

Disease Activity in Moderate Rheumatoid Arthritis Patients - Results from Ontario Best Practice Research Initiative

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Objectives: Randomized trials in Rheumatoid Arthritis (RA) usually include patients with severe disease activity; however, patients with moderate disease activity represent a large proportion of RA patients in the real world. The aim of this study is to describe characteristics of RA patients with moderate disease activity at time of entry into the Ontario Best Practice Research Initiative (OBRI) cohort, and to compare patient characteristics and disease activity in those on Biologics versus DMARDs. We also aim to determine the proportion of patients in low, moderate and severe disease activities at 6 months.

Methods: Data was collected from OBRI, which includes a clinical registry of RA patients followed in routine care in Ontario, Canada. Patients with moderate disease activity were identified based on the Clinical Disease Activity Index (CDAI) at entry into OBRI. These patients were further classified into two subgroups based on their medications at time of entry into the cohort: Disease Modifying Antirheumatic Drugs (DMARDs) or Biologics. Patient characteristics at baseline and the proportions of patients with low, moderate, and severe disease activity at 6 months were compared.

Results: In the OBRI cohort (n=2305), 512 (22%) patients with mean (SD) age 57.3 (13.3) years were found to have moderate CDAI at baseline with follow-up data at 6 months. Among these, 271(53%) reached low activity, 177(35%) stayed in moderate activity, and 64(13%) progressed to high activity at 6 months. At the time of entry into OBRI, patients on Biologics had longer RA duration (11.3 vs 7.2 years, $p<0.0001$), with a higher proportion of females (85% vs 74%, $p<0.05$) compared to those on DMARDs. Patients on biologics also had significantly more previous biologics use ($p<0.0001$), and higher Health Assessment Questionnaire (HAQ) score ($p<0.001$) compared to patients on DMARDs. Age, education, private insurance, income, race, smoking history, comorbidities, tender joint count, swollen joint count, and other disease activities at entry into the cohort were not significantly different between the two groups.

Conclusion: Among patients with moderate disease activity at time of entry into OBRI, half achieved low disease activity at 6 months, while 1/3 remained in moderate disease activity. At entry into the cohort, socioeconomic factors and comorbidities between patients on Biologics and DMARDs were the same. The next steps are to evaluate clinical and functional responses at 6 months in patients taking Biologics in comparison with DMARDs in moderate RA patients.