Background: Inflammation during rheumatoid arthritis (RA) can cause changes in the serum levels of certain proteins, including albumin. Our study aims to find a link between albumin level and disease activity.

Objective: The objective of our study was to study the correlation between the albumin level and the indices of RA activity.

Methods: Descriptive and comparative study including patients with RA between 2007 and 2021. Statistical data analysis was performed using SPSS version 20 software. The correlation between albumin level and RA activity indices was assessed using Pearson's correlation coefficients (p-values).

Results: 260 patients were included. The average age was 49.91 years, with a female predominance in 86.9% of cases. The average duration of evolution was 4.64 years. Chronic polyarthritis was the most frequent mode of evolution (74.2%), it was deforming in 64.1% of cases. Structural damage was present in 84.8% of patients, RA was seropositive for ACPA in 82.9% and seropositive for RF in 77.5% of cases. The mean ESR and CRP levels were 44.08 mm/h and 32.68 mg/l, respectively. Hypoalbuminemia was found in 41.1% of patients with an average albuminemia of 36.5 ± 6.78 g/l. The mean DAS28-CRP was 5.26 and the mean CDAI was 35.75. Patients with severe activity had more frequent hypoalbuminemia than those with moderate and low activity (67% vs 22% and 7%). A significant negative correlation was found between the albumin level and the DAS28 - CRP (r = -0.22, p = 0.16). There is a significant correlation between albumin level, CRP level and ESR (r = -0.27, p < 0.001, r = -0.27, p = 0.001).

Conclusion: These results suggest that the albumin level could provide additional information on the intensity of inflammation in RA.

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Disclosure of Interests: None Declared.

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**NEW INFLAMMATORY MARKER IN RHEUMATOID ARTHRITIS: NEUTROPHIL/LYMPHOCYTE RATIO (NLR)**

**Keywords:** Rheumatoid arthritis, Biomarkers

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Background: Although neutrophils and lymphocytes play well-established roles in the pathogenesis of rheumatoid arthritis (RA), their count is most often ignored by clinicians. However, the neutrophil/lymphocyte ratio (NLR) seems to be of great value in the evaluation of disease activity.

Objectives: Our objective is to determine the interest of this ratio and to study its relationship with the other parameters of RA activity.

Methods: Cross-sectional study of 70 patients followed for RA. We performed a biological check-up including a complete blood count (CBC), an ESR and CRP level. A NLR was calculated for each patient.

Results: There were 58 women (82.9%) and 12 men (17.1%) with a mean age of 54.7 ± 13.6 years [19-82]. The mean duration of the disease was 10.1 ± 9.9 years. Sixteen patients (22.8%) had recent RA (<2 years). The mean DAS 28 ESR was 5.38 ± 1.4. Thirty-nine patients (55.7%) had high disease activity. The average of ESR and CRP were 59 mmHg ± 35 [12-150] and 30.3 mg/l ± 28.6 [0-159], respectively. Anemia of inflammation was observed in 43.3% of cases. Lymphopenia was found in 28.6% of cases, neutropenia in 1.4% and neutrophilic polyneuropathy in 17% of cases. The mean of neutrophil/lymphocyte ratio was 3.62±2.68 [0.48-13.26]. It was 3.7 in patients with severe activity and 3.5 in those with low to moderate activity. Statistical analysis found a significant association between this ratio (NLR) and anemia (p=0.003), ESR (p=0.005), CRP (p=0.038) and disease activity assessed by DAS 28 ESR (p=0.04).

Conclusion: Despite the fact that in RA there are few studies evaluating the interest of the NLR, our study concludes that this ratio is considered as an alternative inflammatory biomarker that could be used to assess the disease activity.

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AB2083 THE IMPACT OF POLLUTION ON DISEASE ACTIVITY IN RHEUMATOID ARTHRITIS: A 112 PATIENT GROUP STUDY

Keywords: Rheumatoid arthritis, Prognostic factors, Geographical differences

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Background: Air pollution is incriminated in a large number of respiratory and cardiovascular pathologies. More recently, the role of particulate matter from pollution has been studied in autoimmune diseases and in particular in rheumatoid arthritis (RA).

Objectives: The objective of our study is to evaluate the impact of air pollution measured by the air quality index (AQI) on different disease parameters during rheumatoid arthritis.

Methods: We included in this study 112 patients with seropositive rheumatoid arthritis, residing in different regions of southern Morocco. Inclusion criteria were: established rheumatoid arthritis, duration of residence exceeding one year in the same region. Exclusion criteria were: specific professional exposure to industrial pollutants and passive and active smoking. The air quality was evaluated by the new ATMO index which classifies the air quality in five levels: Good, average, degraded, bad, very bad and extremely bad according to the concentration of the four air pollutants. The following parameters were collected: duration of disease progression, age, number of exacerbations per year, the mean DAS 28 CRP during the last year, the mean CRP during the last year, the use of analgesics, the number of hospitalizations, an univariate and multivariate analysis evaluating the association and the correlation with the different parameters was carried out by the SPSS 2021.

Results: 112 patients were included. The female sex represents 66%. The different regions included in the study were: Marrakech in 68 cases with an AQI of 47, Safi in 9 cases with an AQI of 21, Beni Mellal in 6 cases with an AQI of 29, Sidi Rehal in 1 case with an AQI of 1, Dernate in 2 cases with an AQI of 29, Ouarzazate in 4 cases with an AQI of 25, Azilal in 10 cases with an AQI of 34, Zagora in 4 cases with an AQI of 21, Youssoufa in 1 case with an AQI of 9, Guelmim in 7 cases with an AQI of 17, Semara in 1 case with an AQI of 46. The mean DAS 28 was 3.11. The mean CRP was 23.1 mg/l. The average number of hospitalizations during the last year was 2.5. The average number of exacerbations in the last year was 5.6. The use of level 1 analgesic was noted in 22%, level 2 in 13%. A positive correlation was found between the number of exacerbations and AQI (r=0.013, rs 0.71). The associations between rheumatoid arthritis and air pollution seem complex, it can be considered as a risk factor aggravating rheumatoid arthritis, and these hypotheses have to be demonstrated on a larger sample.

REFERENCE:

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**EVALUATION OF THE RELATIONSHIP BETWEEN SERUM NETRIN-1 LEVEL AND PATIENT CHARACTERISTICS IN RHEUMATOID ARTHRITIS**

Keywords: Rheumatoid arthritis


REFERENCE: