patients. Enthesitis (11%), uveitis (11%), Chron's disease (7%), dactylitis (3%), and psoriasis (3%) was also noted. Nearly 30% of patients required non-IL-1 biologic therapy (BTx) to control SpA symptoms (axial 70%, peripheral 30%). 40% of the patients needed to switch non-IL-1 BTx to another biologic agent because of lack of efficacy on SpA symptoms (25%) or due to the adverse event (25%) and active FMF not responding to non-IL-1 biological agent (50%).

Conclusion: We showed the following: 1) more female predominance in FMF-SpA patients compared to classic SpA, 2) FMF-SpA patients had lower frequency of HLA B27, 3) up to 30% of the patients required non-IL-1 BTx to control SpA symptoms and 4) in patients on non-IL-1 BTx FMF symptoms responded in 80%.

Table 1. The clinical characteristics of FMF-SpA patients

| Age*   | 45.1±16.4 |
| Male, n (%) | 16 (67) |
| SpA symptom duration, years* | 9.5±7.0 |
| FMF symptom duration, years* | 12.6±9.6 |
| HLA-B27 positivity, n (%) | 5 (29.4) |
| Main axillary involvement, n (%) | 21 (75) |
| Main peripheral involvement, n (%) | 7 (25) |
| nRF positivity, n (%) | 15 (53.6) |
| MEFV (M694V) mutation | 18 |
| MEFV (non M694V) mutation | 19 |
| Amyloidosis, n (%) | 4 (14.4) |
| Non IL-1 biological treatment for SpA symptoms, n (%) | 10 (36.7) |

*mean ± s.D.

Disclosure of Interests: None declared

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Diagnostics and imaging procedures

- ABT072 ROLE OF ULTRASOUND IN DETECTION OF SHOULDER JOINT PATHOLOGIES IN ASYMPOTOMATIC RHEUMATOID ARTHRITIS PATIENTS
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Background: Rheumatoid arthritis (RA) is a chronic inflammatory disease that results in progressive destruction of structural components of the joints. It commonly affects the shoulder leading to pain, tenderness and decreased range of motion. Increased shoulder pain has been found to correlate strongly with disease severity, however there is little information available in the literature regarding shoulder pathologies in asymptomatic RA patients.

Objectives: To determine the prevalence of pathologies in asymptomatic shoulders in rheumatoid arthritis patients and role of ultrasound to detect it.

Methods: A cross-sectional study including two groups, first group included 36 RA patients, meeting the ACR/EULAR classification criteria for RA with no shoulder complaints. The second group included 36 healthy control subjects of similar age groups and sex, with no shoulder complaints. They were recruited from rheumatology outpatient clinic in Mansoura University Hospital. Only asymptomatic shoulders of both groups were examined clinically by inspection, palpation and special tests, then examined by ultrasound using Toshiba Xario 200 machine with 13 MHz superficial probe including biceps tendon, subscapularis tendon, supraspinatus tendon, subacromial subdeltoid (SASD) bursa, infraspinatus tendon, posterior glenohumeral joint for effusion or synovitis, acromioclavicular joint and humeral head for erosions. Findings of both groups were compared to each other.

Results: Asymptomatic shoulders in RA patients showed significant number of pathologies in 72% of the examined patients in comparison with healthy subjects (17%). According to frequency, humeral erosions were detected in 12 patients (33%), acromioclavicular osteoarthritis in 8 patients (22%), biceps tenosynovitis, supraspinatus tendinopathy, glenohumeral effusion in 8 patients (17%), subscapularis tendinopathy in 4 patients (11%), SASD bursitis in 2 patients (6%), infraspinatus tendinopathy in 1 patient (3%). The healthy group showed less number of pathologies including supraspinatus tendinopathy 3 (8%), acromioclavicular osteoarthritis 2 (6%), humeral erosions 1 (3%).

Conclusion: A significant high rate of different pathologies can be present in shoulders of RA patients despite negative history and normal physical examination. Ultrasound can be used for early detection and better management before irreversible joint destruction.

