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Biologic use during pregnancy may not increase opportunistic infection risks in infants

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Using a biologic therapy to manage rheumatoid arthritis may not significantly increase an infant's risk for developing opportunistic infections like pneumonia, meningitis, and tuberculosis, according to new research findings presented this week at the 2017 ACR/ARHP Annual Meeting in San Diego.

Rheumatoid arthritis (RA) is a chronic disease that causes pain, stiffness, swelling, and limitation in the motion and function of multiple joints. Though joints are the principal body parts affected by RA, inflammation can develop in other organs as well. An estimated 1.3 million Americans have RA, and the disease typically affects women twice as often as men.

Researchers at the University of California, San Diego wanted to gauge the serious or opportunistic infection risk for infants whose mothers used biologics during pregnancy. Because biologic drugs suppress the immune system, there has been a concern that infants prenatally exposed to these medications in pregnancy could be at increased risk for infection.

"I think this issue has been an important concern for clinicians and patients with respect to risk for immune compromise in these infants," said Christina Chambers, PhD, MPH, Co-Director of the Center for Better Beginnings and Professor, University of California, San Diego. Dr. Chambers is one of the co-authors of the study. "This is true

especially with later pregnancy exposure, when placental transfer is increased."

In this observational cohort study, the Organization of Teratology Information Specialists (OTIS) Autoimmune Diseases in Pregnancy Project, the researchers included data on pregnant women in the U.S. or Canada, including those with and without RA, and those who used biologics and other therapies. The researchers collected data from the women in phone interviews, as well as from the medical records from the delivery hospitals and obstetric and specialty providers. Data included the dates when women started and stopped using biologics during their pregnancies.

The results of the study included data collected from 2004 through 2016 on 502 pregnancies where the mother with RA was treated with a biologic with or without other disease modifying anti-rheumatic medications during her pregnancy, 231 pregnancies where the mother had RA but did not use any biologics during pregnancy, and 423 pregnancies where the mother had no chronic diseases at all. Follow-up data on infection rates in the infants born to the women in the study were collected from their pediatricians for up to one year after birth. Serious and/or opportunistic infections tracked included neonatal sepsis, invasive fungal infection, X-ray proven pneumonia, meningitis, bacteremia, pneumocystis, septic arthritis, osteomyelitis, tuberculosis, herpes, listeria, legionella, mycobacteria, systemic cytomegalovirus and abscess.

Among the pregnant mothers with RA who used biologics, 43.2 percent took their last dose in the first or second trimester, and 56.8 percent took their last dose in the third trimester. Serious or opportunistic infections occurred in 4.0 percent of the infants born to these mothers. However, serious or opportunistic infections occurred in 2.6 percent of the infants who were born to mothers with RA who did not use biologics during pregnancy and in 2.1 percent of the infants born to mothers with no

chronic diseases.

The researchers also examined the infection rates among infants potentially exposed in the third trimester when most experts believe placental transfer of these medications is increased. Among infants born to mothers whose last biologic dose was after 24 weeks of gestation, 3.5 percent reported infant infections, similar to the rate among women with RA who did not use biologics. They then looked at women with RA whose last biologic dose was after 32 weeks of gestation, and found that 2.7 percent reported these infections in their infants, approximately the same risk of those with RA who did not use any biologic during pregnancy. This study's results were updated after the original abstract was accepted.

"While this study cannot rule out low risks for serious infections, and we did not examine risks for milder infections," said Dr. Chambers. "However, these results should be reassuring for women with RA who need to be treated throughout pregnancy with a biologic."

Provided by American College of Rheumatology

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