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Baricitinib inhibits RA structural damage even in moderate, high disease activity

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Baricitinib reduces structural joint damage progression in rheumatoid arthritis even among patients with who continue to exhibit moderate or high disease activity, according to data published in *Annals of the Rheumatic Diseases.*

"The results presented reveal that baricitinib, with/without de novo [methotrexate (MTX)] or with background MTX, enhances disease-modifying effects by blunting the tight link that is usually seen between disease activity and progression of joint damage in [conventional synthetic DMARD (csDMARD)]-naïve and MTX-[inadequate responder (IR)] patients, being more evident when baricitinib is combined with MTX," **Pedro Lopez-Romero, PhD,** a senior research assistant at Eli Lilly and Co., and co-authors wrote. To investigate the impact of the disease-modification properties of baricitinib (Olumiant, Eli Lilly & Co.) in patients with RA, Lopez-Romero and colleagues used linear regression analysis to compare joint damage progression between treatment groups in the RA-BEAM and RA-BEGIN trials. Disease activity was assessed using the Clinical Disease Activity Index and patients were sorted based on disease activity. Groups included those in remission, those with low disease activity and those who had moderate-to-high disease activity.

For their own analysis, Lopez-Romero and colleagues included only those participants who completed their relevant study endpoint, and excluded patients who switched treatment, were rescued or were lost to follow-up prior to the time point defined for analysis.

According to the researchers, 42% of patients in RA-BEAM who received baricitinib attained remission or low disease activity, compared with 19.2% and 37.4% of patients who received placebo and adalimumab (Humira, AbbVie), respectively. In RA-BEGIN, 57.6% of patients receiving baricitinib monotherapy, and 62.7% of patients who received baricitinib in combination with methotrexate,

achieved remission or low disease activity, compared with 39.6% treated with methotrexate only.

"In two distinct populations of patients with rheumatoid arthritis, either baricitinib alone and/or in combination with MTX enhanced disease-modifying properties by uncoupling the link between disease activity and structural damage progression, with the uncoupling being more evident for baricitinib in combination with MTX," Lopez-Romero and colleagues wrote.

Additionally, joint damage was controlled in the baricitinib groups compared with the control groups across all activity levels, the researchers wrote. Patients with moderate and high disease activity who received baricitinib with or without background methotrexate demonstrated less structural progression than control groups.

Limitations of the study include the fact that the researchers used different timepoints for analysis of early conventional synthetic DMARD-naïve patients and those with an inadequate response to methotrexate. Additionally, the focus on baricitinib means the results cannot be generalized across other JAK inhibitor therapies, the researchers wrote. "The Jakinib baricitinib has shown to have significant inhibitory effects on the progression of structural joint damage even in patients who continue to have [moderate/high disease activity] states," Lopez-Romero and colleagues wrote.