Study finds NSAID use and age may delay conception in spondyloarthritis patients

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New research presented this week at ACR Convergence 2022, the American College of Rheumatology's annual meeting, showed that treatment with nonsteroidal anti-inflammatory drugs (NSAIDs) and older age were associated with longer time to conception in spondyloarthritis patients.

Spondyloarthritis (SpA) is a group of inflammatory diseases of the joints and spine, with a variety of clinical manifestations. Although SpA is prevalent among people of childbearing age, little is known about the effect of the disease and its treatment on fertility. The researchers undertook this prospective observational study to determine the factors influencing time to conception in SpA patients.

Study participants included 88 patients, with a mean age of 31.8 (plus or minus 5 years), who were trying to conceive and were enrolled in the French multi-center GR2 cohort from 2015 to June 2021.

"The GR2 cohort follows patients from preconception or the first trimester of pregnancy until one year after delivery," explains Sabrina Hamroun, MD, an associate professor at Cochin University Hospital, Paris, France, and the study's lead author. "The sociodemographic characteristics of the patients, exposures to various treatments and disease activity are regularly recorded for patients during follow-up. The objective of this cohort is to evaluate the factors associated with time to conception and obstetric morbidity in women with chronic inflammatory rheumatic diseases, among other pathologies."

The study's primary endpoint was time to conception and the secondary endpoints were the number of subfertile patients (their time to conception was more than 12 months or they did not become pregnant) as well as the number who used conventional synthetic disease-modifying anti-rheumatic drugs (csDMARDs) and biologics during the preconception period.

The data showed that 56 (63.6%) of the 88 participants had a pregnancy during follow-up, with 40 (45%) identified as subfertile. In this group, the median time-to-conception was 16.1 months. Twenty-three patients were treated with NSAIDs, eight with corticosteroids, twelve with csDMARDs and sixty-one with biologics. The multivariate model, adjusted for age, body mass index, disease duration and activity, smoking, type of SpA and medication during preconception, showed a statistically significant increase in time to conception with NSAID use and older age.

Dr. Hamroun notes that because study participants were drawn from tertiary centers, these findings may not be representative of all women with SpA in France of child-bearing age since patients with less severe forms of the disease are often managed in outpatient settings. And she says, "We had missing data on disease activity, which we managed by multiple imputation. Therefore, we cannot rule out NSAIDs as a proxy for disease activity. In addition, there were no data available on quality of life and frequency of sexual intercourse, which are variables that may impact time to conception."

Still, Dr. Hamroun says, "The study shows the impact of NSAIDs use in women with SpA and their ability to conceive. These results are also consistent with the mechanism of action of NSAIDs whose deleterious effect on fertilization has been demonstrated in other diseases. Indeed, the significant increase in time to conception argues for the cautious use—or supervised discontinuation—of NSAIDs in women with SpA

who have difficulties conceiving."

More information: Abstract #1673

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