South Australian Perinatal Practice Guidelines

Genital Herpes Simplex (HSV infection) in pregnancy

Genital herpes simplex virus

- Genital herpes is caused by the herpes simplex virus either type 1 or 2 (HSV-1 or HSV-2) (Langford 2002)
- After infection, the herpes simplex virus (HSV) travels along the nerves connected to the affected area and lies dormant within nerve ganglia. The virus can reactivate later and travel along the nerve to the skin surface on or near the genitals causing a recurrence of tender fluid filled vesicles containing numerous virus

Infection precautions

- Standard precautions

Literature review

- Most genital HSV infections (primary, non-primary, recurrent) are asymptomatic, i.e. most mothers of infants with neonatal HSV disease were previously unaware of their own infection (Palasanthiran et al. 2002)
- HSV may be prominent during pregnancy due to relative maternal immunosuppression in pregnancy (Langford 2002)
- Primary infection in the first trimester is associated with an increased risk of early miscarriage. Continuation of the pregnancy does not lead to congenital abnormalities (Langford 2002)
- Maternal HSV infection at the time of a vaginal birth may lead to severe neonatal disease due to ascending infection after rupture of membranes, however, intrauterine infection accounts for < 5 % of reported cases (Palasanthiran et al. 2002)
- Caesarean section reduces risk of HSV transmission in women shedding HSV at the time of birth, particularly in women with first time infections who are HSV type specific antibody negative (Palasanthiran et al. 2006)

Diagnosis

- Most genital HSV infections are asymptomatic
- HSV-1 genital infection is less likely to recur than genital HSV-2

Primary genital lesion in pregnancy

- Obtain a genital culture to establish the HSV type
- Serology for HSV

Early diagnosis (1st or 2nd trimester)

- HSV genital culture positive
- Seroconversion will have occurred before 30 – 34 weeks of gestation

Antenatal management

Recurrent lesion

- Consider suppressive aciclovir (400 mg orally twice a day until birth) for women who have multiple recurrent lesions

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Early primary infection (before 30 weeks)

- Advise the woman that the risk of shedding HSV during a normal birth is 7 % with an overall risk of ≤ 3 % for neonatal HSV disease (Palasanthiran et al. 2002)
- If no seroconversion has occurred, the overall risk of neonatal HSV disease increases to 30 to 50 % (Palasanthiran et al. 2002)

Late primary infection (after 30 weeks)

- Consider suppressive aciclovir 400 mg orally three times a day after diagnosis until birth
- Advise the woman that caesarean birth is preferable
- Advise the woman with active genital herpes that, if spontaneous rupture of the membranes occurs, caesarean section should be performed as soon as possible, particularly within 6 hours

Intrapartum management

- Ensure the hospital of choice is equipped with facilities for caesarean section
- Avoid fetal scalp electrode, fetal blood sampling and instrumental delivery for all vaginal births

Prior maternal history of genital HSV infection

- Careful speculum examination in early labour
- No active lesions seen
    - Suitable for vaginal birth
- Active lesions seen
    - Rupture of membranes < 6 hours, proceed to caesarean birth
    - If membranes ruptured > 6 hours, proceed to vaginal birth

Diagnosis of primary genital HSV in pregnancy

- Vaginal birth is suitable where seroconversion has occurred before 30-34 weeks of gestation
- Late diagnosis (after 34 weeks) advise caesarean birth

Diagnosis of first genital lesion in labour

- Proceed to caesarean birth unless the membranes have been ruptured for > 6 hours

Postpartum care of the neonate

Low risk

- Recurrent antenatal maternal infection or primary infection with seroconversion before labour and birth
    - Collect surface swabs 24 hours after birth – eye, throat, umbilicus and rectum
    - Collect urine for virus culture
    - Observe for clinical signs of infection

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High risk

- Primary maternal HSV infection close to birth or baby born through birth canal with active maternal HSV disease and no previous history of genital HSV
- Care of the infant at high risk of contracting neonatal HSV disease should take place in a hospital with at least Level V facilities (previously level III)
- Collect surface swabs at birth – eye, throat, umbilicus and rectum
- Collect urine for culture and sensitivity
- Complete blood picture (low platelets)
- Liver function test
- HSV polymerase chain reaction (PCR) on blood
- Commence intravenous aciclovir 20 mg / kg three times a day infused over 1 – 2 hours
    - Disease confined to the skin, eye, and / or mouth: continue for 14 days
    - Encephalitis or disseminated disease: continue for 21 days

Clinical signs of HSV disease

- Vesicular skin lesions or atypical pustular or bullous lesions, especially on the presenting fetal part. An ulcer or ulcers involving the buccal mucosa. Corneal ulcer / conjunctivitis/ keratitis
- Seizures
- Unexplained fever or sepsis with negative blood cultures and not responding to antibiotics
- Low platelets
- Elevated liver enzymes
- Disseminated intravascular coagulation
- Respiratory distress (24 hours after birth)

Management if clinical signs of HSV evident

- Perform lumbar puncture (cerebrospinal fluid analysis, viral culture, HSV polymerase chain reaction [PCR])
- Central nervous system imaging
- Repeat complete blood picture
- Repeat liver function tests

Aciclovir treatment

- The recommended dose is an intravenous infusion of 20 mg / kg three times a day infused over one to two hours
- HSV infection confined to skin, eye, and mouth:
    - Continue aciclovir for 14 days
- Encephalitis:
    - Continue aciclovir for 21 days

Follow up

- Monitor baby for signs of recurrence, eye disease or central nervous system sequelae
- A lumbar puncture should be performed on all infants with suspected HSV relapse to exclude central nervous system involvement

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References

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2. Palasanthiran P, Starr M, Jones C, editors. Management of perinatal infections. Sydney: Australasian Society for Infectious Diseases (ASID); 2002, emendations 2006.
3. Dwyer DE, Cunningham AL. Herpes simplex and varicella-zoster virus infections. MJA 2002; 177: 267-73.
4. SOGC Clinical Practice Guideline. Guidelines for the management of Herpes Simplex Virus in Pregnancy. No. 208, June 2008

Useful web sites

SA Department of Health: You've got what – genital herpes
http://www.dh.sa.gov.au/pehs/Youve-got-what/ygw-genital-herpes.pdf

Royal College of Obstetricians and Gynaecologists – Patient information, genital herpes in pregnancy
http://www.rcog.org.uk/files/rcog-corp/uploaded-files/PIGenitalHerpesinPregnancy2009.pdf

Centers for Disease Control and Prevention. Sexually transmitted diseases. Genital HSV infection
http://www.cdc.gov/STD/treatment/2006/genital-ulcers.htm#genulc3

http://etg.tg.com.au/ref/

Version control and change history

PDS reference: OCE use only

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