Algorithm for the evaluation of asymptomatic neonates after vaginal or cesarean delivery to women with active genital herpes lesions.

Maternal and Population Risk
-20-25% of adults have genital HSV caused by HSV type 2
-HSV type I accounts for 20-50% of genital HSV in the US
-10% of HSV-2 seronegative women have an HSV-2 seropositive sexual partner
-20-33%of women are seronegative for both HSV-1 and HSV-2; the chance of acquiring either virus during pregnancy is 3.7%
-66% of women who acquire genital HSV during pregnancy are asymptomatic

Risk of Neonatal HSV Infection
- HSV infection of the neonate is relatively uncommon; however, managing potential neonatal exposure is becoming more commonplace
- Infection may be intrauterine(5%), intrapartum (85%), and postpartum (10%)
- Factors influencing transmission
    - -Type of maternal infection (primary vs recurrent)
    - -Maternal HSV antibody status
    - -Duration of rupture of membranes
    - -Integrity of mucocutaneous barriers
    - -Mode of delivery

Terminology of HSV Infection and Disease
-no HSV-1 or HSV-2 antibody present, acquires genital HSV→first-episode primary infection
-pre-existing HSV-1 antibody, acquires HSV-2 genital infection→first-episode nonprimary infection
-pre-existing HSV-2 antibody, acquires HSV-1 genital infection→ first episode nonprimary infection

TABLE 2 Maternal Infection Classification by Genital HSV Viral Type and Maternal Serology[a]

Classification of Maternal Infection	PCR/Culture From Genital Lesion	Maternal HSV-1 and HSV-2 IgG Antibody Status
Documented first-episode primary infection	Positive, either virus	Both negative
Documented first-episode nonprimary infection	Positive for HSV-1	Positive for HSV-2 AND negative for HSV-1
	Positive for HSV-2	Positive for HSV-1 AND negative for HSV-2
Assume first-episode (primary or nonprimary) infection	Positive for HSV-1 OR HSV-2	Not available
	Negative OR not available[b]	Negative for HSV-1 and/or HSV-2 OR not available
Recurrent infection	Positive for HSV-1	Positive for HSV-1
	Positive for HSV-2	Positive for HSV-2

[a] To be used for women without a clinical history of genital herpes.
[b] When a genital lesion is strongly suspicious for HSV, clinical judgment should supersede the virological test results for the conservative purposes of this neonatal management algorithm. Conversely, if in retrospect, the genital lesion was not likely to be caused by HSV and the PCR assay result or culture is negative, departure from the evaluation and management in this conservative algorithm may be warranted.

Guideline for asymptomatic neonates after delivery to women with active genital HSV lesions

Active genital herpes lesions are identified by the obstetrician. Obstetric provider obtains swab of lesion for HSV PCR assay and send for culture. Send maternal type specific serology for HSV-1 and HSV-2 antibodies.

Notify Infant Provider

Maternal history of genital HSV preceding pregnancy?

No

At 24 hours of age obtain the following from the newborn

- HSV blood PCR
- HSV surface cultures and PCR if desired (conjunctivae, mouth, nasophrnx, rectum, skin lesion, and scalp electrode site if present)
- CSF cell count, chemistries, and HSV PCR
- Serum ALT
- If there is rupture of membranes >4-6 hours or the infant is <37 weeks consider immediate evaluation and treatment.
- Start IV acyclovir at 60 mg/kg/day in 3 divided doses
- Consider infectious disease consult

Determine Maternal HSV Infection Classification (table)

First episode primary or first episode nonprimary

Yes

Consult NICU/ID for management

Recurrent infection

PCR or culture positive?

Yes

No

PCR, viral cultures are negative >48 hours- stop acyclovir and consider discharge if other discharge criteria have been met. Family should receive education regarding signs and symptoms of HSV before baby is discharged home.

Yes

If asymptomatic at 24 hours of age do not start acyclovir, obtain from the newborn:

- HSV blood PCR
- HSV surface cultures and PCR if desired (conjunctivae, mouth, nasophrnx, rectum, skin lesion, and scalp electrode site if present)
- If there is rupture of membranes >4-6 hours or the infant is <37 weeks consider immediate evaluation and treatment.
- Any signs or symptoms at any time immediate evaluation and treatment are indicated
- Consider infectious disease consult

PCR or Culture Positive?

No

Negative surface cultures and blood and surface PCR negative

Acceptable to discharge newborn if HSV cultures are negative >48 hours and other discharge criteria have been met. Family should receive education regarding signs and symptoms of HSV before baby is discharged home.

Yes

Surface cultures positive or blood or surface PCRs positive

Consult NICU/ID for CSF (for cell count, chemistries and HSV PCR) and serum ALT. Start Acyclovir 60/mg/kg/day in 3 divided doses.

Algorithms are not intended to replace providers' clinical judgment or to establish a single protocol. Some clinical situations may not be adequately addressed in this guideline. Clinicians should document management variations or plans of care as indicated. *Last revised Mar 2020.. Ref: Guidance on Management of Asymptomatic Neonates Born to Women with Active Genital Herpes Lesions, Pediatrics, Vol 131, no. 2. Feb. 2013.*

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