MedicalXpress

Women with lupus have a higher risk for preeclampsia

October 30 2012

New research reports that women with systemic lupus erythematosus (SLE) have a two-fold increase in risk of preeclampsia—a dangerous condition in which pregnant women develop high blood pressure (hypertension) and protein in their urine (proteinuria) after 20 weeks of gestation. According to the findings published in *Arthritis Care & Research*, a journal of the American College of Rheumatology (ACR), use of Disease-Modifying Antirheumatic Drugs (DMARDs) during pregnancy was rare in the study population, but women who did use these medications show a statistically non-significant increase in preeclampsia risk. The risk could be explained by the severity of autoimmune disease among DMARD users.

Patients with autoimmune diseases such as SLE and rheumatoid arthritis (RA) are typically treated with DMARDs to prevent disease flares. DMARDs are a class of medications that treat the underlying autoimmune disease, not just symptoms of these diseases, and include: methotrexate (Rheumatrex, Trexall); anti-malarial drugs such as hydroxycholorquine (Plaquenil); and biologics such as etanercept (Enbrel) or adalimumab (Humira).

"Understanding how DMARD use impacts women with autoimmune disease is important, especially during pregnancy, as previous research found that women with SLE had at least a two-fold increase in preeclampsia risk and women with RA had a two-fold increase of this severe pregnancy complication," said lead author Kristin Palmsten from Harvard School of Public Health.

To compare risk of preeclampsia in DMARD users, researchers used the British Columbia healthcare utilization database to identify 306,831 pregnancies in 224,827 women with and without autoimmune disease. Women who filled a prescription for DMARDs, non-steroidal anti-inflammatory drugs (NSAIDs), or corticosteroids before pregnancy were considered "past users" and those who filled these prescriptions both before and during the first 20 weeks of pregnancy were designated "continuous users."

Results show that pregnant women in this study had a median age of 30 years, with 0.3% of women diagnosed with RA or psoriasis; 0.2% with inflammatory bowel disease (IBS); 0.1% with SLE, and another 0.1% with multiple sclerosis (MS). Within this cohort, researchers found that 1,226 (0.4%) women used a DMARD in the year prior to pregnancy, while only 414 (0.1%) women used DMARDs while pregnant. The occurrence of preeclampsia in past DMARD, steroid, NSAIDs users was 2.3%, 2.7%, and 2.9%, respectively.

Further analysis indicates that a continuous DMARD user was at greater risk of preeclampsia (relative risk (RR) =2.29; not statistically significant) compared to past DMARD users. Preeclampsia risk was greater in women with SLE (RR=2.02) compared to women without an autoimmune disease. Restricting the analysis to women with autoimmune diseases weakened the preeclampsia relative risk in DMARD users.

Ms. Palmsten concludes, "Our findings uphold previous evidence, showing that women with SLE had twice the risk of developing preeclampsia. The statistically non-significant increase in preeclampsia risk found for DMARDs was reduced when we more fully accounted for the potential effect of the autoimmune diseases, suggesting that the underlying disease or severity of the disease was likely contributing to the increased risk of preeclampsia among DMARD users." The authors

advise that further studies are needed to confirm their findings, and research should focus on DMARD use and preeclampsia in women with specific autoimmune diseases.

More information: *Arthritis Care and Research*; Published Online: October 29, 2012 DOI: 10.1002/acr.21807.