Introduction

- Tumor necrosis factor antagonists (anti-TNF) have led to better management of rheumatoid arthritis (RA).
- The efficacy of anti-TNF is well-established for patients who have failed disease-modifying antirheumatic drugs (DMARDs), but there is increasing evidence for the utility of switching to a second anti-TNF agent after the first one fails.
- Switching anti-TNFs: promotes carefully disease activity, in comparison with remaining on the first agent or terminating use of biologic; it is associated with high rates of continuation; and may be unfavorable by the order of specific anti-TNF agents used.

Objectives

- To assess the outcomes of switching from one anti-TNF agent to another on a range of clinical measures.
- To compare changes on clinical measures across treatments.

Methods

- Patient charts were identified by their rheumatologists belonging to the ARISglobal—a RA-centric, in-activity managed online panel of several hundred thousand physicians in the US and EU.
- Data were extracted from medical charts of RA patients in the US who had switched their biologic therapy for RA at least once.

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- A total of 110 rheumatologists provided data from medical charts of 399 RA patients who switched biologics at least once.
- Of those, 215 RA patients were only treated with anti-TNFs, and thus, formed the sample for this study.
- Patients were mostly women (71.2%), and white (80.9%), with mean age of 50.3 years.

Figure 1. Tender Joint Count Assessed at Start and End of Each Consecutive Anti-TNF Therapy

Note. Adjusted means are presented, controlling for time on each treatment and between treatments, age, gender, and compliance were also reasons for switching.

Continued, but not enhanced, improvements were seen among the second agent on all measures except CRP and ESR, as indicated by significant treatment Type X Time interactions.

Conclusions

- Patients with RA who failed on a first anti-TNF agent, either due to lack of response or due to tolerability or other issues, showed significant improvements on 5 clinical measures (TJC, TJC, ESR, C-reactive protein elevation, CRP) after switching to a second anti-TNF agent.
- For patients who failed specifically due to lack of response on a first anti-TNF, switching to a second anti-TNF agent was associated with a significant clinical improvement relative to the first, suggesting that a lack of initial response does not predict the same (poor) performance upon switching.
- The current findings add also to the existing literature examining characteristics of those who benefit from switching, who those who do not, suggesting that the improvements will likely continue but not increase among patients whose reasons for switching include tolerability or other issues such as cost or compliance.
- Overall improvements were similar to or better than those observed in most randomized, controlled trials of an anti-TNF agent as the first biologic therapy, thus demonstrating the value of switching to a second anti-TNF when the first fails.

References


Results (continued)

- Statistical Analysis
  - Mixed-effects models assessed improvements over time, from initiation to the first and then the second anti-TNF agent.
  - Concomitant use of methotrexate with anti-TNF therapy is common and predicts better outcomes, so methotrexate use was included.
  - Five most frequently used measures identified for assessment of outcomes of switching from one anti-TNF agent to another on a range of clinical measures.
  - Of the 215 who switched to a second anti-TNF agent: 36 switched for other reasons, 105 switched due to inadequate response, and 74 switched due to tolerability issues.

- Concomitant use of methotrexate with anti-TNFs is common and predicts better outcomes, so methotrexate use was included.

- The efficacy of anti-TNFs is well-established for patients who have failed disease-modifying antirheumatic drugs (DMARDs), and there is increasing evidence for the utility of switching to a second anti-TNF agent after the first one fails.