

## ORIGINAL RESEARCH

21. **The Intersection of Rheumatology and Cardiology: Cardiac Disease in Rheumatic Disorders within Palestinian patients between 2022-2024, A Retrospective Cohort study**Malak R. Hroub<sup>1</sup><sup>1</sup> Al-Quds University, Jerusalem, Palestine

► <https://www.youtube.com/watch?v=4rJ3DHWeKR&list=PLhqNq3xJClbafO0Y5bvBcgMmXpgzJxd44&index=6&t=293s>

**Background:** Rheumatologic and cardiovascular conditions are major causes of morbidity and mortality. Recent research has shown a close association between them. As cardiac manifestations in the Palestinian population remain uncharacterized, the current study aims to investigate the proportion of cardiac manifestations in rheumatologic disease patients from Palestine and to determine the factors associated with these manifestations.

**Methods:** A retrospective cohort was conducted on rheumatology patients, at Al-Makassed Hospital from 2022 to 2024. Data was collected from electronic records for 296 patients. Cardiovascular manifestations were recognized through echocardiography and consultation reports. Analysis using SPSS version 26 was performed to determine the association between patients' characteristics and the cardiac manifestations.

Data included demographics (age, gender), previous chronic diseases; especially regarding rheumatologic condition; age at diagnosis; cardiac manifestations; imaging reports, laboratory information, lipid profile, comorbidities and risk factors.

**Results:** Of the 296 patients, 71.6% were females, with an average age of  $49.2 \pm 15.5$  years. The most common rheumatic diseases were seronegative spondyloarthropathy (25.1%), rheumatoid arthritis (RA) (18.1%), and systemic lupus erythematosus (SLE) (11.1%). The proportion of clinically recognized cardiac disease was 17.9%; whereas 16.6 percent of participants had obesity and 9.8 percent had an addiction to cigarettes. Among comorbidities other than rheumatologic diseases, hypertension (30.4%) and diabetes mellitus (19.9%) were the most common. Cardiac disease was significantly associated with older age, diabetes mellitus, hypertension, coronary artery disease, positive troponin, and positive CK-MB ( $p < 0.05$ ). Meanwhile, no significant associations with gender, specific rheumatic conditions, or lipid profile were observed.

**Conclusion:** This is the first research from Palestine that studies cardiac involvement and its burden on rheumatology patients. The study identified seronegative spondyloarthropathy, rheumatoid arthritis, and systemic lupus erythematosus as the predominant rheumatological diseases, with an average age of diagnosis at 45 years. Hypertension, diabetes, and cardiac disease were commonly

observed comorbidities. This population exhibits a heightened risk of subclinical myocardial injury with increasing age.

Integrated cardio-rheumatology care is advocated to support screening, risk assessment, and management of these patients; as systemic inflammation, seropositivity, and long disease duration play a dominant role in cardiovascular risk, especially in populations with low proportion of traditional risk factors (e.g.: smoking). This underscores the importance of integrating inflammatory markers and serologic status into CVD risk assessment tools for rheumatology patients. Furthermore, given the potential for subclinical myocardial injury, incorporating biomarkers such as CK-MB and troponin into routine monitoring may enable earlier detection of cardiac involvement. Future research in regional populations should aim to refine screening protocols—potentially including periodic echocardiography, carotid ultrasound, and biomarker testing—and guide preventive interventions.

There's also a need for studies examining the effects of disease-modifying treatments on cardiovascular disease outcomes in patients with at-risk rheumatic diseases, studies employing early intervention techniques of anti-atherosclerotic drugs such as aspirin, statins, and angiotensin converting enzyme inhibitors in patients with diseases such as SLE and RA. And large-scale, population-based research is needed to specify the prevalence and patterns of cardiovascular manifestations in regional population.

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