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Trust Guideline for the Management of Herpes Simplex Virus (HSV) Infection in Pregnancy

A clinical guideline recommended for use Maternity Care

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For:	Herpes Simplex Virus (HSV) Infection in Pregnancy
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Name of document author:	Charles Bircher
Job title of document author:	Consultant Obstetrician
Name of document author's Line Manager:	Anna Haestier
Job title of author's Line Manager:	Chief of Maternity Services
Supported by:	BASHH College Guidelines Dr Jo Evans, Consultant Genitourinary Physician, icash, Norwich
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This guideline has been approved by the Trust's Clinical Guidelines Assessment Panel as an aid to the diagnosis and management of relevant patients and clinical circumstances. Not every patient or situation fits neatly into a standard guideline scenario and the guideline must be interpreted and applied in practice in the light of prevailing clinical circumstances, the diagnostic and treatment options available and the professional judgement, knowledge and expertise of relevant clinicians. It is advised that the rationale for any departure from relevant guidance should be documented in the patient's case notes.

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Trust Guideline for the Management of Herpes Simplex Virus (HSV) Infection in Pregnancy

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This is a Controlled Document

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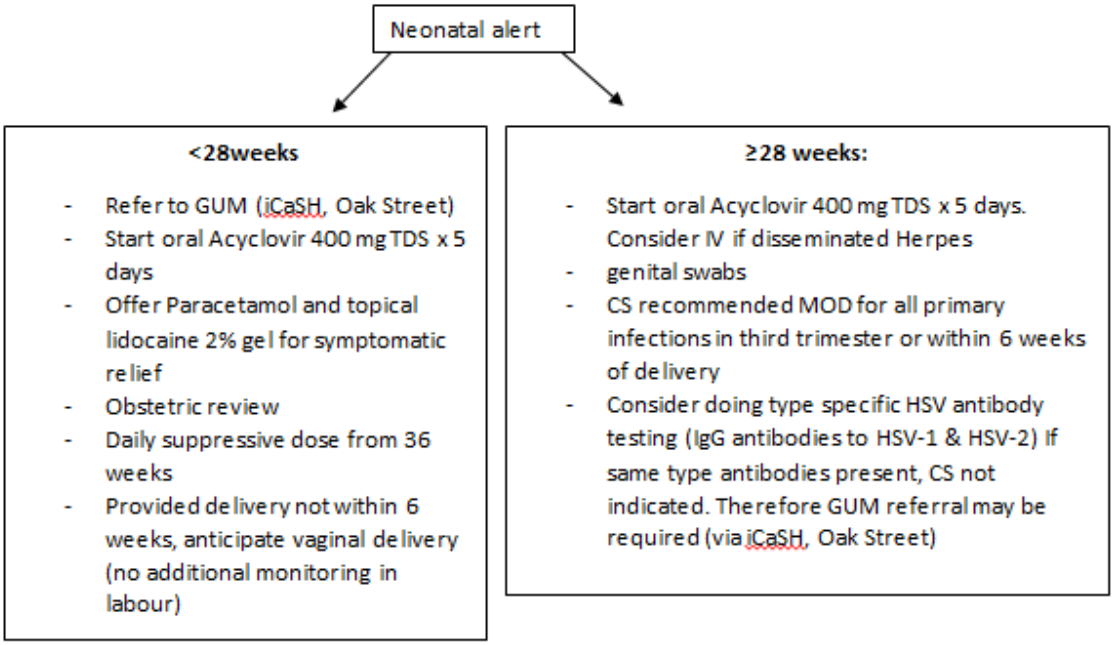
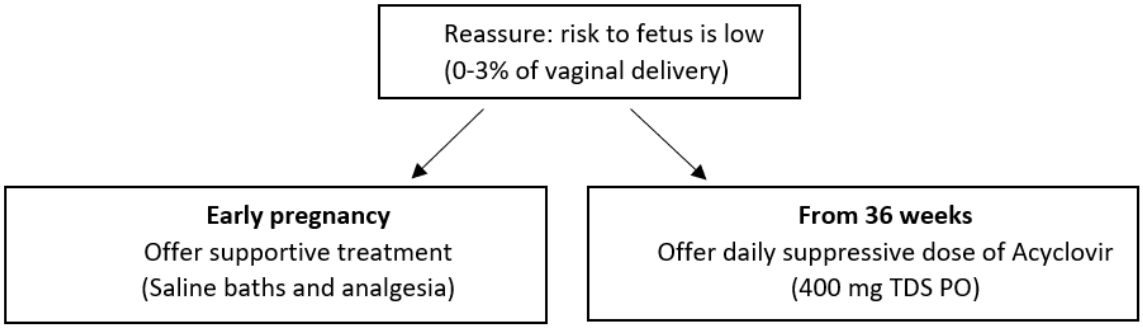
Management pathways

