

# Angiogenic Imbalances Predict Preeclampsia in SLE

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BOSTON — Alterations in circulating antiangiogenic protein levels in pregnant women with lupus and antiphospholipid antibody syndrome may predict preeclampsia, a pregnancy complication for which they are at increased risk, according to data presented at the annual meeting of the American College of Rheumatology.

The findings suggest that identification of angiogenic imbalances early in gestation and subsequent interventions targeting the inflammatory pathways that trigger the imbalances could potentially reduce the incidence of preeclampsia in women with these autoimmune conditions, reported Dr. Jane E. Salmon of the Hospital for Special Surgery in New York.

In a nested case-control study of pregnant women with systemic lupus erythematosus (SLE) and/or antiphospholipid antibody (APLA) syndrome, women with elevated levels of circulating soluble fms-like tyrosine kinase 1 (sFlt-1) and soluble endoglin (sEng) at mid-pregnancy were at significantly increased risk for preeclampsia later in pregnancy, compared with age- and ethnicity-matched disease control patients who had SLE and/or APLA but not preeclampsia, reported Dr. Salmon.

**Identifying such imbalances early in gestation and subsequently targeting the pathways that trigger them could potentially reduce the incidence of preeclampsia.**

and/or an APLA-positive woman who didn't develop preeclampsia and to a healthy control who had neither autoimmune disease or pregnancy complications, Dr. Salmon explained.

Compared with the healthy controls, elevations in levels of circulating sFlt-1 were observed in all of the autoimmune patients as early as 12-15 weeks' gestation. Additionally, the rate of increase in levels of that protein throughout pregnancy was significantly higher in patients who went

on to develop preeclampsia, and it was higher in all patients with autoimmune disorders, compared with healthy controls, reported Dr. Salmon. Among the patients with autoimmune disorders, elevated levels of sFlt-1 and sEng at 20-23 weeks' gestation were independently associated with increased risk of developing preeclampsia, she noted.

The findings indicate that sFlt-1 and sEng are biomarkers predictive of preeclampsia in patients with lupus

and/or APLA and that "imbalances [in the levels of these biomarkers] early in pregnancy increase the vulnerability of these patients to preeclampsia," said Dr. Salmon. "Because inflammatory mediators trigger production of antiangiogenic factors, early intervention to block specific pathways of inflammation could prevent angiogenic imbalance in lupus pregnancies at risk for preeclampsia."

Dr. Salmon reported having no financial disclosures relative to this presentation. ■

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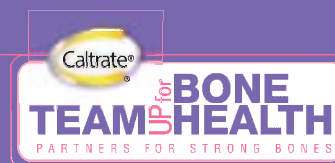
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