assessed by High-resolution computed Tomography (HRCT). Statistical analyses were performed using SPSS 20.0. The *t*-test was employed to compare means of continuous variables, whereas chi-square test was used to compare frequencies. Variables that were significantly associated with ILD using univariate analyses, were included in multivariate logistic regression model. Statistical significance was considered if $p < 0.05$.

Results: The majority (89.2%) of patients were female. Mean age was 52.6 ± 12.53 years and disease duration was 11.2 ± 9.3 years. A total of 48 (16.7%) patients were noted to have respiratory symptomatology. Lung involvement was documented in 189 (65.6%) patients. In each compartment of the lung, abnormal HRCT findings suggestive of ILD were detected in 134 (70.8%) cases, bronchiectasis in 37 (19.5%) and then pleural effusion in 11 (5.8%) (Table 1).

Table 1. Frequency of subtype's pleuropulmonary involvement detected on HRTC (n=189)

Lung abnormal types N (%)	Lung abnormal Sub-types N (%)	N (%)
Interstitial lung disease 134 (70.8%)	Usual interstitial pneumonia	113(59.7%)
	Non-specific interstitial pneumonia	23(12.1%)
	Cryptogenic organizing pneumonia	3(1.5%)
	Acute interstitial pneumonia/diffuse alveolar damage	0(0%)
	Fibrosis	18(9.5%)
Airways respiratory disease 50(26.4%)	Bronchiectasis	37(19.5%)
	Follicular bronchiolitis	10(5.2%)
	Obstructive bronchiolitis	2(1.05%)
Pleural damage 20(10.5%)	Effusion	11(5.8%)
	Pleural thickening Nodules	6(3.17) 3(1.5%)

In multivariate analysis, ILD was associated with male older age (OR=1.43, 95% IC [1.202-1.952], $p=0.037$), advanced age at RA onset (OR=2.17, 95% IC [1.151-1.874], $p=0.007$), extra-articular manifestations (OR=10.8, 95% IC [5.312-12.300], $p<0.001$), disease activity (OR=2.68, 95% IC [1.463-1.715], $p<0.001$) and low methotrexate dose (OR=1.03, 95% IC [1.003-1.106], $p=0.031$).

Conclusion: ILD was the most prevalent manifestation of RA lung involvement, it was associated to male gender, older age active and severe RA.

References:

- [1] Paolo Spagnolo et al. The lung in rheumatoid arthritis. Focus on interstitial lung Disease. *Arthritis and Rheumatology*. 2018-5, 1-11. Doi: 10.1002/art.40574.
- [2] Ana C. Duarte et al. The lung in a cohort of rheumatoid arthritis patients-an overview of different types of involvement and treatment. Oxford University Press. *British Society for Rheumatology*. 2019-4. Doi: 10.1093/rheumatology/kez177.

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AB0204

A NEW INFLAMMATORY MARKER ASSOCIATED WITH DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS: PLATELET TO ALBUMIN RATIO

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Background: Rheumatoid arthritis (RA) is an inflammatory autoimmune disease characterized by disordered immunity and dysregulated cytokine. Neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) have been defined as inflammatory markers to evaluate disease activity of RA. Recently, platelet to albumin ratio (PAR) was reported as a new prognostic index in patients with cancer. However, similar studies have not been displayed in RA.

Objectives: This study was to explore the role of PAR in RA and its association with disease activity.

Methods: This retrospective study enrolled 136 RA patients and 87 age- and gender-matched healthy controls. Neutrophil, lymphocyte, monocyte, platelet, hemoglobin, albumin, NLR, neutrophil to hemoglobin ratio (NHR), neutrophil to albumin ratio (NAR), monocyte to lymphocyte ratio (MLR), monocyte to hemoglobin ratio (MHR), monocyte to albumin ratio (MAR), PLR, platelet to hemoglobin ratio (PHR), PAR, C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and Disease Activity Score of 28 joints - ESR (DAS28-ESR) were detected. Receiver operation characteristic (ROC) curve was used to discriminate RA patients from healthy individuals. Relationships between PAR and DAS28-ESR as well as other laboratory data were measured by the Spearman's correlations analysis.

