Abstract #: 01

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Title: Tumour Necrosis Factor Inhibitors Use and Discontinuation Among Pregnant Women with Chronic Inflammatory Diseases

Objective(s): Previous guidelines (2006) recommended that tumour necrosis factor inhibitors (TNFi) be discontinued during pregnancy. Despite new guidelines (2016 & 2020) now recommending against this, the choice to stop TNFi pre-conception is patient- and provider-dependent. Observational studies have evaluated use of disease-modifying anti-rheumatic drugs (DMARDs) during pregnancy, but few have specifically assessed TNFi discontinuation pre-conception. Understanding trends and predictors of TNFi discontinuation pre-conception may help inform initiatives to improve care and optimize maternal and fetal outcomes. We examined trends in TNFi discontinuation pre-conception over time, and evaluated the characteristics of pregnant women with chronic inflammatory diseases who successfully stopped using TNFi pre-conception compared with those who used TNFi at any time during pregnancy.

Method(s): We created a cohort of pregnant women with rheumatoid arthritis (RA), ankylosing spondylitis, psoriatic arthritis (PsA), psoriasis (PsO), and/or inflammatory bowel diseases (IBD) who delivered between 2011 and 2019, using the MarketScan commercial database. TNFi use was defined as at ≥1 filled prescription or infusion procedure claim, categorized according to the timing of the filled prescription or infusion procedure date in relation to the gestational period: 1) TNFi pre-conception only (≥1 prescription filled or infusion procedure claim in the 12 weeks preceding the gestational period but none within the gestational period) or 2) TNFi use at any time during pregnancy (any prescription filled or infusion procedure claim during the gestational period, including restarts, new starts, and those continuing from pre-conception).

Result(s): We identified 3,372 pregnancies; 13% discontinued TNFi in the 12 weeks before conception and did not restart, and 86% were exposed to TNFi during pregnancy. Pregnancies in IBD patients accounted for 47% of pregnancies. Nearly all pregnancies with IBD were exposed to TNFi during pregnancy (95%). Compared to those with IBD, more patients with RA (difference of 18%, 95% CI 15-21%) and PsA/PsO (20%, 95% CI 16-24%) discontinued their TNFi. Corticosteroid use was similar in both TNFi exposure groups, while patients who took TNFi during pregnancy were more likely to use non-biologic DMARDs concomitantly (p-value <0.0001). Over time, a lower proportion of patients stopped TNFi pre-conception (2011-2013 19% vs 2014-2016 13% vs 2017-2019 10%; p-value for trend <0.0001).

Conclusion(s): In our sample, 13% discontinued TNFi in the 12 weeks before conception and did not restart. The proportion of patients stopping TNFi pre-conception between 2017-2019 decreased compared to earlier years, possibly reflecting updated guidelines. Further research on TNFi discontinuation in the years after the 2020 ACR guidelines is warranted.