Changes in Diverse Disease Activity Measures Are Highly Correlated Following the Initiation of Most Treatment Modalities in the Management of Longstanding Rheumatoid Arthritis

Craig Wiesenhutter

University of Washington School of Family Medicine, Seattle and Coeur d’Alene Arthritis Clinic, Coeur d’Alene

Abstract

Background/Purpose: Treating rheumatoid arthritis (RA) patients to target (T2T) has been shown to result in better outcomes in patients with longstanding disease who have difficulty with standard doses of disease-modifying antirheumatic drugs (DMARDs); however, the detailed markers of treatment response and the timing of assessment following the change in therapy is not currently understood. We used the data from nine common DMARDs, which were administered to patients with longstanding RA (≥ 10 years), to assess whether changes in disease activity follow the change in therapy and whether these changes are highly correlated across diverse measures.

Methods: Patients at a community-based rheumatology clinic undergoing treatment change (T2T) were included. We measured the disease activity score in 28 joints (DAS28), the Doppler joint count (UPD), and the multibiomarker disease activity (MBDA) blood test. The correlation and change in activity measures were assessed using paired sample t-tests and Spearman’s rank correlation tests, respectively.

Results: 44 patients were included in the analysis with a median age of 64 years (IQR 55-72), and 39 of them were female. The average duration of RA in patients at this clinic is > 10 years. Patients underwent assessments prior to change in therapy, and then generally about six months later. Patients at this clinic undergo changes in therapy due to intolerance or to pursue new therapeutic options.

Conclusion: Changes in diverse DMARDs have moderate to high correlation following the initiation of most therapies. Implementing a T2T strategy is feasible to perform diverse disease activity measurements in the management of patients with longstanding RA.

Introduction

Treating rheumatoid arthritis (RA) patients to target (T2T) has been shown to result in better outcomes in patients with new-onset disease. Although the beneficial results of T2T in patients with longstanding disease who have difficulty with standard doses of DMARDs, these results have not been as consistent. Implementing this strategy in a rheumatology clinic is problematic, as patients with longstanding disease who have chronic diseases and other comorbidities can have extensive flare-up scores because of the impact on these scores are due to pharmocological side effects and other comorbidities. Results: 44 patients were included in the analysis with a median age of 64 years (IQR 55-72), and 39 of them were female. The average duration of RA in patients at this clinic is > 10 years. Patients underwent assessments prior to change in therapy, and then generally about six months later. Patients at this clinic undergo changes in therapy due to intolerance or to pursue new therapeutic options.

Methods: Patients at a community-based rheumatology clinic undergoing treatment change (T2T) were included. We measured the disease activity score in 28 joints (DAS28), the Doppler joint count (UPD), and the multibiomarker disease activity (MBDA) blood test. The correlation and change in activity measures were assessed using paired sample t-tests and Spearman’s rank correlation tests, respectively.

Results: 44 patients were included in the analysis with a median age of 64 years (IQR 55-72), and 39 of them were female. The average duration of RA in patients at this clinic is > 10 years. Patients underwent assessments prior to change in therapy, and then generally about six months later. Patients at this clinic undergo changes in therapy due to intolerance or to pursue new therapeutic options.

Conclusion: Changes in diverse DMARDs have moderate to high correlation following the initiation of most therapies. Implementing a T2T strategy is feasible to perform diverse disease activity measurements in the management of patients with longstanding RA.

Discussion

It is feasible to perform diverse disease activity measurements (DAMs), including clinically oriented disease activity measures (DAMs), in the time constraints of a twenty minute office visit. Several of the common employed therapies for RA are shown in this paper to lead to significant improvements in these DAMs and, as well as showing significant correlations with these changes between the three DAMs for most therapies. The data suggests that the addition of non-DMARDs, such as the UPD and MBDA, would complement the value of more conventional inflammatory measures and facilitate the rapid management of patients with longstanding RA.

Conclusion

Treating rheumatoid arthritis (RA) patients to target (T2T) has been shown to result in better outcomes in patients with new-onset disease. Although the beneficial results of T2T in patients with longstanding disease who have difficulty with standard doses of DMARDs, these results have not been as consistent. Implementing this strategy in a rheumatology clinic is problematic, as patients with longstanding disease who have chronic diseases and other comorbidities can have extensive flare-up scores because of the impact on these scores are due to pharmocological side effects and other comorbidities. Results: 44 patients were included in the analysis with a median age of 64 years (IQR 55-72), and 39 of them were female. The average duration of RA in patients at this clinic is > 10 years. Patients underwent assessments prior to change in therapy, and then generally about six months later. Patients at this clinic undergo changes in therapy due to intolerance or to pursue new therapeutic options.

Methods: Patients at a community-based rheumatology clinic undergoing treatment change (T2T) were included. We measured the disease activity score in 28 joints (DAS28), the Doppler joint count (UPD), and the multibiomarker disease activity (MBDA) blood test. The correlation and change in activity measures were assessed using paired sample t-tests and Spearman’s rank correlation tests, respectively.

Results: 44 patients were included in the analysis with a median age of 64 years (IQR 55-72), and 39 of them were female. The average duration of RA in patients at this clinic is > 10 years. Patients underwent assessments prior to change in therapy, and then generally about six months later. Patients at this clinic undergo changes in therapy due to intolerance or to pursue new therapeutic options.

Conclusion: Changes in diverse DMARDs have moderate to high correlation following the initiation of most therapies. Implementing a T2T strategy is feasible to perform diverse disease activity measurements in the management of patients with longstanding RA.