

Abstract Title: Prevalence and characteristics of cardiovascular diseases in rheumatoid arthritis patients Data from the Ontario Best Practice Research Initiative (OBRI)

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Abstract:

OBJECTIVE: Cardiovascular disease (CVD) is a major comorbidity and the leading cause of death among rheumatoid arthritis (RA) patients. This study aims to compare the characteristics and patterns of medication use in RA patients with and without CVD. **METHODS:** Data were collected from the Ontario Best Practice Research Initiative (OBRI), a clinical registry of RA patients followed in routine care. CVD was defined as the presence of coronary artery disease (CAD), congestive heart failure (CHF), arrhythmia, cerebral vascular accidents (CVA), pulmonary embolism (PE), and/or other peripheral vascular disorders upon entering the registry. Patient characteristics and medications were compared between CVD and non-CVD patients using Chi-square and t-tests. Mean disease activity and functional status scores were estimated by generalized linear regression, adjusting for confounders, including age, sex, smoking, and socioeconomic factors. **RESULTS:** Among 2226 RA patients, 360 (16.2%) had CVD at baseline. Among which, 101 (28.1%) had CAD, 51 (14.2%) had arrhythmia, 12 (3.3%) had CHF, 28 (7.8%) had CVA, 8 (2.2%) had PE, and 160 (44.4%) had other/unspecified CVD. Patients with CVD were older (66.7 ± 10.1 vs. 53.6 ± 12.9yrs, $p < 0.0001$), had longer RA duration (10.6 ± 11.8 vs. 8.1 ± 9.0yrs, $p < 0.0001$) and more extra-articular features (35.0% vs. 26.3%, $p < 0.05$). Male sex, low education and income, lack of private insurance, and smoking were more prevalent in CVD patients ($p < 0.001$ for all). CVD patients were more frequently treated with glucocorticoids (GC, 34.9% vs. 28.3%, $p < 0.05$) but less frequently with NSAIDs (29.9% vs. 49.3%, $p < 0.05$). After adjusting for confounders, CVD patients maintained higher disease activity and worse functional status. **CONCLUSION:** The prevalence of CVD is 16.2% in the OBRI cohort. Disease severity and functional status appeared to be worse in RA patients with CVD. The lower utilization of NSAIDs may be due to their CVD risks.