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The C-reactive protein/serum albumin ratio in rheumatoid arthritis and its relationship to disease activity, physical function and quality of life

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Introduction:

Rheumatoid arthritis (RA) is a systemic autoimmune disease characterized by synovial inflammation ultimately leading to joint deformity. The C-reactive protein (CRP)/albumin ratio is considered a novel marker of inflammation. Our aim was to assess the relationship between the C-reactive protein/albumin ratio (CAR) and disease activity, quality of life (QoL) and physical function in rheumatoid arthritis (RA).

Materials and methods:

We conducted a retrospective study including 139 patients with rheumatoid arthritis meeting ACR EULAR 2010 criteria.Clinical, socio-demographic, biological parameters were collected. Disease activity was measured using the Disease Activity Score 28 (DAS28)-CRP. Fatigue and pain were questioned using a 100 mm visual analog scale (VAS). Quality of life was assessed using the Rheumatoid Arthritis Quality of Life Questionnaire (RAQoL). Functional status was determined using the Health Assessment Questionnaire (HAQ). Statistical analysis was performed using SPSS software. Spearman's correlation coefficient was used for correlations between non-parametric data. A p-value < 0.05 was considered statistically significant.

Variable	characteristics
mean age (years)	53,7 ± 12,1
Gender: Female Male	 89,9% 10,1%
mean duration of RA evolution	11,50±8,45
Median CAR	0,92 ± 1,47
Deforming Non-deforming	55,4% 44,6%
RP activity : DAS28 Average CRP	 5,4± 0,83
Markers of inflammation SV CRP	 45,13± 30,81 32,87 ± 48,75
Average fatigue	6,45±1,95
Mean pain	6,95± 1,01
Mean HAQ	1,65±0,60
mean RAQoL	36,82± 8,98

Table 1: General characteristics of the population

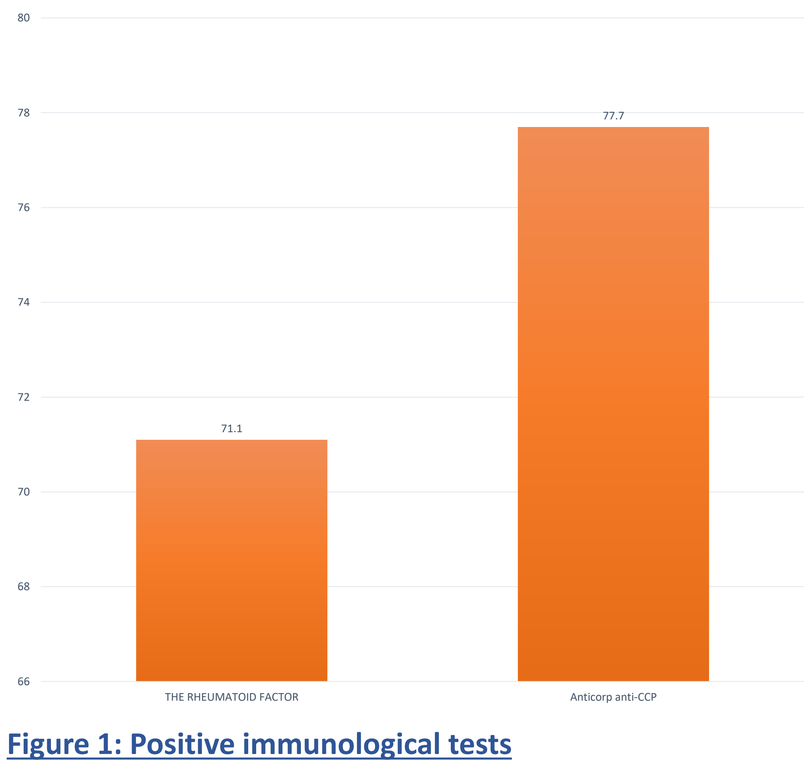

Figure 1: Positive immunological tests

Variables	Correlation coefficients r	P value
Le DAS28-CRP	0,327	0,01
SV	0,56	<0.01
CRP	0,99	<0.01
Pain VAS	0.20	0,05
HAQ	-0,076	0,40
EVA fatigue	-0,17	0,056
RAQoL	-0,29	0,20

Table 2: Correlation between CAR and the various variables

Conclusion:

Our study showed a significant association between CAR and disease activity during RA, nevertheless there was no significant correlation between CAR and HAQ and RAQoL.