

Can a Risk Score Predict Which Babies Have Invasive HSV Infection?

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This week, *Pediatrics* is early releasing an article by Dr. Andrea Cruz and colleagues on the Pediatric Emergency Medicine

Collaborative Research Committee of the American Academy of Pediatric HSV Study ([10.1542/peds.2021-050052](#)). In this article, the authors describe the results of a 23-center nested case-control study, which they then used to derive a risk score for invasive HSV.

The authors matched 149 infants with HSV with 3 types of controls (season-matched, age-matched, and random) who were ≤ 60 days of age and had a cerebrospinal fluid (CSF) sample collected for culture. They found that invasive HSV infection was independently associated with age, prematurity, seizure prior to arrival at the Emergency Department, ill appearance, abnormal temperature, vesicular rash, thrombocytopenia, and CSF pleocytosis.

The authors then used regression modeling to assign points to each of these variables and create a risk score. They then tested the risk score, using the information available for the infants with invasive HSV that were in the study. They found that using a cut point of ≥ 3 , the risk score had a sensitivity of 95.6%, specificity of 40%, likelihood ratio positive 1.60, and likelihood ratio negative 0.11. In other words, if the score is < 3 , you can be fairly confident that the infant does not have invasive infection. If the score is 3 or higher, you can't be so sure that the infant does have invasive infection.

This risk score will clearly be helpful in risk stratifying our patients. Should we all start using it? In an accompanying commentary, Dr. David Kimberlin from the University of Alabama makes the following points ([10.1542/peds.2021-051018](#)). First, the most important aspect of this risk score is that it helps us to identify

those infants who are at very low risk for invasive HSV infection (with a score of 0-2). Second, the risk score is only for young (<60 days of age) infants with central nervous system or disseminated disease. Third, he agrees with the authors that this risk score needs to be externally validated before it is used on a routine clinical basis.

Even if this clinical score is not quite ready for prime time, I think that reading the article and accompanying commentary will be helpful for the next time that you are evaluating and caring for a young infant who has a possible infection and you are worried about the cause being HSV.

- [Therapeutic Drug Monitoring in Neonatal HSV Infection on Continuous Renal Replacement Therapy](#)
- [Rare Genetic Variants in Immune Genes and Neonatal Herpes Simplex Viral Infections](#)
- [Sacral Myeloradiculitis: An Uncommon Complication of Genital Herpes Infection](#)
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