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Hospital studies novel approaches to care of chorioamnionitis-exposed infants

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A children's hospital has found it could manage well-appearing chorioamnionitis-exposed (CE) infants without separating them from their mothers or unnecessarily exposing them to antibiotics and laboratory tests.

Chorioamnionitis, also known as intraamniotic infection, is diagnosed in 3% to 6% of women during labor. Because it is a major risk factor for early-onset sepsis, clinicians often quickly begin antibiotics and laboratory testing.

However, researchers sought to look at other approaches since incidence of early-onset sepsis is low. They embarked on a two-phase quality improvement initiative at Lucile Packard Children's Hospital Stanford.

In the first phase documented last year, the hospital reduced antibiotic use by 88% in CE infants at least 34 weeks' gestation who appeared healthy by using a clinical examination approach. For two hours, these infants had skin-to-skin time with their mothers and then were admitted to the neonatal intensive care unit (NICU) for clinical monitoring for 24 hours. They did not receive antibiotics or laboratory testing unless they began to develop symptoms of illness.

In phase 2, researchers aimed to build on this approach while limiting mother-child separation. They documented the findings in "Management of Chorioamnionitis-Exposed Infants in the Newborn Nursery Using a Clinical Examination-Based Approach" (Joshi NS, et al. *Hosp Pediatr*. March 4, 2019, http://bit.ly/2tPxGpq).

In this phase, well-appearing CE infants of at least 35 weeks' gestation were clinically monitored in couplet care instead of the NICU. They were examined by a physician at birth, then a nurse in the delivery room every 30 minutes for two hours. Those who were healthy continued to be monitored by a nurse every four hours while in couplet care. Only those who developed signs of illness underwent laboratory testing and antibiotic treatment.

Among 319 well-appearing CE infants in phase 2, about 7% underwent sepsis laboratory testing and just under 5% received antibiotics, according to the study. Roughly 92.5% were able to stay with their mothers.

"Potential benefits include promotion of bonding, reduced maternal stress, better thermoregulation, and establishment of breastfeeding," authors wrote

Looking at all infants of at least 34 weeks' gestation who were born at the hospital during the project, the team found those exposed to ampicillin dropped from 12% to 5%. Sepsis lab testing declined from about

17% to 8%.

Across the two phases, only one of the 596 CE infants had culture-positive early onset sepsis, a risk of 1.7 per 1,000. Among all 12,901 infants born at least 34 weeks' gestation, five were culture positive, a risk of 0.39 per 1,000 live births.

Authors of a related commentary noted the benefits of clinical monitoring used in the study, but said it requires time and effort. In addition, if treatments are started later, they aren't as effective. The study, they said, "provides some reassurance."

"Ultimately, clinicians should review the evidence … incorporate local contextual and practice conditions, and develop a local guideline with a strong implementation strategy to ensure consistent practice in their institutions," they wrote.

Resources

- AAP clinical report "Management of Neonates Born at ≥35 0/7 Weeks' Gestation With Suspected or Proven Early-Onset Bacterial Sepsis"
- AAP clinical report "Management of Neonates Born at ≤34 6/7 Weeks' Gestation With Suspected or Proven Early-Onset Bacterial Sepsis"
- American College of Obstetricians and Gynecologists committee opinion "Intrapartum Management of Intraamniotic Infection"