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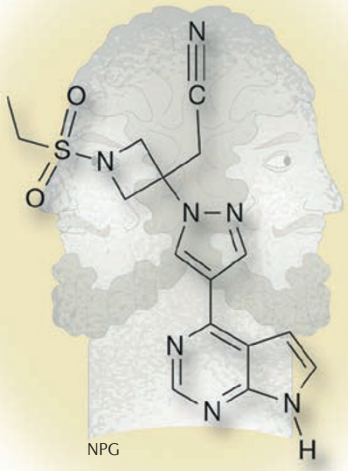
RHEUMATOID ARTHRITIS

RA-BEACON illuminates baricitinib

Baricitinib therapy has demonstrated clinical efficacy in patients with rheumatoid arthritis (RA), according to the results of the RA-BEACON phase 3 trial just published in the *New England Journal of Medicine*. "Baricitinib works well in patients who have active disease that has been refractory to many other agents," says Mark Genovese, corresponding author of the study.



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Baricitinib is an oral inhibitor of Janus kinases 1 and 2 (JAK1 and JAK2). This family of tyrosine kinases transmits cytokine signals to the nucleus. Inhibition of this signalling pathway provides an alternative for those patients who do not respond adequately to treatment with synthetic or biologic disease-modifying antirheumatic drugs (DMARDs). In a previous phase 2 trial, baricitinib proved effective and safe in patients with RA who were refractory to methotrexate.

In this randomized, double-blind trial, Genovese and co-workers enrolled a total of 527 patients who had an inadequate response to (or could not tolerate) treatment with one or more biologic DMARDs.

These patients were randomly assigned to one of three groups: placebo, 2 mg baricitinib or 4 mg baricitinib daily. The primary end point of the study was the American College of Rheumatology 20% (ACR20) response rate, which was measured 12 weeks after initiation of treatment. Secondary end points included the Health Assessment Questionnaire-Disability Index (HAQ-DI), the 28-joint Disease Activity Score including C-reactive protein level (DAS28-CRP) and the Simplified Disease Activity Index (SDAI).

55% of patients receiving 4 mg baricitinib had an ACR20 response, compared with 27% of those in the placebo group ($P \leq 0.001$). A higher percentage of patients with an ACR20 response was observed in the 2 mg group than the placebo group ($P \leq 0.001$), but not as high as in the 4 mg group. Significant differences were also observed between the 4 mg and placebo groups for the HAQ-DI and DAS28 scores. Moreover, the number of serious adverse events were similar among the three groups.

"This study demonstrates that benefit can be obtained independent of the number or the type of agent previously used," points out Genovese, who adds that ongoing studies will help his research group to better understand the durability of this treatment response and the long-term safety of baricitinib.

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