Evaluation and Management of Possible Neonatal Herpes Simplex Infection (within 4 to 6 weeks of birth)

Key Points:
- Intrauterine infection is rare, but possible.
- Infants born to mothers with active primary HSV infection are at the highest risk of infection.
- Cesarean delivery without preceding rupture of membranes significantly reduces the risk of neonatal HSV.
- Maternal therapy (acyclovir or valacyclovir starting at 36 weeks gestation) reduces viral shedding but does not eliminate the risk of neonatal HSV infection.
- In most cases of neonatal HSV infection, there is no known history of maternal genital HSV.

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**Signs of Possible Neonatal HSV:**
- Vesicular rash (not present in up to 40% of infants with disseminated or CNS disease)
- Lethargy, irritability, seizures or apnea,
- Fever or hypothermia, increased ALT, low platelets, abnormal CSF testing,
- Unexplained coagulopathy, persistent culture-negative sepsis or viral pneumonia
  - **Yes**
  - **No**

**Active maternal oral or genital herpes or genital lesions characteristic of HSV?**
- **Yes**
- **No**

**Vaginal delivery or C-section with ROM?**
- **Yes**
- **Recurrent**
- **C-section without ROM**
- **PCR Positive**
- **Surface and Blood PCR Negative**

**Primary infection or recurrent lesions?**
- **Primary**
- **PCR Positive**
- **Surface and Blood PCR Negative**

**HSV testing * and Antiviral therapy §**
- Obtain ALT and CSF cell count and chemistries
- Initiate contact precautions
  - If positive surface swabs, IV acyclovir at least 14d.
  - If positive blood or CSF, IV acyclovir at least 21d.
  - If HSV is confirmed, consult ID and determine the need for follow-up testing and long-term oral therapy.

**Routine Newborn Care** (regardless of current antiviral therapy or past maternal history). If intrapartum testing was performed, initiate contact precautions, and if testing is found to be positive, proceed down this algorithm.

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*HSV testing (by PCR)*
1. Swab of the conjunctivae, mouth, nasopharynx, anus
2. Swabs of any skin vesicles or scalp electrode sites
3. Blood
4. CSF (only if starting antiviral therapy)

§ Antiviral therapy
1. Acyclovir 20 mg/kg/dose IV q 8h
2. Consult ophthalmology and add a topical antiviral if eye disease is present

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