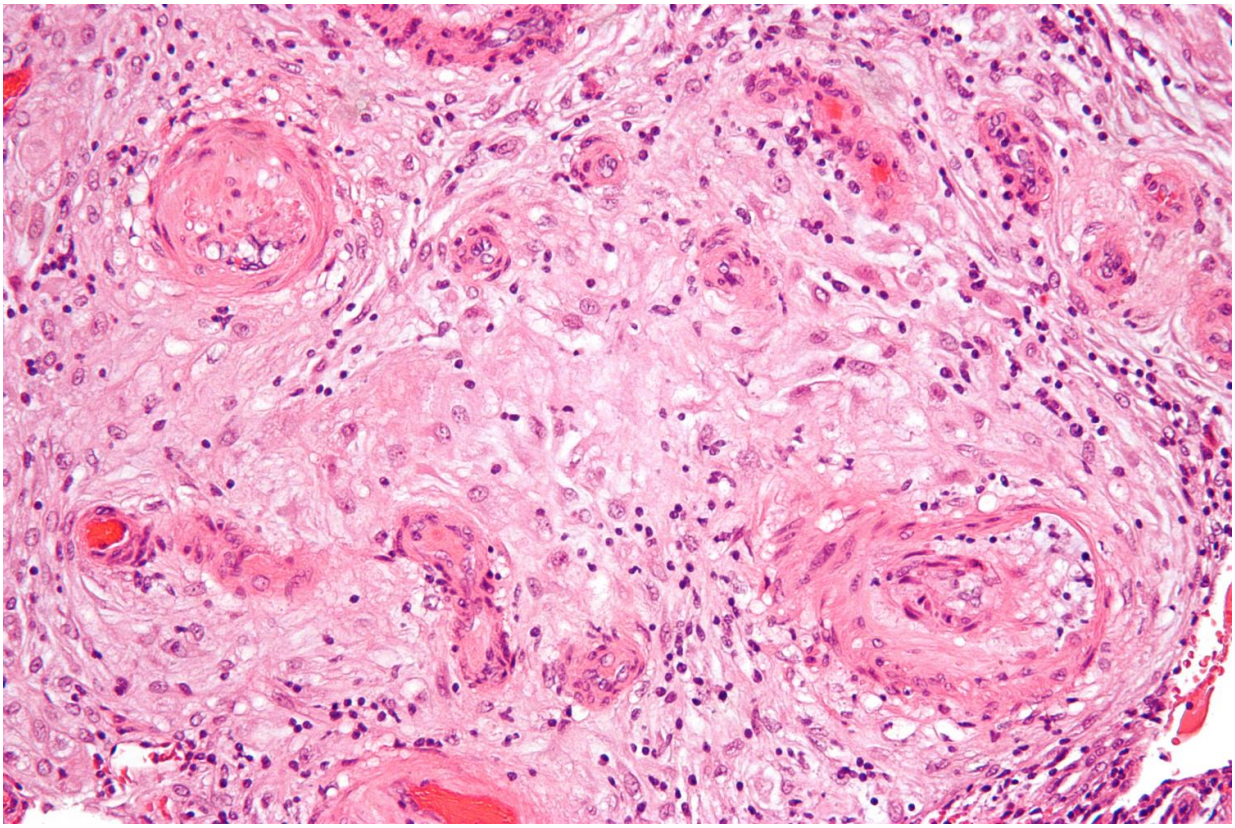
Genetic signature may identify mothers at risk for preeclampsia

March 17 2020



High magnification micrograph of hypertrophic decidual vasculopathy, as seen in pregnancy-induced hypertension. Credit: Wikipedia

Researchers at Baylor College of Medicine have identified a genetic signature combining certain maternal and fetal gene variants that are

associated with a higher risk of preeclampsia.

Preeclampsia is a pregnancy complication resulting from sudden elevation in blood pressure that may lead to maternal organ dysfunction and fetal growth restriction. If the condition is not controlled, eclampsia, a serious disorder that causes life-threatening seizures, may follow. Ten to 15 percent of maternal mortality is associated with preeclampsia and eclampsia.

What causes preeclampsia is not known, and the condition is difficult to predict, but in this new study published in *Scientific Reports*, Drs. Manu Banadakoppa, Meena Balakrishnan and Chandra Yallampalli in the Department of Obstetrics & Gynecology at Baylor discovered that a particular combination of two maternal and one fetal gene variants seems to predispose women to preeclampsia. The genes are linked to the complement system, an important part of the body's immune defense against infection that also can drive inflammation. This genetic signature of the condition could be used in the future to identify women at risk and prepare in advance to manage their condition.

More information: Manu Banadakoppa et al, Common variants of fetal and maternal complement genes in preeclampsia: pregnancy specific complotype, *Scientific Reports* (2020). DOI: 10.1038/s41598-020-60539-9

Provided by Baylor College of Medicine