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Pre-Eclampsia: Early Urine Test Predicts Pregnancy Complication

Pre-eclampsia affects approximately 5% of pregnancies and can pose serious health concerns for mother and child. Some patients develop severe disease associated with kidney, liver, and neurological problems. The condition is characterized by high blood pressure and the loss of protein in the urine during the second half of pregnancy.

Matt Hall, MBChB (Leicester General Hospital and the University of Leicester, United Kingdom) and colleagues conducted a study to see, if analyzing the protein content of pregnant women's urine, before the 20th week of pregnancy might predict pre-eclampsia. The researchers recruited 145 patients from a high-risk obstetric outpatient clinic; 11 (7.6%) developed pre-eclampsia, 10 at >37 weeks into the pregnancy and one at 31 weeks. An analysis of urine samples obtained prior to week 20 revealed a panel of 5 proteins that correctly predicted pre-eclampsia with 92% accuracy. "Our study suggests that changes in levels of certain proteins in the urine early in pregnancy can predict who will develop pre-eclampsia," said Dr. Hall. "Early identification will allow focused monitoring of those women and timely delivery of their babies, as well as reassurance for women at low risk."

Study co-authors include Paul Bosio, MD (Sandwell and West Birmingham NHS Trust, in Birmingham, the United Kingdom), Jonathan Barratt, MD, PhD; Nigel Brunskill, MD, PhD; Susan Carr MD (Leicester General Hospital and the University of Leicester); and Karen Molyneux, PhD (University of Leicester, in the United Kingdom).

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The study abstract, "An Early Pregnancy Urinary Proteomic Fingerprint Accurately Predicts Later Pre-Eclampsia," [F-FC223] was presented as an oral presentation on November 19, 2010 at the Colorado Convention Center in Denver, CO.

Editor's Note: This article is not intended to provide medical advice, diagnosis or treatment.