Abstract ID: 6382

Evaluation of platelet/lymphocyte and neutrophil/lymphocyte ratios as activity indicators in patients with rheumatoid arthritis: a study of 108 cases.

Jomaa O. , Bouazra R. ,Hachfi H. ,Brahem M. ,Ardhaoui M. ,Jebali B. ,Kenani C. ,Ben Slama Y. , Gayed O. ,Sayeh C. ,Younes M.

Rheumatology Department, Taher Sfar University Hospital, Mahdia

Introduction:

New inflammation indicators, including platelet/lymphocyte ratio (PLR) and neutrophil/lymphocyte ratio (NLR), have been recognized in inflammatory rheumatism.

Objectives:

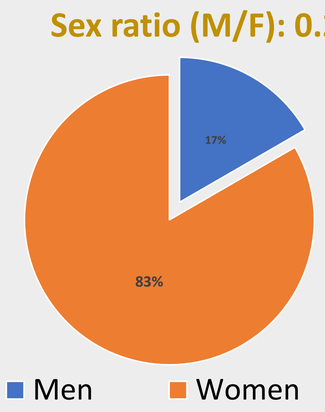
This study aims to assess the relevance of PLR and NLR in rheumatoid arthritis (RA) and explore potential correlations with disease activity parameters.

Method :

A descriptive cross-sectional study was conducted at the rheumatology department including RA patients based on ACR/EULAR 2010 AND/OR ACR 1987 criteria. For each patient, complete blood count formula, PLR, and NLR were calculated, and correlations with disease activity were explored.

Results :

❖ 108 patients with an average age of 55.15 ±13.8 years.

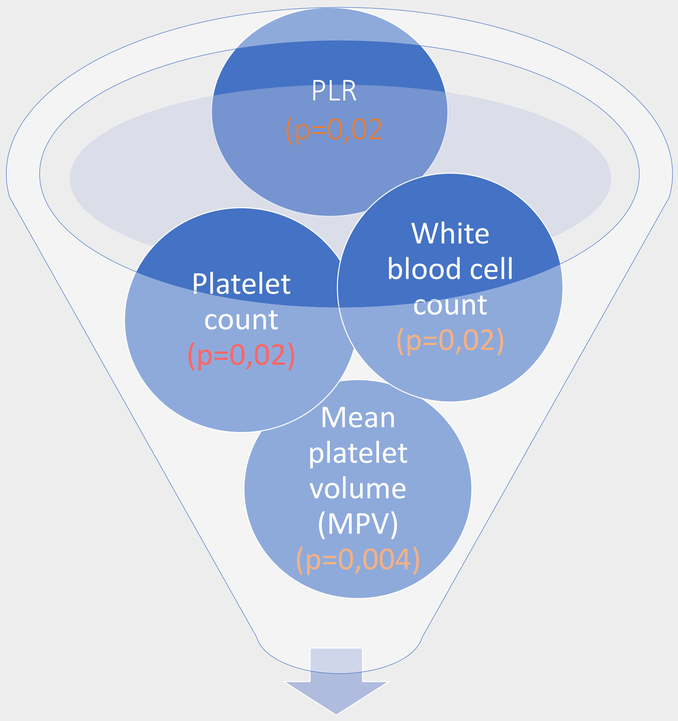


Total number of patients:	108
Mean age	55,15 years ±13,8
Sex ratio:	0,2
Mean disease duration	11,1 years ±8,9
% of patients with joint deformities	58,1%
Mean DAS28 (ESR)	5,26 ± 1,45
Mean DAS28 (CRP)	3,4 ± 1,4
% of patients with high disease activity	52,5%
Mean hemoglobin level	11.54g/dl ±1.98
Mean platelet count	326616.6 cells/mm³ ±116373
Mean total leukocyte count	9025.3 cells/mm³ ± 3022
Mean lymphocyte count	2185,1 cells/mm³ ± 993,3
Mean neutrophil count	5788.5 cells/mm³ ± 2329.4
Mean NLR	3.41 ± 2.51
Mean PLR	259 ± 253,1

Variation of PLR and NLR based on disease activity

	PLR	NLR
Remission	259	5,17
Low disease activity	140,4	2,56
Moderate disease activity	151,17	3,14
High disease activity	240,5	3,66

Factors correlated with disease activity (DAS28-CRP)



Factors correlated with DAS28(ESR)	
Factors	P-value
white blood cell count	0,03
platelet count	0,03
NLR	0,04

Conclusion:

This study establishes significant correlations between disease activity and hematological indicators, particularly emphasizing the association between disease activity (DAS28 ESR) and white blood cell count, NLR, platelet count, mean platelet volume, platelet level, and PLR. The findings suggest that PLR and NLR could serve as valuable indicators for assessing RA activity.