 vs. 2.96±1.48; p=0.74) and depression (mean HAD score 5.86±4.12 vs. 5.80±3.84; p not calculated).

**Conclusions:** The prevalence of ID without anaemia was similar between early and old RA and was similar to that of the general French adult population (15.5%).<sup>1</sup> ID does not appear to be a major cause of fatigue in RA and does not affect the activity of the disease. The search for an ID is of limited value in exploring fatigue of RA patients.

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#### AB0346 INVESTIGATION OF ALEXITHYMIA IN PATIENTS AFFECTED BY RHEUMATOID AND PSORIATIC ARTHRITIS: CROSS-SECTIONAL OBSERVATION

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**Background:** Rheumatoid arthritis (RA) and Psoriatic arthritis (PsA) are chronic inflammatory diseases that lead to an overthrow of articular structure, functional limitation and disability. Alexithymia is a personality trait characterised by deficits in cognitive processing and regulation of emotions. A broad association between alexithymia and symptoms as depression, inflammation and pain has been demonstrated.

**Objectives:** to evaluate the prevalence of alexithymia in patients affected by Rheumatoid and Psoriatic arthritis.

**Methods:** We prospectively enrolled, from January to December 2017, patients affected by RA diagnosed according to the ACR revised criteria and PsA diagnosed according to the CASPAR criteria referred to the out-patients clinic of the Rheumatology Unit of Policlinico Tor Vergata, Rome. The 20-item Toronto Alexithymia Scale (TAS-20) was used to assess alexithymia. Disease activity, function and quality of life, clinimetric tests as well as ESR and CRP were assessed.

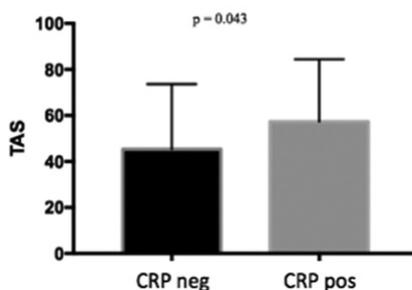
Statistical comparisons were performed using Pearson's Coefficient of Skewness, the unpaired t-Test and Mann-Whitney test.

**Results:** A total of 50 RA patients and 51 PsA patients were enrolled (table 1). The TAS-20 score showed that 38.6% (39/101) of patients had alexithymia, 26.7% (27/101) patients were in the borderline of alexithymia and 34.7% (35/101) patients had not alexithymia. A statistical significant association was observed between alexithymia and inflammatory indexes (ESR: p=0.029, CRP: p=0.043, figure 1 and 2) and also between alexithymia and clinimetrics parameters (ptVAS, pVAS, GH, p<0.0001 for all comparisons). No correlations were observed between alexithymia and disease duration, gender, therapies with bDMARDs. A significant trend has been demonstrated between alexithymia and corticosteroidal therapy

**Abstract AB0346 – Table 1.** Characteristics, therapies and clinimetric evaluation of the study population

	RA	APs	Total
Female Sex - No. (%)	41 (40.6%)	31 (30.7%)	72 (71.3%)
Male Sex- No. (%)	20 (19.8%)	9 (8.9%)	29 (28.7%)
Age (years) in mean ± (DS)	59.5 ± (11.46)	52.6 ± (12.84)	56 ± (12.66)
Mean Disease Duration ± (DS)	6.19 ± (3.82)	6.29 ± (3.96)	6.24 ± (3.89)
Patients on csDMARDs - No. (%)	10 (9.9%)	34 (33.6%)	44 (43.5%)
Patients on bDMARDs - No. (%)	12 (11.8%)	38 (37.6%)	50 (49.5%)
Patients on steroids - No. (%)	37 (36.6%)	12 (11.9%)	49 (48.5%)
patient VAS (0-100)	42.6 ± (20.95)	58.23 ± (26.52)	50.49 ± (25.17)
pain VAS (0-100)	38.1 ± (20.87)	56.9 ± (26.59)	47.59 ± (25.71)
GH (0-100)	44 ± (23.08)	49.7 ± (22.58)	46.88 ± (23.01)

Data are expressed as Mean ±Standard Deviation; csDMARDs: conventional synthetic disease-modifying antirheumatic drugs; bDMARDs: biological disease-modifying antirheumatic drugs; VAS: Visual Analogic Scale; GH: Global Health; percentages calculated for total population.



**Abstract AB0346 – Figure 1**

**Conclusions:** This study suggests that alexithymia assessment should be a part of the comprehensive care of patients with RA and PsA. We are in the process of extending this investigation on a larger sample population to improve our investigation field and to consolidate our dates.

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#### AB0347 BODY COMPOSITION IN PATIENTS WITH RHEUMATOID ARTHRITIS KAZAKH NATIONALITY

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**Background:** Chronic inflammation in rheumatoid arthritis (RA) leads to a decrease in fat and muscle mass [Baker J.F., Von Feldt J. Mostoufi-Moab S. et al., 2014 Low muscle mass in RA is considered as the main criterion of sarcopenia.

Recently, much attention has been paid to various phenotypes of sarcopenia, among which osteopenic sarcopenia, sarcopenic obesity and osteosarcopenic obesity (most unfavourable in terms of functional disorders) are distinguished.

In the modern literature there are works devoted to changes in the composition of the body in the aspect of abdominal obesity and its influence on cardiovascular risk in RA [Crowson C.S., Myasoedova E., Davis J.M., 2011]. Studies with the evaluation of muscle mass and sarcopenia in RA are few. In Kazakhstan, the composition of the human body was not studied.

**Objectives:** The purpose of the study was to study the body composition (muscle and fat mass) of patients with RA of Kazakh nationality using bioelectrical impedance analysis.

**Methods:** In our study we used Bioimpedance analyzer 101 (BIA 101, Italy).

Bioimpedansometry was performed in 585 participants, including 295 patients with RA and 290 of their siblings.

**Results:** In patients with RA, in contrast to the comparison group (sibs), BMI (pro-bands – 25.34±5.1, siblings – 24.86±4.45), the girth of the waist and hips were slightly higher than those of the siblings. The ratio of RT/OB in both groups was virtually the same. At the same time, a decrease in the lean mass was found