

Psychiatrie

**Blood Test May Help Identify Fetal Alcohol Spectrum Disorders**

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SAN DIEGO -- November 9, 2016 -- Researchers have identified a blood test that may help predict how severely a baby will be affected by alcohol exposure during pregnancy, according to a study published today in the journal PLOS ONE.

The findings could facilitate early intervention to improve the health of infants and children who were prenatally exposed to alcohol.

Despite widespread prevention guidelines, drinking during pregnancy still occurs, in part because roughly half of pregnancies in the United States are unplanned and many women may not realise that they need to stop consuming alcohol before harm occurs.

“It’s a huge problem, but we might not realise the full scope because infants born with normal-looking physical features may be missed, making many cases difficult to diagnose early,” said Rajesh Miranda, PhD, Texas A&M College of Medicine, College Station, Texas.

Seeking to develop a predictive test using biomarkers, researchers looked at birth outcomes for 68 pregnant women enrolled in the study at 2 perinatal care clinics in western Ukraine. The team obtained detailed health and alcohol consumption histories and second and third trimester blood samples from each woman.

The results indicated that moderate to high levels of alcohol exposure during early pregnancy resulted in significant differences in some microRNAs (miRNAs) in maternal blood. These differences were particularly notable in mothers whose infants showed some physical or neurobehavioral signs of alcohol effects in the first 12 months of life.

“Collectively, our data indicate that maternal plasma miRNAs may help predict infant outcomes and may be useful to classify difficult-to-diagnose FASD [fetal alcohol spectrum disorders] subpopulations,” said Dr. Miranda.

Part of the reason FASD can be difficult to diagnose is because infants with similar amounts of prenatal alcohol exposure may have vastly different outcomes.

“Although it is generally true that binge-drinking during pregnancy presents the greatest risk, not all women who consume substantial amounts of alcohol in pregnancy will have a child who is clearly affected,” said Christina Chambers, PhD, University of California San Diego School of Medicine, San Diego, California. “That's why we examined specific biomarkers in the mother's blood in the second and third trimester of her pregnancy to determine if they are useful in identifying children who could benefit from early interventions.”

The scientists said their next steps will include repeating the investigation in other, larger samples of mothers and infants, and determining if these early markers are predictive of longer term developmental outcomes for children exposed to alcohol.

“If we can reset developmental trajectories earlier in life, it is a lot easier than trying to treat disabilities later in life,” said Dr. Miranda. “We hope this work will lead to a test that can allow healthcare providers to identify the mothers and infants most at risk and provide them with extra care for the best outcome possible.”

SOURCE: University of California at San Diego