Proper functioning of the placenta—the life support system for the fetus—is crucial for a healthy pregnancy and healthy fetus. When placenta disorders arise, so does the likelihood of neurologic abnormalities in the fetus. Specifically, two population-based studies have shown an association between placental infarction and cerebral palsy (CP). In an attempt to confirm the association of placental infarcts with an increased risk of adverse events (eg, perinatal death, neurologic abnormality detected in the newborn period, or later CP), Dr Eve Blair, from the Center for Child Health Research at the University of Western Australia, the Telethon Institute for Child Health Research, and the School of Paediatrics and Child Health in Perth, Western Australia, and colleagues conducted a prospective case-control investigation within a population-based study of placental infarction identified on macroscopic examination.

Blair and colleagues collected data from all births that occurred between 1980 and 1995 in Western Australia using the midwife’s statutory “notification of birth attended” form that is filed with the Western Australian Department of Health. (In Western Australia, midwives attend every birth; hence, it is their job to complete this form.) The researchers identified 363,747 singleton deliveries that occurred at least 35 weeks’ gestation. The controls consisted of 491 neonatal survivors who were not on the CP register and had a description of the placenta available; cases (n = 445) also had placenta description available. The cohort also included 688 neonatal deaths and 993 intrapartum stillbirths.

The researchers found that placental infarcts were associated with adverse outcomes, with placenta infarcts occurring in 2.0% of control infants, in 4.4% of cases of perinatal deaths, and in 5.2% of those infants who were later diagnosed with CP. Moreover, 8.4% of the children with the spastic quadriplegic subtype of CP had placental infarction. While maternal age was comparable among the groups without infarcts, mothers with infarcts tended to be younger than those without infarcts, and mothers with infarcts and whose infants had CP were statistically significantly older.

When looking at preeclampsia beginning no earlier than 30 weeks’ gestation, Blair and colleagues found that preeclampsia was strongly associated with infarction in control patients and in cases of deaths but less so in cases of children who developed CP. Interestingly, significantly more mothers without placental infarction whose infants later developed CP had preeclampsia as compared to mothers in the control group.

The researchers concluded that their study does indeed show an association between macroscopically described placental infarcts and increased risk of perinatal death or adverse neurologic outcomes in infants (encephalopathy in the newborn, later-diagnosed CP). They further found that fetal growth restriction and placental infarction was independently related to risk of CP.

While the results seem noteworthy, physicians on OBGYN.net are skeptical of the study’s conclusions and implications. One physician, for instance, said it was an “interesting observational study” but cautioned it would “muddy the waters and provide the paid ‘experts’ with ammunition for either the good or bad side.” Meanwhile, another clinician commented, “[The study needs larger numbers before I would consider significance.”

Want to see what else your colleagues are saying? Join in on the conversation by visiting the forum
Study Shows Link Between Placental Infarction and Negative Outcomes—Should Clinicians Be Concerned?

Published on Diagnostic Imaging (http://www.diagnosticimaging.com)


More Information

Image: Placental Pathology: Placental Infarct
Image: Antiphospholipid Antibody Syndrome: Placental Infarction

Related Content
Placental Localization by Transperineal Sonography in Antepartum Hemorrhage
The Value of 3D Ultrasound Measurement of Placental Volume in Prediction of IUGR

References:
Reference

Source URL:
http://www.diagnosticimaging.com/fetal-monitoring/study-shows-link-between-placental-infarction-and-negative-outcomes%E2%80%94should-clinicians-be-concerned

Links: