Abstract

Background:

Rheumatoid arthritis (RA) is a chronic inflammatory disease that requires effective treatment to manage symptoms and improve patient outcomes. The introduction of biological therapies alongside conventional Disease-Modifying Antirheumatic Drugs (DMARDs) has expanded treatment options and enabled more personalized therapeutic strategies based on disease severity and patient-specific treatment goals. This study aimed to evaluate and compare the effectiveness and safety of two common treatment approaches for RA: DMARDs alone versus a combination of DMARDs and biological therapy.

Methods

A retrospective observational study was conducted at the Rheumatology Clinic of Benghazi Medical Center, involving 70 patients diagnosed with rheumatoid arthritis and treated between 2018 and 2023. Data was extracted from patient medical records and included demographics, disease duration, medications prescribed, treatment-related side effects, clinical efficacy, and relevant laboratory parameters. Ethical approval for the study was obtained, and only patients who met the predefined inclusion criteria were included in the analysis. Descriptive statistics, including means, medians, standard deviations, frequencies, and percentages, were applied to summarize the data. To assess differences in clinical and laboratory outcomes before

and after biological therapy, the Wilcoxon signed-rank test was used for ordinal variables, and the McNemar test was applied for categorical data.

Results:

The results showed that the majority of patients were female, with the most common age group being 46–55 years. Significant differences in both safety and efficacy were observed. While mild side effects were more common in the DMARD-only group, the incidence of side effects was higher in those receiving combination therapy. However, patients treated with the addition of biologics demonstrated greater clinical improvement, with statistically significant reductions in ESR, CRP, and DAS28 scores.

Conclusions:

In conclusion, combining DMARDs with biological therapy results in more effective disease control and higher remission rates in RA patients, but it may also be associated with a higher risk of adverse effects, particularly infections. In contrast, DMARD monotherapy is associated with fewer serious side effects but offers less robust control of disease activity. These findings underscore the importance of balancing treatment efficacy and safety when designing individualized therapeutic strategies.

Keyword Disease Activity Score, Safety, Efficacy, Inflammatory Markers