Differences Between Early and Established Rheumatoid Arthritis in Time to Achieving CDAI but not Fatigue Low Disease Activity and Remission: Data from the OBRI Registry

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Objective(s): Previous studies have shown that early diagnosis and treatment of rheumatoid arthritis (RA) is important for achieving comprehensive disease control and have identified established disease as an independent predictor of worse clinical outcomes. However, it is not clear whether these differences are driven by patient-reported or objective outcome measures. The aim of this analysis was to compare the time to achieving low disease activity (LDA) and remission based on both objective and patient-reported outcomes in people with early vs. established RA followed in routine clinical care.

Methods: RA patients enrolled in the Ontario Best Practices Research Initiative (OBRI) registry that were not in a low disease state at baseline based on the CDAI, SJC28, PtGA, pain and fatigue criteria below, and had at least six months of follow-up, were included in the analysis. LDA was defined as CDAI≤10, SJC28≤2, TJC28≤2, PtGA≤2cm, pain≤2cm, fatigue≤2cm, and MDGA≤2cm; remission was defined as CDAI≤2.8, SJC28≤1, TJC28≤1, PtGA≤1cm, pain≤1cm, fatigue≤1cm, and MDGA≤1cm. Between group (early vs. established) differences in time to first LDA/remission were assessed with Kaplan-Meier survival analysis and the log-rank test.

Results: A total of 986 patients were included, 347 (35%) with early RA and 639 (65%) with established RA. At baseline, patients with early RA were significantly younger (55.8 vs. 58.3 years) and were less likely to have a comorbidity (94.5% vs. 97.5%) or an erosion (26.7% vs. 62.6%), be RF-positive (65.6% vs. 74.2%), use bDMARDs (7.5% vs. 26.6%), and be non-smokers (38.9% vs. 47.3%).

Time to achieving LDA based on CDAI (HR [95%CI]: (1.23 [1.07,1.43]), SJC28 (1.32 [1.15,1.51]), TJC28 (1.18 [1.02,1.36]), MDGA (1.28 [1.10,1.49]), PtGA (1.23 [1.05,1.44]), and pain (1.29 [1.09,1.52]) were significantly shorter in early RA compared to established RA. Similarly, time to achieving remission based on CDAI (HR [95%CI]: (1.50 [1.22,1.84]), SJC28 (1.35 [1.17,1.55]), MDGA (1.25 [1.06,1.47]), PtGA (1.22 [1.02,1.47]), and pain (1.37 [1.14,1.65]) were significantly shorter in early RA. However, no differences were observed in time to remission based on TJC28 (1.12 [0.96,1.31]) and either LDA or remission based on fatigue (LDA (1.10 [0.94,1.30]); remission (1.09 [0.92,1.31]).

Adjustment for age, gender, presence of comorbidities, and baseline scores did not alter the results.

Conclusion(s): Time to achieving low disease state or remission based on various objective and patient-reported measures is significantly shorter in early compared to established RA with the exception of fatigue.