

**THE COMPARISON OF TREATMENT RESULTS OF RHEUMATOID
ARTHRITIS WITH BIOLOGICAL AGENTS AND DISEASE
MODIFYING ANTI RHEUMATIC DRUGS**

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What is Rheumatoid Arthritis?

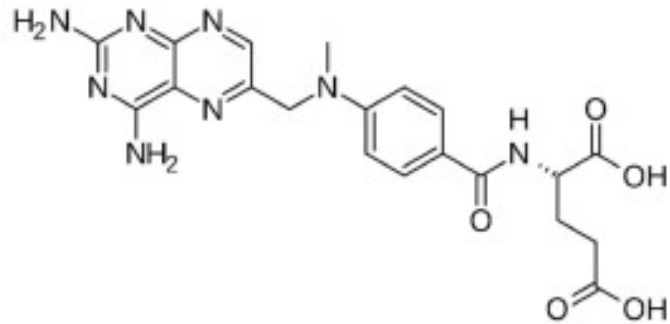
- Rheumatoid arthritis (RA) is a systemic, inflammatory and autoimmune disease characterized by polyarthritis. Although its etiology is not fully known, genetic factors, environmental factors are emphasized.



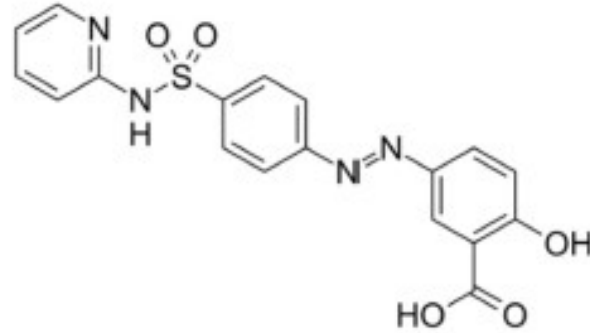
Characteristics of RA

- Rheumatoid arthritis (RA) causes symmetric inflammation of the synovium in peripheral joints.
- Over time, this inflammation can lead to cartilage damage, bone erosion, and deterioration in joint integrity.
- As the disease progresses, individuals may experience disability and a shortened lifespan.
- Early diagnosis and effective management are crucial in mitigating the progression of RA and improving the quality of life for affected individual

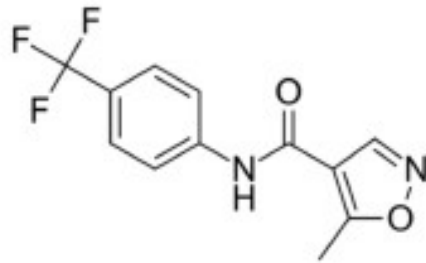




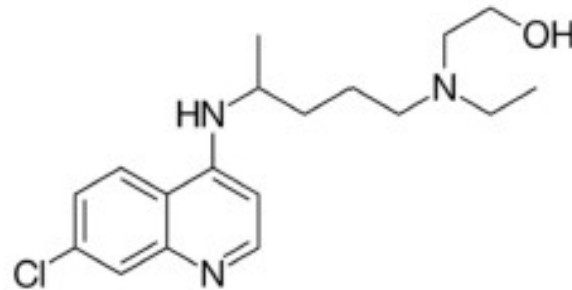
Methotrexate



Sulfasalazine



Leflunomide



Hydroxychloroquine

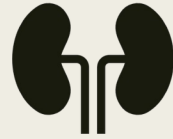
Treatment

- NSAIDs - both analgesic and anti-inflammatory effects
- Steroids – NSAIDs are long-term and low-dose
- DMARD (methotrexate, sulfasalazine, leflunomide) - prevention of joint damage and preservation of its properties
- TNF ALPHA INHIBITORS (infliximab, etanercept, adalimumab, tofacitinib) – inhibiting the inflammatory response
- Single or combined treatments are applied. (2,3)

MATERIAL and METHODS



Patients diagnosed with rheumatoid arthritis who applied to Bezmialem Vakif University Faculty of Medicine Hospital Physical Therapy and Rehabilitation Polyclinic between 2000 and 2023 will be included in our study.



