

Predictors of patient reported decision to discontinue Anti-Rheumatic Medication in Rheumatoid Arthritis Patients: Data from a Rheumatoid Arthritis Cohort

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Background: Despite the availability of safe and effective treatments and the establishment of treatment guidelines, real-world effectiveness remains suboptimal largely due to low patient adherence with prescribed treatment. The purpose of this study was to systematically evaluate sociodemographic, health insurance, and disease-related factors associated with patient reported decision for discontinuation of anti-rheumatic medications (ARM) in a large observational cohort of RA patients followed in Canadian routine clinical care.

Methods: RA patients enrolled in the Ontario Best Practices Research Initiative (OBRI) clinical registry and had at least two years of follow-up were included in the analysis. Treatment discontinuation due to patient reported decision was defined as ARM discontinuation. Independent predictors of ARM discontinuation were evaluated with multivariate cox-regression using both time-fixed and time-dependent variables. Factors considered included patient sociodemographics (age, gender, race, education status, annual income, smoking history), health insurance information (private vs. non-private, % coverage), disease parameters (RA duration, presence of erosion, RF positivity, DAS28, physician global, HAQ-DI, number of comorbidities), types of medications used, and physician characteristics (gender, academic position, urban vs. rural, distance from patient's residence).

Results: A total of 1,762 patients were included in the analysis with a mean (SD) age of 57.4 (13.0) years and disease duration of 8.5 (9.3) at the time of enrolment to the registry (baseline). The majorities of patients were female (77.7%), had post-secondary education (55.3%), and had private insurance (67.2%). In terms of disease severity, 54.5% had prior erosion, 69.5% were RF positive, and mean (SD) DAS28 was 4.5 (1.5).

In a multivariate analysis, married status (HR, 0.73 ; 95% CI 0.56-0.96), RF positivity (HR, 0.73 ; 95% CI 0.56-0.96), and higher number of comorbidities (HR, 0.92 ; 95% CI 0.85-0.99) were identified as significant predictors of ARM continuation while higher physician global score (HR, 1.10 ; 95% CI 1.04-1.15), NSAID use (HR, 1.75 ; 95% CI 1.29-2.38), and polypharmacy (HR, 1.23 ; 95% CI 1.07-1.40) were associated with ARM discontinuation due to patient reported decision.

In a subset analysis, multivariate analysis showed that higher HAQ and use of bDMARDs over time were significantly associated with a lower hazard for discontinuation of csDMARDs and/or bDMARDs.

Conclusion: In this systematic approach a variety of factors encompassing sociodemographics, disease, and medication characteristics, were identified as significant independent predictors of ARM discontinuation due to patient reported decision. These results should be taken into consideration when developing patient adherence support programs and in the choice of treatment regimens.