212 MULTIMORBIDITY IS ASSOCIATED WITH INCREASED DISABILITY BUT LOWER DISEASE ACTIVITY OVER TIME IN PATIENTS WITH RA: RESULTS FROM THE BSRBR-RA

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Background: Multimorbidity is an increasing challenge in the management of chronic diseases such as rheumatoid arthritis (RA). It is not yet fully understood how the presence and accrual of multimorbid disease impacts disease specific outcomes. The aim of this study was to describe the relationship between multimorbidity and disability and disease activity over time in patients with established RA.

Methods: The British Society for Rheumatology Biologics Register for RA (BSRBR-RA) recruited patients with a physician diagnosis of RA to either biologic or conventional synthetic (cs) DMARD cohorts. For the biologic arm, inclusion in this analysis was restricted to patients starting their first biologic, in order to exclude mortality acquired as a consequence of previous biologic treatment. Baseline information included data on demographics, multimorbidity, medication, and measures of disease activity (DAS28) and disability (HAQ). To assess burden of multimorbidity, the rheumatic disease comorbidity index (RDCI) was calculated using baseline data, and during follow up using all adverse events reported to the BSRBR-RA. The RDCI was updated each time a new adverse event was reported. However, if the same disease was reported more than once for a patient, it was only included the first time. The association between RDCI and HAQ(tentatives) and DAS28 throughout follow up was investigated using mixed effects models adjusted for age, gender, smoking status, disease duration, calendar year and rheumatoid factor positivity, as well as a time interaction term. Data from the biologic and csDMARD cohorts were analysed separately.

Results: A total of 17,537 patients were included; baseline characteristics are shown in Table 1. RDCI was significantly associated with increased disability in both biologic and csDMARD cohorts, respective adjusted odds ratios (95% CI): 1.33 (1.27, 1.38) and 1.69 (1.47, 1.93). For disease activity, the reverse association was seen, respective adjusted beta co-efficients (95%CI): -0.21(-0.23, -0.20) and -0.09 (-0.11,-0.07) for biologic and csDMARD cohorts; i.e. at the individual level, each increase in RDCI is associated with a 0.21 decrease in DAS28.

Conclusion: Multimorbidity at baseline or acquired during follow up was associated with increased disability, but lower levels of disease activity over time in the BSRBR-RA. This may be due to increased contact from health care professionals.

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