Abstract

This thesis focuses on evaluating the effectiveness and safety of biological/targeted treatment in chronic inflammatory rheumatic diseases based on data from the ATTRA registry. The introductory chapters of the thesis give an overview of three rheumatic diseases – rheumatoid arthritis (RA), psoriatic arthritis (PsA) and axial spondyloarthritis (axSpA), characterising clinical manifestation, diagnosis, therapeutical options and current treatment guidelines. The work also contains a brief summary of information about planning, creating and maintaining a clinical registry and characterises specifics related to the analysis of registry data. The practical part of the thesis was aimed at two research questions. Recently, a treat-to-target (T2T) strategy was established for RA, PsA and axSpA. Studies from daily clinical practice concerning the advantage of following T2T over usual care are still lacking. Thus, the first goal of the thesis was to evaluate whether following a treat to target strategy after not reaching low disease activity within the first six months leads to a higher chance of meeting the treatment target at the twelve-month visit. Our second goal in the thesis was to evaluate the association between therapeutic response (achieving remission and drug retention) and patients' self-perceived general health status at the treatment initiation based on answers in the SF-36 questionnaire. For both analyses, we included patients with RA, PsA and axSpA starting their first-line biological/targeted therapy and employed the propensity score matching to reduce selection bias. For the second analysis, we used two different datasets to validate our findings. The results of the first analysis showed that the T2T strategy was more effective than the conservative approach in patients with RA (statistically significantly) and with axSpA (only numerically). Patients following the T2T strategy showed significantly bigger improvements in disease activity and quality of life within the period from the 6- to 12-month visit than patients not following the strategy. We have also found that the application of the T2T is underused in the Czech Republic. The second analysis results provided strong evidence that self-perceived general health at the start of TNFi therapy predicts reaching remission at 12 months in patients with RA. We showed that both patients who expected their health to get worse and patients who seemed to get sick a little easier than other people at treatment initiation had higher odds of treatment response within the first year than patients who did not think that. In the other two diagnoses, the evidence was not strong.

Keywords: rheumatoid arthritis, psoriatic arthritis, axial spondyloarthritis, treat-to-target, biological/targeted treatment, remission, low disease activity, clinical registry, ATTRA, propensity score, SF-36