Medical Xpress

Subtle thyroid problem triples the risk of placental separation in birth

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Pregnant women with antibodies that can indicate early thyroid disease are three times as likely to have placental separation during labor, researchers at UT Southwestern Medical Center have found in a study of more than 17,000 women.

The findings, however, do not indicate that there would be any benefit from routinely screening pregnant women for thyroid problems, the researchers said. The study appears in the August issue of Obstetrics *and* Gynecology.

"Our work shows a link between anti-TPO antibodies and placental abruption, but that does not necessarily mean that thyroid supplementation would improve the health of the women or babies," said Dr. Brian Casey, professor of obstetrics and gynecology at UT Southwestern and the study's co-lead author.

The thyroid, a small butterfly-shaped gland at the base of the throat, produces hormones that regulate many of the body's metabolic functions. Thyroid disorders can disrupt sleep, mood and mental sharpness, and cause weight gain or loss.

The thyroid uses an enzyme called thyroid peroxidase (TPO) to incorporate iodine into thyroid hormones. Table salt often contains added iodine so people can produce adequate levels of thyroid hormones.

TPO function is disrupted in some autoimmune diseases, when the body creates antibodies against it. As a result, hormone levels decrease and the body's metabolism slows. But when antibody levels are still low, the thyroid can sometimes compensate and produce normal amounts of hormone.

In the current study, the researchers took samples of serum - the clear, liquid fraction of blood - from women before 20 weeks of pregnancy, and compared the levels of anti-TPO antibodies with the mothers' and babies' health after birth. Only singleton births were included in the study.

Almost 6 percent of the 17,298 women (1,012 participants) tested positive for the anti-TPO antibody, the researchers found. Ethnicity affected the rate: 8.4 percent of white women were antibody-positive, compared to 6.1 percent of Hispanic women and 2.6 percent of African-American women. The antibody-positive women had normal levels of thyroid hormones.

The researchers found that the rates of birth complications were the same between the antibody-positive and -negative groups, except for placental abruption, a rare but potentially fatal complication in which the placenta separates from the uterus too early. Abruption occurred in 1 percent of antibody-positive women, compared to 0.3 percent of antibody-negative women.

Antibody status made no difference to the health of the babies, including their birth weight, rates of admission to intensive care and so on, the researchers found.

UT Southwestern researchers are participating in a national study, led by Maternal-Fetal Medicine Units Network of the National Institutes of Child Health and Human Development (NICHD), to test whether supplementation with thyroid hormones can improve pregnancy outcomes, Dr. Casey said.

In addition, UT Southwestern researchers are testing for possible relationships between other thyroid-related measurements and birth outcome.

Provided by UT Southwestern Medical Center