AB0280 GENDER-DIFFERENCES IN CARDIO-VASCULAR RISK FACTORS IN PATIENTS WITH INFLAMMATORY RMDS

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Background: Patients with rheumatoid arthritis (RA), psoriatic arthritis (PsA) and spondyloarthritis (SpA) have an increased risk of cardiovascular events when compared to the general population. This increase is probably due to both the deleterious effects of inflammation and the traditional cardio-vascular risk factors (CVRF).

Objectives: Analyse the differences by gender in the distribution of traditional CVRF in patients with chronic arthritis included in a screening program.

Methods: A program for the detection and management of traditional CVRF in patients with chronic arthritis was implemented following EULAR recommendations. Patients with RA, PsA and SpA followed-up at our department were included in this program. Patients underwent a baseline visit in a nurse-clinic where cardiovascular (CV) risk was assessed. Data on smoking status, diet, exercise, diagnosis of hypertension (HT), diabetes mellitus (DM), hypercholesterolemia (HCh) and prior CV events. The height and weight, the abdominal perimeter and the blood pressure of patients were measured. Results of a blood test previously ordered by the managing physician was recorded.

SCORE index was calculated as applied to Spanish population and then modified according to EULAR recommendations. Treatment targets (previously agreed upon by the department of rheumatology) were set; if pharmacological treatment was needed, patients were referred to their rheumatologist or GP.

Data are presented of all patients included in this screening program.

Results: The number of patients assessed at the nurse-led clinic for CVRF assessment and with data on gender, is 416. In the table 1 we present the characteristics of these patients grouped by gender

Abstract AB0280 – Table 1

		Women (n=242)	Men (n=174)
Age years, mean (SD)		59.6 (±11.9)	56.7 (±12.8)
Rheumatic disease	RA	179 (73.9%)	62 (35.6%)
	SpA	25 (10.3%)	70 (40.2%)
	PsA	38 (15.7%)	42 (24.2%)
Diabetes mellitus	Prior diagnosis	25 (10.3%)	31 (17.8%)
	New diagnosis	2 (0.9%)	4 (2.8%)
	Poor control	6 (2.4%)	10 (32.2%)
Hypertension	Prior diagnosis	93 (38.4%)	73 (42%)
	New diagnosis	25 (16.7%)	22 (21.7%)
	Poor control	53 (37%)	33 (45.2%)
Hypercholesterolemia	Prior diagnosis	91 (37.6%)	69 (39.6%)
	New diagnosis	28 (18.5%)	23 (21.9%)
	Poor control	33 (36.2%)	16 (23.2%)
Smoker		48 (19.8%)	60 (24.5%)
Obesity		86 (35.5%)	63 (36.2%)
Prior CV event		9 (3.7%)	20 (11.4%)

Data expressed as n (%) except where specified

* Poor control of hypercholesterolemia is defined as LDL over the target recommended by European guidelines for each risk stratification.

Conclusions: In a similar manner as the general population, there is a greater number of CV events in men than in women. However, the gender-distribution of traditional CVRF is similar except for DM, more common in men.

Disclosure of Interest: None declared

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AB0281 REDUCTION RATE OF RHEUMATOID FACTOR REFLECTS DISEASE ACTIVITY OF RHEUMATOID ARTHRITIS

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Background: Rheumatoid factor (RF) is involved in the pathology of rheumatoid arthritis (RA) and its titer varies during the course of treatment with biological or synthetic DMARD.

Objectives: In this study, we examined the relationship between RF change rate and disease activity.

Methods: We analysed 287 RA patients (mean age 62.3 years; mean disease duration 13.1 years) in our hospital between 2015 and 2017, who were able to confirm the RF, and 3 groups were classified according to the change rate of RF for 1 year (92 in decreasing less than 80%, 114 in unchanged 80% or more, less

than 120% and 81 in increasing 120% or more). We evaluated disease activity by simplified disease activity index (SDAI).

Results: The drugs used are: MTX usage rate 63.1%, mean amount 3.81 mg, PSL usage rate 37.3%, mean amount 1.47 mg, biological drugs usage rate 48.8%. Disease activity change amount in 1 year (delta SDAI) was -0.88 (from 6.90 to 6.02). The median RF titer at baseline was 76 (27.5–178.5), the median RF change rate was 96% (71.5–125) and delta SDAI was significantly improved in the decreasing group (-1.97, 0.005, -0.04, p=0.0011). The swollen joint counts, tender joint counts, global assessment of evaluator and CRP were similarly improved significantly in this group.

Conclusions: Although RF dose not decrease in all cases, it suggested that reduction rate of RF reflects disease activity.