Results: RA patients showed higher levels of NLR, NHR, NAR, MLR, MHR, MAR, PLR, PHR PAR and lower levels of albumin than healthy controls. PAR and

other inflammatory parameters were also raised along with increased disease activity in RA patients ($P < 0.05$) except NHR ($P = 0.098$). Similarly, albumin was decreased in RA patients as the disease activity increased ($P = 0.001$). ROC showed that area under curve (AUC) of PAR (0.887, 95%CI: 0.843-0.931) was higher than NLR (0.818, 95%CI: 0.762-0.874), NHR(0.839, 95%CI: 0.787-0.890), NAR(0.829, 95%CI: 0.776-0.882), MLR (0.794, 95%CI: 0.734-0.854), MHR(0.817, 95%CI: 0.760-0.874), MAR(0.814, 95%CI: 0.757-0.872), PLR (0.832, 95%CI: 0.779-0.886), PHR(0.884, 95%CI: 0.838-0.930) and albumin(0.860, 95%CI: 0.813-0.908). Besides, PAR was positively correlated with DAS28-ESR ($r = 0.429$, $P < 0.001$), CRP ($r = 0.540$, $P < 0.001$) and ESR ($r = 0.492$, $P < 0.001$), yielding a highest relevance than other inflammatory indexes.

Conclusion: This study demonstrated that PAR was elevated in RA patients and increased with the disease activity. PAR may be a novel marker to assess the disease activity of RA patients.

References:

- [1] Li C, Peng W, Zhang X Y, et al. The preoperative platelet to albumin ratio predicts the prognosis of hepatocellular carcinoma patients without portal hypertension after liver resection[J]. *Medicine*, 2019, 98:e17920.

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AB0205

PREDICTORS OF ULTRASOUND DETECTED INFLAMMATORY FINDINGS IN PATIENTS WITH INFLAMMATORY ARTHRALGIA

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Background: Patients with inflammatory arthralgia (IA) are considered to be at increased risk for progression to RA. US has shown high sensitivity to detect synovitis compared with physical examination. Thus, US is recommended to identify subclinical synovitis in patients without clinical signs of inflammation.

Objectives: The objective of our study is to determine the frequency and pattern of US detected inflammatory findings in patients with IA and investigate factors contributing to predict these findings.

Methods: An US clinic is scheduled in an academic center running three days every week. A retrospective analysis of our US unit cohort during a period of 6 months was undertaken. Patients with IA and no previous diagnosis of inflammatory arthropathies were included for analysis. Inclusion criteria of IA definition included: severe symptoms presenting in the morning, duration of morning stiffness ≥ 60 min, symptoms predominantly located in MCP joints and absence of clinically detected synovitis by the referral rheumatologist. The following routinely collected variables were included in the analysis: demographics, clinical features and laboratory tests. Patients underwent bilateral US examination in GS and PD mode of hands and/or feet according to the European League Against Rheumatism (EULAR) guidelines. The presence of synovitis, tenosynovitis and enthesitis was assessed on a semi quantitative scale (0-3) for Grey Scale(GS)/Power Doppler(PD) or using enthesitis OMERACT definition, respectively. Patients were stratified in two groups based on the presence of US inflammatory findings (synovitis, tenosynovitis or enthesitis with PD signal). First, differences between groups were tested using chi-squared and Student-t tests in the univariate analysis. Second, multivariate logistic regression models were employed to investigate the association between possible predictive factors of US detected inflammatory findings.

Results: A total of 57 patients were included in the analysis. Mean age was 55.8 ± 15.2 years, 41 (71.9%) were females, and mean symptoms duration was 11.4 ± 10.4 months (Table 1). A total of 42 (73.7%) patients presented with a polyarticular arthralgia pattern. US inflammatory findings were present in 20 (35.1%) patients (26.3% PD synovitis, 21.1% PD tenosynovitis and 3.5% PD enthesitis). Hands were most commonly involved with PD synovitis at wrists in 19.3% and at MCP in 12.3% of patients (Table 2). For PD tenosynovitis, the flexor MCP 2-5 (5.3%) and compartment IV tenosynovitis (1.8 %) were the most frequent affected locations. Only two patients had PD enthesitis at feet and 6 (10.5%) had erosions in hands or feet at baseline examination. In the univariate analysis, the higher ESR values and the shorter time from symptoms onset were significantly associated with US detected inflammatory findings ($p=0.044$ and 0.049, respectively). In the multivariate analysis, only ESR values (OR=1.04; 95%CI 1.002-1.078), remained significantly associated with the presence of US inflammatory findings (Table 3).