Study finds preterm labor diagnostic markers not universal, diagnosis and interventions should not be generalized

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In a study to be presented today at the Society for Maternal-Fetal Medicine's annual meeting, The Pregnancy Meeting, in Dallas, Texas, researchers will report findings that indicate that preterm birth interventions should be tailored for underlying risk factors and pathways.

"Pathophysiologic pathways leading to preterm labor and delivery are not the same in each and every subject and vary based on an individual's risk exposure. This can include her race, type of infectious agent or bacterial pathogen, as researched in this study, or any other risk factor like BMI, nutritional deficiencies, behavioral issues, various stressors, genetic, and epigenetic factors," said Ramkumar Menon, PhD, with the University of Texas Medical Branch, Obstetrics & Gynecology, Galveston, Texas, and the principal investigator of this study, which was funded by the Eunice Kennedy Shriver National Institute of Child Health & Human Development. "Preterm labor diagnostic markers are not universal markers. Therefore, diagnosis and interventions should be tailored to a subject's own risk factors and not generalized."

For the study, Diversity in Fetal Membrane Cytokine Signature to Stimulation by Bacterial Infections Associated with Preterm Birth, Menon and his colleagues tested normal term fetal membranes from African-American and Caucasian women exposed to eight intraamniotic infection pathogens associated with spontaneous preterm birth for differential immune response and racial disparity.

The findings indicate that inflammatory mediators of preterm birth pathways are distinct in response to different bacterial pathogens, inflammation is not a generalizable condition in preterm birth and many of the inflammatory mediators do not induce uterotonic activities, and racial disparity is associated with fetal immune response to different pathogens associated with preterm birth.

In addition to Menon, the study was conducted by Geeta Bhat, University of Texas Medical Branch, Obstetrics & Gynecology, Galveston, Texas; Cayce Drobek, Lina Brou and Stephen Fortunato, the Perinatal Research Center, Maternal-Fetal Medicine, Nashville, Tenn.; George Saade, University of Texas Medical Branch, Obstetrics & Gynecology, Galveston, Texas; and Morgan Peltier, Winthrop University Hospital, Department of Obstetrics and Gynecology, Mineola, N.Y.

Provided by Society for Maternal-Fetal Medicine