Disclosure of Interest: None declared

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AB0282 ADJUSTING THE DOSE OF TOFACITINIB TO ACHIEVE OPTIMAL RESULTS IN THE MANAGEMENT OF PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS (RA) MAY OFFER MORE SUCCESSFUL RESULTS THAN UTILISING A STANDARD FIXED ONE DOSE APPROACH

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Background: We have previously reported results of patients with active RA who had been unresponsive to tofacitinib at 5 mg bid but who had demonstrated significant response after dose escalation to 10 mg bid.^{1 2} This extension trial was performed to see if 9 patients who had failed to reach treatment target on 5 mg bid but then responded to 10 mg bid of tofacitinib would maintain their clinical target if the dose was reduced down to 5 mg bid. Furthermore, if the patients could not maintain their clinical response on the lower dose, we explored whether increasing the dose of tofacitinib up to 10 mg bid could again result in a target response.

Objectives: The objectives were as follows: to explore the response of patients who achieved a treatment target when taking 10 mg bid of tofacitinib and then reduced the dose down to 5 mg bid; to report the results of the patients who could not maintain the target response at 5 mg bid and then increased the dose back up to 10 mg bid; and to identify if there was any separation between the clinical and structural findings at 5 mg bid vs 10 mg bid.

Methods: Nine RA patients who were unresponsive to treatment with tofacitinib at a dose of 5 mg bid plus MTX (10–25 mg weekly) were dose escalated to 10 mg bid and reached low disease activity (LDA) or remission at the increased dose. These patients were maintained on 10 mg bid of tofacitinib for 6 months and sustained a clinical target of LDA or remission. After 6 months, the dose of tofacitinib was reduced back to 5 mg bid which had previously not been an effective dose. The clinical response was measured by the Clinical Disease Activity Index (CDAI) and the structural response was measured by an MRI of the index hand/wrist and blindly read by a musculoskeletal radiologist using a modified OMERACT-RAMRIS score. If the patients could not maintain their positive clinical response for 3 months the dose of tofacitinib was escalated back up to 10 mg bid.

Results: Of the 9 enrolled patients, 6 patients maintained LDA or Remission over the next 6 months once the dose of tofacitinib was reduced back down to 5 mg bid. Three³ patients were unable to maintain their treatment target at the reduced dose and were dose escalated back up to 10 mg bid at which time they achieved the treatment target. (See table 1) The MRI findings showed no difference in structure at either dose and do not appear to demonstrate a relationship to the clinical findings. There were no clinically significant adverse events in either group.

Abstract AB0282 – Table 1

6 Patients who maintain target once reducing dose tofacitinib to 5 mg bid						
Patients	CDAI BSL	CDAI target on 10 mg bid	CDAI 3 months on 5 mg bid	CDAI 6 months on 5 mg bid		
003	45.9	2.6	7.2	8.2		
004	65.2	4.4	4.7	0.1		
005	56.1	3.6	9.4	2.6		
007	27.9	2.3	1.7	2.6		
012	25.3	5.1	6.4	9.3		
014	21.6	1.4	8.5	3.2		
3 Patients who could not maintain target at 5 mg bid tofacitinib and were increased to 10 mg bid						
Patients	CDAI BSL	CDAI target on 10 mg bid	CDAI 3 months on 5 mg bid	CDAI 3 months on 10 mg bid	CDAI 6 months on 10 mg bid	CDAI 9 months on 10 mg bid
008	34.3	9.2	19.2 inc dose	2.6	2.5	
018	31.8	2.5	16.2 inc dose	11.9	8.3	
019	27.3	8.9	9.7	11.9 inc dose	1.9	2.7

Conclusions: This study confirms the previous findings that 10 mg bid of tofacitinib may be the effective dose needed for some patients with active RA to reach treatment target.⁽¹⁾ It also suggests that there is an opportunity to reduce the escalated dose back down to the standard dose once a target response is achieved. This in many ways is similar to the clinical use of other drugs used to treat RA including corticosteroids, MTX and biologics where dose adjustment may well increase the therapeutic benefit of the molecule and allow subsequent dose adjustments to maintain efficacy with a lower adverse event profile. Additional studies will be needed to test the results found in this trial.

REFERENCES:

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AB0283 INDICES OF ANTIBODIES TO FIBRONECTIN ASSOCIATED WITH CLINICAL MANIFESTATIONS OF RHEUMATOID ARTHRITIS

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Background: According to available data, fibronectin (FN) is implicated in progressing cartilage destruction in arthritis of varying etiology. It is established that it is not native FB that has the ability to enhance the expression of chondrocyte catabolism gene thus causing. Antibodies enhance both resorption and synthesis of osseocartilaginous tissue; they affect proteoglycan and glycosaminoglycan production in connective tissue, and also block active centres of FN molecule.

Objectives: Determining the level of FN antibodies using fibronectin-based magnetocontrollable immobilised adsorbents is an additional criterion of rheumatoid arthritis disease activity. Demonstrating the FN indices and its antibodies in blood serum of healthy individuals, and in that of RA patients depending on the disease activity. Demonstrating that the level of FN antibodies in the blood serum of RA patients reliably differs from that of healthy people.

