SMFM: Inhibin A May Predict Stillbirth

By Nancy Walsh, Staff Writer, MedPage Today
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MedPage Today Action Points

- Note that this study was published as an abstract and presented at a conference. These data and conclusions should be considered to be preliminary until published in a peer-reviewed journal.

- Explain that a study of serum markers taken during the second trimester of pregnancy found that elevated Inhibin A was associated with an increased risk of stillbirth.

- Note that this marker remained significant even after controlling for pre-pregnancy risk factors.

Review

SAN FRANCISCO -- Elevated levels of the serum marker inhibin A detected during the second trimester significantly increased the risk of stillbirth, according to a prospective, population-based study.

The study, which included almost 400 women who had experienced stillbirths, found that of the analytes included in second trimester screening for aneuploidy, only inhibin A was associated with stillbirth (adjusted OR 5, 95% CI 2 to 12.6, *P*=0.0008), said George Saade, MD, of the University of Texas in Galveston.

"The association is strong and may prove to be useful in risk assessment," Saade reported at the annual meeting of the Society for Maternal-Fetal Medicine here.

"In 2006 the stillbirth rate -- deaths occurring after 20 weeks' gestation -- was 6.2 per 1,000 births, and a frequently overlooked fact is that since 2000 the rate of stillbirth has almost equaled the rate of infant mortality," he added.

A number of studies have looked at the second trimester markers of aneuploidy, typically used to screen for neural tube defects and trisomy 21, and adverse pregnancy outcomes.

However, previous studies have been limited by not being population based and

having only small numbers of stillbirths, Saade said.

To explore the problem of stillbirth more fully, he led a study sponsored by the Eunice Kennedy Shriver National Institute of Child Health and Human Development that included 59 hospitals in five geographic areas of the country.

Together, these hospitals averaged 80,000 births per year.

This analysis included data for 157 of 399 stillbirths delivered after 24 weeks and 626 of 1,756 live births delivered after 24 weeks for which second trimester screening test results were available.

On univariate analysis, elevations of these markers more than two multiples of the median were associated with stillbirth:

- Maternal serum alpha-fetoprotein, OR 2.8 (95% CI 1.4 to 5.3)
- Human chorionic gonadotropin, OR 2.1 (95% CI 1.2 to 3.7)
- Inhibin A, OR 6.9 (95% CI 3.4 to 14)

The fourth component of the so-called quadruple screen, unconjugated estriol, was not significantly associated.

The combination of elevated maternal serum alpha-fetoprotein plus inhibin A was associated with an odds ratio of 16.71, Saade said.

On multivariate analysis after adjustment for pre-pregnancy risk factors, however, the association with serum alpha-fetoprotein was lost and only inhibin A remained significant.

When the analysis excluded anomalous fetuses and multiple gestations, the likelihood ratio for stillbirth with elevated inhibin A was 15.77 (95% CI 2.79 to 89.15, *P*=0.0026).

In the future, Saade said that he and his colleagues from the Stillbirth Collaborative Research Network plan to further explore the causes of stillbirth.

The investigator reported no conflicts of interest.

Primary source: Society for Maternal-Fetal Medicine
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Saade G "Risk of stillbirth according to second trimester aneuploidy screen result in the Stillbirth Collaborative Research Network: a population-based study" *Am J Obstet Gynecol* 2011; Abstract 62.