

Time to Discontinuation of Tofacitinib in Rheumatoid Arthritis Patients with and without Methotrexate: Data From A Rheumatoid Arthritis Cohort

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Background: Tofacitinib (TOFA) is an oral, small molecule drug which can be used as an alternative to biologic disease modifying antirheumatic drugs (bDMARDs) for rheumatoid arthritis (RA) treatment and is prescribed alone or with methotrexate (MTX). We aimed to evaluate the discontinuation rate of this drug, with and without concurrent MTX, and with and without prior biologic use, in patients with RA in the Ontario Best Practices Research Initiative (OBRI).

Methods: RA patients enrolled in the OBRI initiating their TOFA within 30 days prior to or any time after enrolment between 1st June 2014 (TOFA approval date in Canada) and 31st Dec 2017 were included. Patients were excluded if they had ≤ 2 visits and ≤ 6 months' follow-up. Time to discontinuation due to (1) any reason, (2) lack/loss of response, and 3) adverse events (AEs) were assessed using Kaplan-Meier survival to compare patients 1) with and without MTX use; 2) with or without prior biologic use at initiation of TOFA was assessed using Kaplan-Meier survival analysis. Cox proportional hazards regression model was also used to assess TOFA discontinuation adjusting for propensity score to balance the two treatment groups.

Results: Among the 131 patients, 70 (53.4%) received TOFA without MTX and 61 (46.6%) TOFA with MTX. Mean (SD) age and disease duration were 60.2 (9.8) years and 13.7 (9.3) years, respectively. The majority were females (89.3%) and most had prior biologic use history (74.0%). The TOFA with MTX group had a significantly lower use of other csDMARDs and less than 5 prior biologic agent. Discontinuation was reported in 44 (33.6%) of all TOFA patients with a median survival of 31.3 months. Overall retention of TOFA at 6, 12 and 24 months was 80.5%, 63.1% and 53.5% respectively. These findings are very similar to the results reported from the RHUMADATA registry at ACR 2018.¹ Fifteen (34.0%) patients stopped their TOFA due to non-response/loss of response, 22 (50.0%) due to adverse events, and 7 (16%) due to other reasons. Discontinuation due to any reason was borderline significantly lower in the "TOFA with MTX" group compared with "TOFA without MTX" group. There was no significant difference in TOFA discontinuation between the two groups of patients with and without prior biologic use (Logrank $p=0.77$).

Conclusions: We found that half of the RA patients remained on TOFA 31 months after initiation. TOFA retention is similar between patients with and without MTX group specifically for lack/loss of response or adverse events reasons. However, the interpretation of results is limited because of small sample size. Merging data with other RA registries in Canada is proposed to increase study power and to provide more robust results.

References:

1. Choquette D, Bessette L, Brown J, Haraoui B, Massicotte F, Pelletier JP, Raynauld JP, Rémillard MA, Sauvageau D, Turcotte A, Villeneuve É, Coupal L. Tofacitinib Show Similar Retention When Used with and without Methotrexate. Analysis from the Rhumadata® Clinical Database and Registry [abstract]. *Arthritis Rheumatol.* 2018; 70 (suppl 10).