Methods: 117 RA patients receiving hospital treatment at Municipal hospital 25 of Volgograd were examined. The patients' mean age was 49.9±13.9. The mean duration of disease was 9.1±1.57 years. Low (I) disease activity was noted in 14 patients (12%), moderate (II) – in 66 (56.4%), and high (III) – in 37 (31.6%) patients with RA. According to the degree of articular dysfunction the patients were classified in the following way: 11 patients (9.4%) showed articular insufficiency functional class II (intact occupational ability), 87 patients (74.41%)

showed insufficiency functional class III (lost occupational ability), and 19 patients (16.2%) showed insufficiency functional class IV (lost autonomy).

The articular syndrome underlies all clinical presentations of RA. In most patients (102 individuals, 87.2%) RA took the form of polyarthritis; in the remaining 15 people (12.8%) oligoarthritis was noted. 107 patients (91.5%) showed hand joint involvement, 99 (71.8%) – knee joints, 71 (60.7%) – talocrural joints, 61 (52.1%) – elbow joint, 49 (41.9%) – shoulder joints, and 37 patients (31.6%) showed foot joint involvement. Serum from 30 apparently healthy individuals, donors from the regional hemotransfusion centre in Volgograd, was used as control.

The FN antibody titer was determined using an original technique: enzyme immunoassay with FN-based immobilised granulated antibodies with magnetic properties.

Results: The mean FN content in the plasma of healthy people was 351.0 ±65.1 mcg/ml. The mean concentration of specific antibodies in donor sera was 0.031±0.0029 optical density units. An elevated concentration of plasma FN was detected in 39 RA patients (33.3%). The mean concentration of serum antibodies to FN in RA patients was 0.095±0.014 optical density units, which exceeded the values in the control group (p<0.05). An elevated content was noted in 49 patients (41.9%).

Conclusions: A correlation analysis revealed a positive association between FN antibody concentration, and parameters of ESR (r=0.27, p<0.03), and circulating immune complex (r=0.43, p<0.05), as well as indices indicating the degree of exudative-inflammatory process in the joints, and the extent of pain syndrome (DAS score of 28, articular index, pain score, swelling index) (p<0.05).

Disclosure of Interest: None declared

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AB0284 RELATIONSHIP OF BIOMARKERS, ULTRASOUND (US) SIGNS OF JOINT DAMAGE AND RADIOGRAPHIC PROGRESSION IN PATIENTS WITH RHEUMATOID ARTHRITIS(RA)

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Background: Rheumatoid arthritis (RA) is a chronic inflammatory immune-mediated disease, based on the imbalance of biomarkers, leading to the appearance of inflammatory changes in the joints, the progression of bone and cartilage destruction.

Objectives: to identify the relationship between cytokines, their dynamic changes, ultrasound (US) signs and radiologic progression in 12 month prospective study in patients RA.

Methods: 35 patients (median age 55.0 [48.0; 64.0] years) with early RA use MTX and/or biologic therapy in accordance with the treat-to-target concept. Serum cytokine concentrations were determined using the xMAP multiplexing technology baseline, 3 and 6 months after the start of therapy. US with grey scale (GS), power Doppler (PD) and destructive changes (erosion), according to the criteria of OMERACT, were performed baseline, 3, 6, 9 and 12 months after the start of therapy. We analysed absolutely levels and their changes(Δ). X-ray examination was conducted baseline and at 12 month of therapy with an assessment of X-ray changes by Sharp van der Heijde scores (ΔSHS).

Results: Levels of proinflammatory cytokines (IL1β, IL6, IL12, IL15, TNFα) decreased by 3 month. Significant differences in PD-group at the end of observation were revealed only for IL6 and TNFα, and with X-ray progression – for ΔIL17 level at 6 month.

At baseline a positive correlation was found between PD and levels of IL1β (r=0.34), IL6 (r=0.42). We found correlation between PD at 12 month and ΔIL1β by 6 month, ΔTNFα by 3 month. In the PD-group concentration of IL6 baseline was significantly higher: 75.2 (37.9; 101.7) vs 38.7 (19.2; 59.6); by 6 month level of TNFα in this group also higher: 67.6 (34.3;125.5) vs 38.8 (21.9; 67.2). Radiographic progression was detected in 6 of 35 RA patients; this group was with PD and destructive change by US was significantly higher.

We found correlation between ΔIL17 and ΔFGF levels at 3 month with PD at 3 month: r=0.57 p=0.001 and r=0.52 p=0.004, respectively. Also we found significantly correlation between ΔIL17 and ΔFGF at 3 month and ΔIL17 at 6 month with the X-ray examination: the sum of erosions, the sum of the narrowing of the joints and the total score (for IL17 at 3 month r=0.43 p=0.01, r=0.51 p=0.0018, r=0.52 p=0.001, respectively, for the FGF at the 3 month r=0.37 p=0.03, r=0.41 p=0.014, r=0.41 p=0.014, respectively, for IL17 at 6 month r=0.38 p=0.024, r=0.39 p=0.019, r=0.4 p=0.016, respectively).

Conclusions: The revealed relationship of active synovitis by US, X-ray progression and biomarkers of inflammation in RA confirm the role of ultrasound as a method of independent evaluation of the course and outcomes of the disease.

Disclosure of Interest: None declared

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