

New biomarker may help diagnose ectopic pregnancies

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Researchers may have identified a promising novel diagnostic biomarker for ectopic pregnancy, according to a study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism* (*JCEM*). In the western world, deaths from ectopic pregnancy are not common but in the developing world one in ten women who are admitted with an ectopic pregnancy die.

An ectopic pregnancy is an abnormal pregnancy that occurs outside the uterine cavity. Most ectopic pregnancies take place in the Fallopian tube but implantation can also occur in the cervix, ovaries and abdomen. Ectopic pregnancy is associated with severe pelvic pain and the need for a blood transfusion. The condition is a leading cause of pregnancy-related first trimester deaths.

"Finding a simple and cost-effective test using biomarkers to diagnose ectopic pregnancies would have a significant impact on reducing emotional distress and unnecessary deaths," said Andrew Horne, PhD, of the University of Edinburgh in the United Kingdom and lead author of the study. "Our study shows that placental growth factor (PIGF), a key molecule in the formation of blood vessels, is a promising novel diagnostic biomarker for ectopic pregnancies."

In this study, researchers obtained trophoblast samples from 40 pregnant women aged 18-45 years undergoing surgical termination of pregnancy, evacuation of uterus for embryonic missed miscarriage or surgery for tubal ectopic pregnancy. Trophoblasts are specialized cells of the

placenta that play an important role in embryo implantation. Serum PIGF levels were measured in all trophoblast samples and researchers found that PIGF was reduced in samples from tubal ectopic pregnancies when compare to intrauterine pregnancies.

"The inevitable multiple visits and tests that are currently necessary to diagnose ectopic pregnancies are a sizable expense for health services," said Horne. "Serum PIGF may be the answer to the urgent unmet need for a [biomarker](#) for tubal ectopic pregnancy that allows quicker diagnosis and facilitates earlier and less invasive treatment. Large-scale studies are now required to determine its clinical utility."

More information: The article, "Placental growth factor: a promising diagnostic biomarker for tubal ectopic pregnancy," will appear in the January 2011 issue of *JCEM*.

Provided by The Endocrine Society

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