References:

Disclosure of Interests: None declared

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- ABT073 DYNAMICS OF X-RAY CHANGES IN THE HIP JOINTS WITH EARLY AXIAL SPONDYLOARTHRITIS PATIENTS
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Background: in almost half of patients with ankylosing spondylitis (AS) in Russia, damage to the hip joints (HJ) is detected, but the rate of its progression has not been studied.

Objectives: to evaluate the radiological progression of coxitis in patients with early axial spondylarthritides (axSpA) for two years.

Methods: the study involved the patients of the Moscow cohort CORSAIR (Early Spondylarthritides Cohort), which was formed in V.A. Nasonova Research Institute of Rheumatology. We analyzed 62 patients with a diagnosis of axSpA (ASAS criteria 2009), observed for at least 2 years and having survey images of the pelvic bones during inclusion in the cohort and 2 years after the start of observation. The average age at the time of inclusion in the cohort was 29.2 ± 6.4 years with an average disease duration of 23.8 ± 16.2 months, 32 men and 30 women, 92% of patients positive for HLA-B27. All patients received standard anti-inflammatory therapy.

Results: when including out of 62 patients in the study, only one (2%) patient showed X-ray changes in HJ, Fig. 1 (a; b). After 2 years of follow-up, the number of patients with radiological changes in HJ increased to 13 (21%), Fig. 1 (a; b). Patients were divided into two groups depending on the presence of radiological progression in HJ.
Peripheral Arthritis, n% 12 (32%) 5 (22%) >0.05
CRP, mg/L, Me [25; 75 percentile] 5,3 [1,3;24,5] 5,2 [1,1; 23,4] >0.05
ESR, mm/h, Me [25; 75 percentile] 8 [6;22] 10 [5;28,7] >0.05
BASFI, Me [25; 75 percentile] 1,5 [0,5;2,8] 0,7 [0,3;2,4] >0.05

**Methods:**
in patients with RA.

**Background:**
The cardiovascular system can be successfully detected by ultrasound in patients involving CD4+ T-cells and proinflammatory macrophages. Minor changes in the cardiovascular system can be successfully detected by ultrasound in patients with RA.

**Objectives:**
to improve the quality of non-invasive diagnostics of heart disease in patients with RA.

**Methods:**
57 patients with RA were under observation: 7 men and 50 women aged from 26 to 70 years; mean age 50.45 ± 10.12 years; activity (according to DAS28) was low for 3.5%, medium for 86%, and high for 10.5%. Immunological examination included determination of serum IgM-RF, CRP, antibodies to cyclic citrulline peptide (anti-CCP), antibodies to modified vimentin (anti-MCV), antibodies to antigens RA33, IgA, IgG, IgM, IgE, and IgG antibodies to 5'-nucleotidase (5'-NT) and xanthine oxidase (XO) (modified ELISA test). Data from ultrasound, magnetic resonance (MRT) and computer (CT) tomography were used in assessing the state of the heart structures.

**Results:**
The pathology of cardiovascular system was diagnosed in 28 (49.1%) patients with RA. Signs of the heart damage were noted in 33.3% of cases (pericarditis and valvular heart disease were most often detected). In groups of patients with RA with elevated levels of antibodies to 5'-NT and XO (compared with RA patients with normal parameters), there was a significantly more frequent heart damage (for antibodies to 5'-NT: χ² = 3.8, p = 0.047; for antibodies to XO: χ² = 3.92, p = 0.041). It was discovered that in all patients with an increased level of antibodies to XO, one of the lesions of the heart valvular apparatus of varying severity was noted. According to ultrasound data (usually confirmed by CT and/or MRT), signs of valvular dysfunction were found in 21 (36.8%) patients with RA. The high frequency of mitral prolapse (28.6%) may be associated with the presence of a chronic inflammatory process that is able to accelerate the development of atherosclerosis and heart disease in RA patients. A tendency to an increase in the prevalence of mitral prolapse in patients with a longer duration of the disease (p = 0.062) and with high levels of serum ANGPTL4 (p = 0.058) was found.

