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**ANEMIA IN PATIENTS WITH RHEUMATOID ARTHRITIS: PREVALENCE AND ASSOCIATED CORRELATING FACTORS**

**Introduction:**

Rheumatoid arthritis (RA) is a chronic systemic inflammatory disease of unknown etiology, primarily characterized by synovial joint involvement leading to structural alterations. It often presents hematological disturbances, notably anemia Hematological disturbances, particularly anemia, are frequently observed in individuals with RA.

**Objectives:**

Our study aims to investigate the prevalence of anemia in RA, and explores associated factors, in order to establish correlations with anemia. while also examining the associated factors and their correlation with anemia.

**Patients and Methods:**

This is a descriptive cross-sectional study conducted at the rheumatology department, including patients with RA meeting according to ACR/EULAR 2010 and/or ACR 1987 criteria. For each patient, we collected demographic, clinical, radiological, and therapeutic characteristics related to RA. Demographic, clinical, radiological, and therapeutic data related to RA were collected for each patient.

**Results**:

A total of 108 patients participated, with an average age of 55.15 years ±13,18 [19-83]. A female predominance was noted with a sex ratio of 0.2. The average duration of RA was 11.1 years ±8,9. The mean DAS28 ESR was 5.26 ±1,45 with high activity in 52.5% of cases. Anemia was observed in 60.2% with an average hemoglobin level of 10.37 g/dl. Inflammatory anemia was found in 61.5%, and 39.5% had iron-deficiency anemia. Common manifestations included fatigue (64.8%), exertional dyspnea (3.7%), dizziness (3.7%), and palpitations (1.8%).

The mean serum iron level was 14.4 µmol/l, and 39.8% of patients had iron deficiency. The mean ferritin level was 138.5µg/l, and 39.8% had elevated ferritin levels. A significant association was noted between anemia and pain intensity (p=0.001), polyarticular onset (p=0.04), structural damage (p=0.04), and other associated autoimmune diseases (p=0.001). Analysis also showed a significant association between anemia and ESR (p=0.009), CRP (p=0.02), ferritin level (p=0.001), mean corpuscular volume (MCV) (p=<10-3), Mean Corpuscular Hemoglobin (MCH) content (p < 10-3), MCH concentration (p<10-3), neutrophil/lymphocyte ratio (p=0.03), platelet count (p=0.03), and mean platelet volume (p=0.04). Anemia was correlated with rheumatoid factor positivity (p=0.03) but not with anti-citrullinated peptide antibodies (ACPA) (p=0.76) or ANA (p=0.16) positivity. No significant association was found between prescribed treatments and anemia. Disease activity strongly correlated with anemia (p=0.01), MCH content(p=0.04), and MCH concentration(p=0.03).

**Conclusion:**

Our study highlights the high prevalence of anemia in Tunisian RA patients. Associations with disease activity suggest the potential use of anemia as an indicator of inflammation in RA. Further research is needed to refine understanding and improve management strategies.