Background

Quality of life assessments are important tools for therapy management (TM) pharmacists to support Rheumatoid Arthritis (RA) patients taking specialty disease modifying antirheumatic drugs (sDMARDs) in determining therapy effectiveness. One such tool is the Routine Assessment of Patient Index Data (RAPID), which consists of function, pain, and global domains. Consistent and frequent tracking of RAPID scores may be clinically beneficial. Understanding how time trajectories of total and domain-specific RAPID scores may be important to determine patient populations that can benefit from more frequent TM care.

Objective

This study examined total RAPID and domain-specific changes among RA patients by baseline disease severity class to understand the trajectory of RA quality of life once started on sDMARDs. Further, factors associated with decreases in RAPID-3 scores between baseline and 3- to 6-months of follow-up were investigated to determine characteristics of patients who may need differing levels of clinical intervention to control disease.

Methods

This was a retrospective cohort of RA patients presenting to a specialty pharmacy for sDMARD therapy from 6/2018 to 7/2021. Population of interest included patients: New to sDMARD therapy or new to pharmacy. Had ≥1 RAPID-3 measured within the first 30-days of TM initiation (Baseline), and had ≥1 RAPID-3 recorded within 3-12 months following TM initiation. A secondary analysis of patients with ≥1 follow-up RAPID-3 measured 3- to 6-months following TM initiation was undertaken to assess characteristics related to early sDMARD success.

Analysis: Mixed effects regression determined the trajectory of RAPID-3 scores throughout 12 months of TM enrollment while controlling for intra-patient correlation. Differences between baseline and 3- to 6-month follow-up RAPID-3 and domain-specific scores were assessed using logistic regression models estimated odds ratios (ORs) and 95% confidence intervals (CIs) of factors related to decreases in RAPID-3 total and domain-specific scores.

Results

Trajectory of RAPID-3 scores by baseline RAPID-3 severity group over 12-months since starting sDMARD therapy

Characteristics of patients with baseline and 3- to 6-month follow-up RAPID-3 scores

Change in RAPID-3 scores between baseline and 3- to 6-months follow-up by RAPID-3 severity group

Discussion

• Quality of life improved across the total population over 12-months
  - Baseline high severity patients indicated the largest improvement in RAPID-3 scores over 12-months with an 8-point decrease
  - RAPID-3 scores decreased to the largest degree of 3 points within this group
  - RAPID-3 scores of patients who were baseline low severity or near remission did not change significantly over 12-months
  - Among 128 patients who had follow-up RAPID-3 scores between 3- and 6-months after TM initiation, 80% indicated a decrease in their scores corresponding to an increase in quality of life
  - Changes in RAPID-3 scores from baseline to 3- to 6-month follow-up varied by baseline severity group

• Patients with drug therapy problems were 4.5 times less likely to improve total RAPID-3 and 6.3 times less likely to improve Function Domain scores at 3- to 6-months
• Baseline high severity patients were more likely to show improvements in RAPID-3 scores than lower severity patients

Conclusion

RA patients in TM taking sDMARDs with high and moderate baseline RAPID-3 scores achieved significantly reduced scores over 1-year. Previous research notes a decrease of 3.8 points in RAPID-3 scores to be clinically meaningful, indicating overall success among this study population. Intervening to improve drug therapy problems may aid in increasing more patients to achieve high quality of life among RA patients, indicating the importance of TM pharmacists within the care team. Future research will explore the relationship between clinical characteristics and longer-term quality of life outcomes among RA patients, and work to further decouple domain scores to understand their interplay in patient outcomes.

References