South Australian Perinatal Practice Guidelines

Genital herpes simplex (HSV) infection in pregnancy

Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with **consumers** in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

The 'Management of Perinatal Infections' guideline for Herpes Simplex Virus by the Australasian Society for Infectious Diseases 2002, emendations 2006 has been used to inform this practice guideline.

Genital herpes simplex virus

> Genital herpes is caused by the herpes simplex virus either type 1 or 2 (HSV-1 or HSV-2)[1]

> 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

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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[2]
- HSV may be prominent during pregnancy due to relative maternal immunosuppression in pregnancy[1]
- 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[1]
- 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[2]

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 by PCR
- Serology for HSV 1 and 2 IgG and IgM

Early diagnosis (1st or 2nd trimester)

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

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Antenatal management

First episode

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[2]
- If no seroconversion has occurred, the overall risk of neonatal HSV disease increases to 30 to 50 %[2]
- Treat active infection (please refer to *Table 1* for antiviral agents and dosing)

Late primary infection (after 30 weeks)

- 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
- Treat active infection and consider suppressive therapy until birth (please refer to *Table 1* for antiviral agents and dosing)

Recurrent lesion

- Treat severe recurrent episode(s) (please refer to *Table 1* for antiviral agents and dosing)
- Consider suppressive therapy until birth for women who have multiple recurrent lesions

Table 1: Recommended treatment options for herpes simplex virus

Indication	Aciclovir	OR valaciclovir
***Treatment of first episode**	400 mg orally three times a day for 5 days	1,000 mg orally twice a day for 5 days
****Treatment of recurrent episode(s)**	400 mg orally three times a day for 5 days	500 mg orally twice a day for 3 days
Suppression therapy	400 mg orally twice a day until birth	500 mg orally daily OR 1,000 mg orally daily (if more than 9 recurrences per year) until birth
*In the case of treatment for late primary infection (after 30 weeks gestation) consider suppressive therapy until birth **In the case of multiple recurrent episodes consider suppressive therapy until birth		

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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. Send for HSV 1 and 2 PCR
    - Collect urine for HSV 1 and 2 PCR
    - 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

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

Aciclovir treatment

- The recommended dose is an intravenous infusion of 20 mg / kg three times a day infused over one to two hours

(for further information, please refer to PPG neonatal medication guideline – aciclovir)

- HSV infection confined to skin, eye, and mouth:
    - Continue aciclovir for 14 days
- Encephalitis:
    - Continue aciclovir for 21 days

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References

1. Langford KS. Infectious disease and pregnancy. Current Obstet Gynaecol 2002; 12: 125-30.
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
5. Ural SH, Peng TCC. Genital herpes in pregnancy. Medscape [serial online] 2011 Oct [cited 2012 Nov 6]; [11 screens]. Available from URL: http://emedicine.medscape.com/article/274874-overview
6. Electronic Therapeutic Guidelines (eTG). Genital Herpes Simplex virus infection [revised 2009 Feb]. In eTG complete [Internet]. Melbourne: Therapeutic Guidelines Limited; 2012 Mar. Accessed 2013 Feb 18 at URL: http://online.tg.org.au.proxy1.athensams.net/ip/

Useful web sites

SA Department of Health: You've got what – genital herpes
http://www.health.sa.gov.au/pehs/ygw/herpes-pehs-sahealth-2009.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

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Abbreviations

ASID	Australasian society for infectious diseases
et al.	And others
>	Greater than
HSV	Herpes simplex virus
HSV - 1	Herpes simplex virus type 1
HSV - 2	Herpes simplex virus type 2
kg	Kilogram/s
<	Less than
≤	Less than or equal to
mg	Milligram/s
PCR	Polymerase chain reaction
SOGC	The Society of Obstetricians and Gynaecologists of Canada

Version control and change history

PDS reference: OCE use only

Version	Date from	Date to	Amendment
1.0	08 Apr 04	30 Nov 09	Original version
2.0	30 Nov 09	29 Apr 13	Review
3.0	29 Apr 13	current	

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