

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

Mohammad Movahedi, Angela Cesta, Xiuying Li, Edward Keystone, Claire Bombardier and OBRI investigators

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

Methods: RA patients enrolled in the OBRI initiating their TOFA or TNFi (adalimumab, certolizumab, etanercept, golimumab, and infliximab) within 30 days prior to or any time after enrolment between 1st June 2014 (TOFA approval date in Canada) and 31st Dec 2018 were included. Time to discontinuation (due to any reason) were assessed using Kaplan-Meier survival (adjusted for propensity score using inverse probability of treatment weight) to compare patients with and without MTX use at initiation of TOFA or TNFi.

Results: A total of 565 patients initiated TOFA (n=208) or TNFi (n=357). Of those, 106 (51%) and 222 (62%) were treated with MTX in the TOFA and TNFi group, respectively and mean (SD) disease duration were 13.1 (9.4) and 9.5 (9.4) years. In the TOFA group, 86% were female and mean (SD) age at treatment initiation was 60.4 (10.6) years. In the TNFi group 82% were female and mean age (SD) at treatment initiation was 57.0 (12.6) years. The TOFA group was more likely to have prior biologic use (61.5%) compared with the TNFi group (31%). At treatment initiation, the mean (SD) clinical disease activity index was 24.8 (12.1) in the TOFA group and 21.8 (12.0) in the TNFi group.

Over a mean of 17.3 month follow-up, discontinuation was reported in 75 (36%) and 103 (29%) of all TOFA and TNFi patients, respectively. After adjusting for propensity score, patients treated with TNFi and MTX remained on treatment longer than those treated without MTX (Logrank p=0.002) while there was no significant difference in TOFA discontinuation in patients with and without MTX (Logrank p=0.31).

Conclusions: In this real world data study, we found that TOFA retention is similar in patients with and without MTX, while patients treated with TNFi and MTX remained on treatment longer than those treated without MTX. Merging data with other RA registries in Canada is proposed to increase study power and to provide more robust results.