One of the main factors leading to the development of vascular pathology in RA is the accumulation of reactive oxygen intermediates. Antibodies to XO can affect the biochemical activity of the enzyme in the serum of patients with RA, stimulating the increased formation of O-form XO, which has a pronounced prooxidant effect (especially to lipids). ANGPTL4, acting as a potent inhibitor of endothelial lipoprotein lipase, can suppress the release of non-esterified fatty acids and their transfer to the heart muscle.

**Conclusion:**
To identify subclinical signs of involvement of cardiovascular system in the pathological process in the early asymptomatic stages of RA, it is advisable to use imaging techniques in combination with immunological markers of heart damage, which can be especially useful for screening, diagnostic evaluation and determining cardiovascular risk.

**Disclosure of Interests:** None declared

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**AB1074**

**FEATURES OF COMBINED USE OF BIOMARKERS AND VISUALIZATION METHODS FOR DIAGNOSIS OF HEART DAMAGE IN PATIENTS WITH RHEUMATOID ARTHRITIS**

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**Background:**
In rheumatoid arthritis (RA), the endocardium is involved in the inflammatory process, which is caused by immunopathogenetic mechanisms involving CD4+ T-cells and proinflammatory macrophages. Minor changes in the cardiovascular system can be successfully detected by ultrasound in patients with RA.

**Objectives:**
to improve the quality of non-invasive diagnostics of heart disease in patients with RA.

**Methods:**
57 patients with RA were under observation: 7 men and 50 women aged from 26 to 70 years; mean age 50.45 ± 10.12 years; activity (according to DAS28) was low for 3.5%, medium for 86%, and high for 10.5%. Immunological examination included determination of serum IgM-RF, CRP, antibodies to cyclic citrulline peptide (anti-CCP), antibodies to modified vimentin (anti-MCV), antibodies to antigens RA33, IgA, IgG, IgM, IgE, and IgG antibodies to 5'-nucleotidase (5'-NT) and xanthine oxidase (XO) (modified ELISA test). Data from ultrasound, magnetic resonance (MRT) and computer (CT) tomography were used in assessing the state of the heart structures.

**Results:**
The pathology of cardiovascular system was diagnosed in 28 (49.1%) patients with RA. Signs of the heart damage were noted in 33.3% of cases (pericarditis and valvular heart disease were most often detected). In groups of patients with RA with elevated levels of antibodies to 5'-NT and XO (compared with RA patients with normal parameters), there was a significantly more frequent heart damage (for antibodies to 5'-NT: χ² = 3.8, p = 0.047; for antibodies to XO: χ² = 3.92, p = 0.041). It was discovered that in all patients with an increased level of antibodies to XO, one of the lesions of the heart valvular apparatus of varying severity was noted. According to ultrasound data (usually confirmed by CT and/or MRT), signs of valvular dysfunction were found in 21 (36.8%) patients with RA. The high frequency of mitral prolapse (28.6%) may be associated with the presence of a chronic inflammatory process that is able to accelerate the development of atherosclerosis and heart disease in RA patients. A tendency to an increase in the prevalence of mitral prolapse in patients with a longer duration of the disease (p = 0.062) and with high levels of serum ANGPTL4 (p = 0.058) was found.

One of the main factors leading to the development of vascular pathology in RA is the accumulation of reactive oxygen intermediates. Antibodies to XO can affect the biochemical activity of the enzyme in the serum of patients with RA, stimulating the increased formation of O-form XO, which has a pronounced prooxidant effect (especially to lipids). ANGPTL4, acting as a potent inhibitor of endothelial lipoprotein lipase, can suppress the release of non-esterified fatty acids and their transfer to the heart muscle.

**Conclusion:**
To identify subclinical signs of involvement of cardiovascular system in the pathological process in the early asymptomatic stages of RA, it is advisable to use imaging techniques in combination with immunological markers of heart damage, which can be especially useful for screening, diagnostic evaluation and determining cardiovascular risk.

**Disclosure of Interests:** None declared

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