Moderate disease does not necessarily mean moderate disability

Yi Pan, Sam Norton, James M Gwinnutt, Lianne Kearsley-Fleet, Deborah P. M. Symmons, Mark Lunt, Adam Young, The BSRBR-RA Control Centre Consortium, Kimme L. Hyrich, Suzanne M. M. Verstappen.

What was already known?

Biologic drugs are very effective for treating rheumatoid arthritis (RA). However, they are very expensive and so are restricted to patients who have failed to respond to standard treatment. Some patients will not have high disease activity measured in clinic, but will still have evidence of inflammation and pain. These patients are often labelled as "moderate disease". Currently, patients with moderate disease do not have access to biologic drugs in the United Kingdom (UK).

Patients with moderate disease are more likely to develop joint damage and have higher levels of disability than those with low disease activity or remission. Furthermore, studies from other countries have shown that patients with moderate disease do benefit from biologic treatment.

There is likely to be a lot of variation in how much patients with moderate disease are affected by their disease, such as how much disability they experience. If we could identify groups of patients with moderate disease who are likely to have high disability in the future, these patients may be candidates for biologic treatment.

What was found?

Patients with moderate disease receiving standard treatment (not biologics) and who were recruited to the British Society for Rheumatology Biologics Register for RA (BSRBR-RA) were included in this study (1274 in total). We showed that there were seven distinct groups of patients, with each group characterised by how their disability changed over three years. These groups were 1) low decreasing, 2) low stable, 3) moderate stable, 4) moderate increasing, 5) high stable, 6) high increasing and 7) severe increasing. Patients' disease activity at the start of the study as well as age, gender and number of years since their first symptom could predict which disability group they would be in over the following three years.

Why is this important?

Despite all the patients in this study being classified as having moderate disease, other features of their disease differed markedly. Some patients had low disability whilst others experienced high or increasing disability. Future patients who are likely to have high disability may be good candidates to receive biologic drugs.

Should you wish to read this scientific paper in full, the text can be found online here: <u>https://doi.org/10.1371/journal.pone.0215999</u>