The files of 150 patients between the ages of 18 and 65 who received at least 6 months of treatment will be examined retrospectively, and 78 of these patients will be randomly included in the study (4).



Patients will be divided into two groups, TNF group and DMARD + TNF group, according to the treatments they receive.



The effects of drug groups on the course of the disease will be investigated by comparing the erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), ANA, anti-CCP and RF values of the patients at the first examination and 6-month follow-up.



Laboratory & Serology

- RF
- ANA
- anti-CCP
- CRP
- WBC

Literature Review and Aim of Our Study

- Although evaluating and comparing the effects of combined treatments on the course of the disease has been the subject of many studies, there is no study in the literature comparing the effectiveness of anti-TNF therapy and MTX + anti-TNF treatments (3).
- Our aim is to evaluate the clinical benefits of these two treatment groups by retrospectively classifying patients according to laboratory, serological criteria and disease severity.

Group 1: 39 people using
only TNF group drugs

infliksimab
adalimumab
tofacitinib
etanersept
sertolizumab
sekukinumab
golimumab

Group 2: 39 people using
TNF + DMARD group drugs

Metotreksat + TNF
Sulfasalazin + TNF
Leflunomid + TNF
**Tekli ya da kombine
kullanımları**

Data Analysis

- The data will be analyzed in the IBM SPSS Statistics 22.0 package program. Chi-square (χ^2) test will be used to investigate the differences in demographic data and clinical parameters of the groups according to age and gender, and Paired Student-t test will be used to compare the test parameters of the groups at the beginning and at the end of the 6th month. Mean, \pm SD, r (relationship coefficient), frequency and % values will be given as descriptive statistics. $p < 0.05$ will be considered statistically significant.



RESULTS



- Average Age of Patients:
- Patients using biological agents have an average age of 50.27 years with a standard deviation of 7.9 years.
- Patients using DMARDs have an average age of 46.79 years with a standard deviation of 8.6 years.
- Treatment Comparison:
- There was a statistically significant difference between the treatment groups across various parameters examined.
- Both groups showed a decrease in the parameters examined before and after treatment, but the decrease in the group receiving combined anti-TNF (Tumor Necrosis Factor) therapy was found to be statistically higher than in the DMARD group.
- Follow-up at 6th Month:
- At the 6th month follow-up, significant differences were observed between the two groups in terms of ESR (Erythrocyte Sedimentation Rate), RF (Rheumatoid Factor), and CRP (C-Reactive Protein) values.
- The p-value (probability value) for these differences was less than 0.001, indicating a highly significant result.
- Overall, these findings suggest that combined anti-TNF therapy may be more effective in reducing the examined parameters and improving clinical outcomes compared to DMARD therapy alone in the treatment of the condition under study. However, further interpretation would require additional context, such as the specific condition being treated, the study design, sample size, and any potential limitations of the research.

Conclusion

- Based on the findings of this study, it can be concluded that both biological agents and DMARDs are effective treatments for conditions such as rheumatoid arthritis. However, combined anti-TNF therapy, including biological agents targeting Tumor Necrosis Factor, may offer superior outcomes compared to DMARD therapy alone. Particularly, significant improvements were observed at the 6th month follow-up. These results underscore the potential of combined anti-TNF therapy as a more effective option in the treatment of conditions like rheumatoid arthritis. However, further research is warranted.

- The results indicate significant differences between treatment groups, particularly in terms of the effectiveness of combined anti-TNF therapy.

Group	Average Age	Pre-Treatment Parameters	Post-Treatment Parameters
Biological Agents	50.27 ± 7.9	Decrease observed, not significant	More significant decrease, significant
DMARDs	46.79 ± 8.6	Decrease observed, not significant	Less significant decrease, significant

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