AB0355

THE DIFFERENCES BETWEEN THE FIRST PREFERRED BIOLOGICAL DMARD AND THE DRUG SURVIVAL IN GERIATRIC AND YOUNGER ADULT POPULATION WITH RHEUMATOID ARTHRITIS AND PSORIATIC ARTHRITIS: TREASURE REAL-LIFE DATA

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Background: Inflammatory musculoskeletal diseases are frequent in the elderly population, and this number is expected to increase significantly near future. The exclusion of older adults from the studies due to their age and comorbidities causes insufficient data about this population. Insufficient data cause clinicians to have difficulties using and selecting biological therapy in the elderly patient group. In real life, physicians' approaches to the selection and use of biological disease modifying anti-rheumatic drugs (DMARDs) in the geriatric population with rheumatoid arthritis (RA) and psoriatic arthritis (PsA) have not been well studied.

Objectives: To compare the clinicians' first choice of biological DMARDs in elderly and younger RA and PsA patients and investigate the drug survival of first biological DMARDs in both populations.

Methods: The traditional chronological age for the human to be classified in the geriatric population is ≥ 65 years (1). The TReasure web-based registry, created in 2017, is a multicenter observational cohort established to collect data on RA and spondyloarthritis (SpA) patients from the participating 17 rheumatology centers in different regions of Turkey. Physicians' first choice biological and targeted synthetic DMARDs in younger and elderly patients with RA and PsA was evaluated using the descriptive statistical method. The survival of the first b/tsDMARDs was assessed using the Kaplan-Meier method.

Results: 3136 RA and 738 PsA patients were evaluated. 12% of 3136 patients with RA were in the geriatric population. In patients with RA, the first choice of biologic DMARDs was adalimumab (20.6%), followed by etanercept (19.9%), and tofacitinib (13.6%) in patients < 65 years of age, while rituximab (24%) was the first choice in patients ≥ 65 years, tofacitinib (20.9%) in the second place and etanercept (13%) in the third. Of 738 PsA patients, 3% were over 65 years. Adalimumab (41.1%) was the first choice of <65 years of age, etanercept (17.6%) was the second choice, and infliximab (15.5%) was the third choice, while adalimumab (28.6%) was the first choice in patients ≥ 65 years followed by etanercept (17.9%) and certolizumab (17.9%). In RA group, drug survival was significantly higher in patients ≥ 65 years (estimated median drug survival; <65 age: 37.5 (34.1-41.1) months vs ≥65 age: 53.5 (24.9-82.2) months; log-rank p=0,016) (Figure 1). In PsA group, drug survival was significantly higher in patients < 65 years (estimated median drug survival; <65 age: 31.2 (26.4-36.1) months vs ≥65 age: 9.1 (0.4-17.7) months; log-rank p<0,001) (Figure 1).

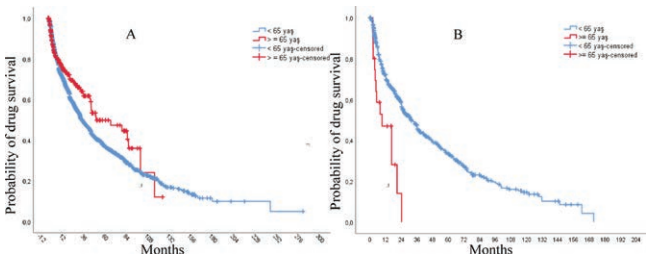

Figure 1. Comparison of first bDMARD retention rates between <65 years and ≥ 65 years. A: In rheumatoid arthritis patients, B: In psoriatic arthritis patients

Conclusion: With these findings, it is thought that in Turkey, the limited socioeconomic support in the geriatric patients has led physicians to prescribe treatments such as rituximab, which are administered in the hospital under the supervision of a physician, are relatively preferred in malignancies, and are considered to be relatively less risky in terms of tuberculosis. Adalimumab and etanercept were chosen in the first two lines in both geriatric and young populations in the patient group with PsA. While the drug survival was significantly higher in patients with RA geriatric age group than the younger group, in PsA in which tumor necrosis factor-alpha (TNF-α) inhibitors were chosen as initial therapy in both age groups was lower in the geriatric population.

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AB0356

THERAPEUTIC DRUG MONITORING: STANDARDIZATION OF PROMONITOR QUICK IFX AND PROMONITOR QUICK ADL POINT OF CARE TESTS WITH WHO INTERNATIONAL STANDARDS FOR THE QUANTIFICATION OF INFLIXIMAB AND ADALIMUMAB IN WHOLE BLOOD AND SERUM

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Background: Promonitor Quick IFX and Promonitor Quick ADL are rapid point of care lateral flow tests (LFT) based on a sandwich immunoassay for the quantification of infliximab (IFX) and adalimumab (ADL), respectively, in human whole blood (finger prick or venous) or serum. These tests are to be used as an aid in Therapeutic Drug Monitoring (TDM) of rheumatic and inflammatory bowel disease patients under anti-TNFα therapy. The international standards (IS) developed by World Health Organization (WHO) for IFX and ADL allow harmonization and comparability among different assays.

Objectives: The aim of this study, was to show that Promonitor Quick IFX and Promonitor Quick ADL can measure either reference or biosimilar drugs, as well as to evaluate the agreement of Promonitor Quick IFX and Promonitor Quick ADL tests and the WHO IS.

Methods: Clinical and Laboratory Standards Institute EP10-A3 guidelines were followed to estimate the bias of Promonitor Quick assays when used to quantify IFX or ADL in samples containing the reference drugs, biosimilars or the WHO IS. Briefly, whole blood was spiked with four known concentrations of IFX or ADL, including current clinical decision levels. Ten replicates were measured of each level along two days. Promonitor Quick IFX was evaluated using the reference drug, SB2 and CT-P13 biosimilars, and the WHO IS (NIBSC 16/170). Promonitor Quick ADL was evaluated using the reference drug, ABP501 and SB5 biosimilars, and the WHO IS (NIBSC 17/236). Results were obtained in combination with the automated portable reader PQreader.

Results: Bias was estimated by comparing the observed concentration of drug spiked whole blood samples. Each biosimilar was compared to the reference at the different drug levels tested. Results showed that Promonitor Quick IFX and Promonitor Quick ADL are able to measure equivalently any molecule (see Table 1).

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