

Meghan McNeely¹, Maya Roth¹, Peter Joslyn, MD², Staci Olistter, MD², Nicole Freehill, MD³

¹School of Medicine, ²Department of Pediatrics, ³Department of Obstetrics and Gynecology, LSU Health Sciences Center, New Orleans, LA

Introduction

The risk of HSV transmission from mother to neonate is influenced by the maternal infection classification

- Primary vs. recurrent infection
- Genital lesion PCR/culture and HSV-1 and 2 serology

AAP recommendations in an asymptomatic neonate born to a mother with visible genital lesions:

- IV acyclovir should be started in the neonate if maternal HSV classification is unknown or is suggestive of primary infection.
- Acyclovir should not be started if maternal HSV classification is indicative of recurrent infection.

ACOG does not recommend routine HSV screening in pregnancy or routine antepartum genital HSV cultures.

Asymptomatic neonates are often born to mothers with non-classified HSV status, requiring unexpected NICU stays and treatment with acyclovir.

Methods

Mothers with HSV infections in pregnancy between 4/2018-4/2020 identified using ICD-10 codes

87 charts identified for retrospective chart review

Charts assessed for maternal HSV classification, neonatal evaluation, treatment, and length of hospital stay

2 cases of asymptomatic neonates born to mothers with non-classified HSV status and treatment with acyclovir

Case Reports

Case 1:

- A 27-year-old G2P1001 with a history of positive HSV-2 IgG and suspected recurrent HSV genital lesions presented for cesarean section at 41 weeks.
- At the time of delivery, the lesions were crusting and PCR/viral culture were not obtained.
- Due to unknown maternal HSV-1 antibody status, the asymptomatic neonate was evaluated and empiric acyclovir was initiated.
- Maternal serology resulted positive for HSV-2 and negative for HSV-1.
- The neonate received 10 days of acyclovir for presumed maternal first-episode nonprimary HSV-1 exposure.

Case 2:

- A 25-year-old G3P1102 with suspected primary HSV genital lesions presented for cesarean section at 39 weeks.
- PCR/viral culture from the lesions were not obtained.
- The asymptomatic neonate was evaluated and empiric acyclovir was initiated.
- Maternal HSV-1 and HSV-2 IgG antibodies resulted positive indicative of recurrent infection.
- The neonate received 3 days of acyclovir for presumed maternal first-episode nonprimary HSV exposure.

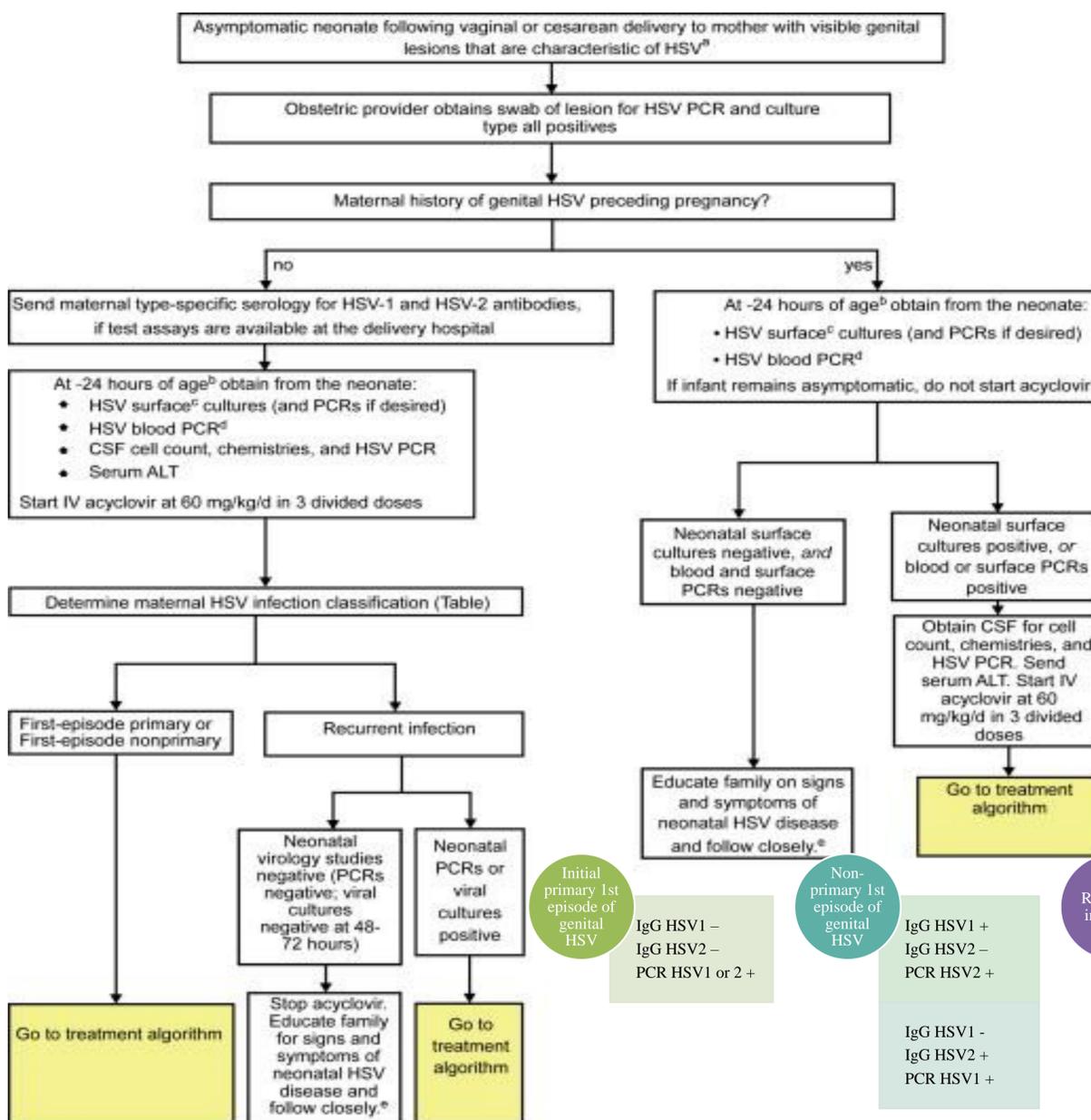
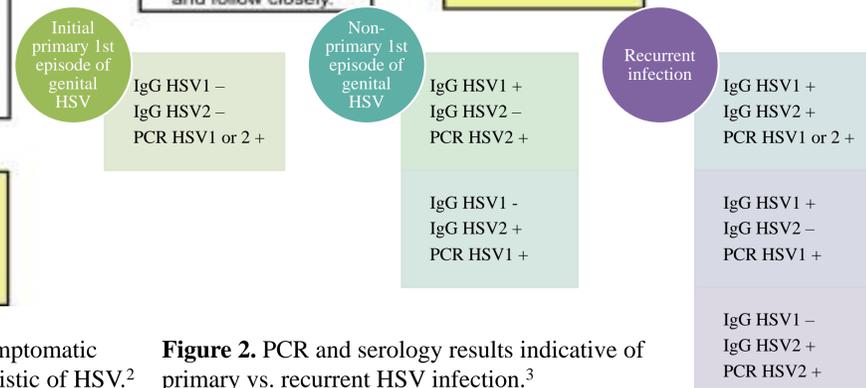


Figure 1. AAP algorithm for the evaluation of an asymptomatic neonate born to mothers with genital lesions characteristic of HSV.²

Figure 2. PCR and serology results indicative of primary vs. recurrent HSV infection.³



Conclusions and Implications

Early classification of mother's HSV status helps neonatologists plan for appropriate workup and treatment of neonates exposed to active herpes lesions.

- Had these mothers' antibody status been known at the time of delivery, the asymptomatic neonates may have been managed as one born to a mother with presumed recurrent infection and not required treated with acyclovir.

Timely, accurate classification of maternal HSV status by obstetric providers may avoid parental dissatisfaction, neonatal acyclovir exposure, iatrogenic harms, and costs of longer neonatal hospital stays.

Adhering to AAP recommendations requires obstetric and neonatal providers to understand and align their approach to this patient population.

Pathogenesis of Neonatal Herpes

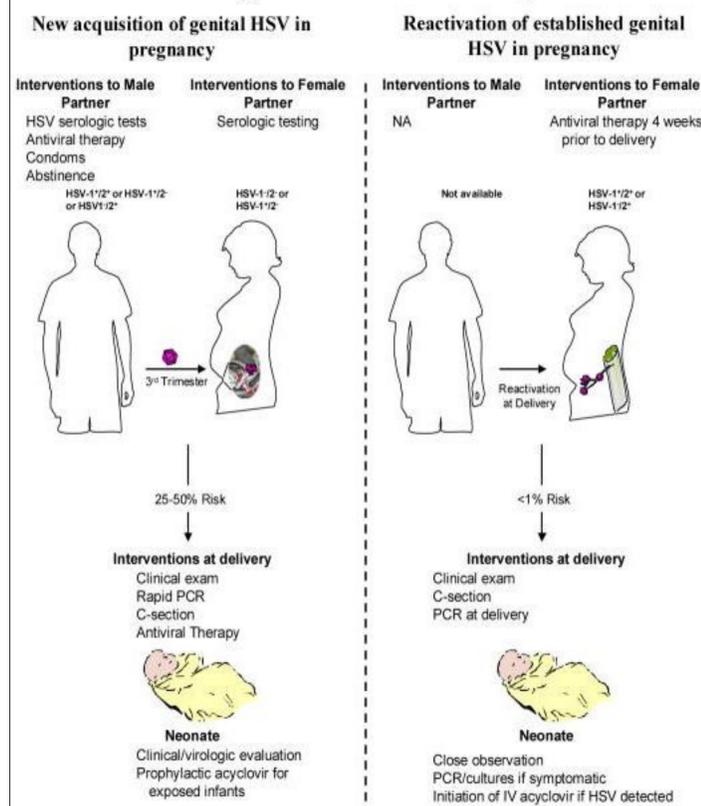


Figure 3. Vertical transmission of primary vs. recurrent HSV.¹

References

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3. Sénat MV, Anselm O, Picone O, Renesme L, Sananès N, Vauloup-Fellous C, Sellier Y, Laplace JP, Sentilhes L. Prevention and management of genital herpes simplex infection during pregnancy and delivery: Guidelines from the French College of Gynaecologists and Obstetricians (CNGOF). *Eur J Obstet Gynecol Reprod Biol.* 2018.