Management of pregnant women with first episode of herpes (i.e. Primary Herpes)

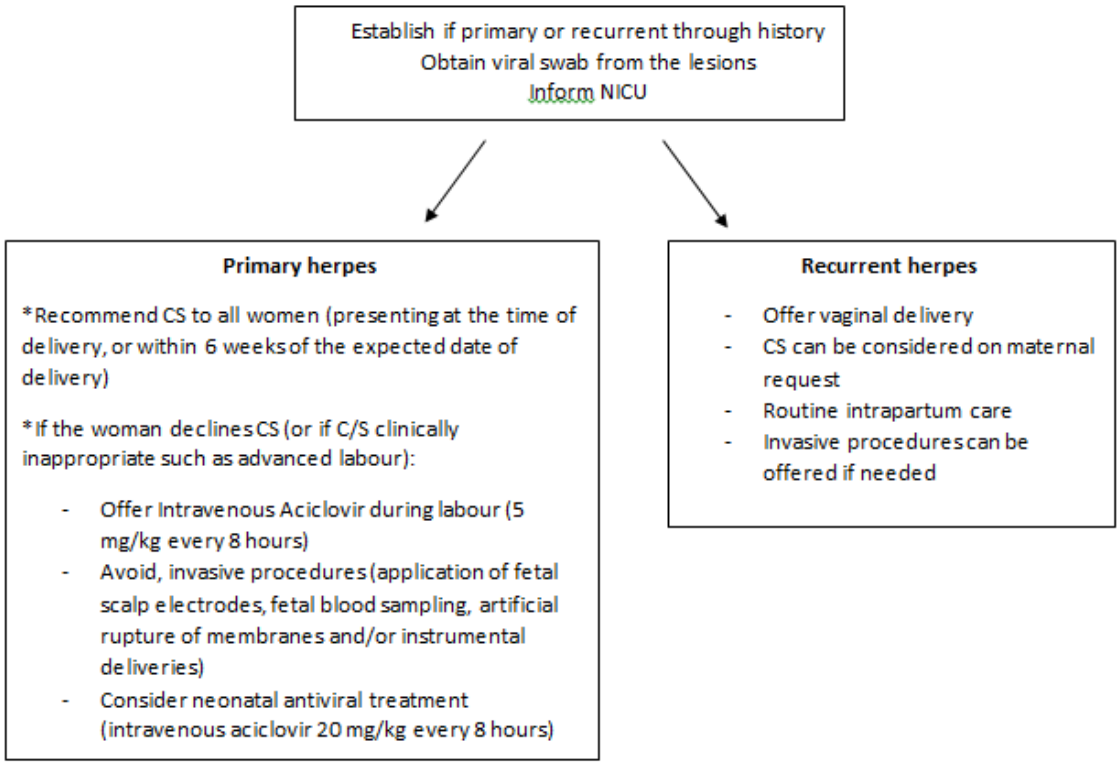


Management of pregnant women with Recurrent Herpes

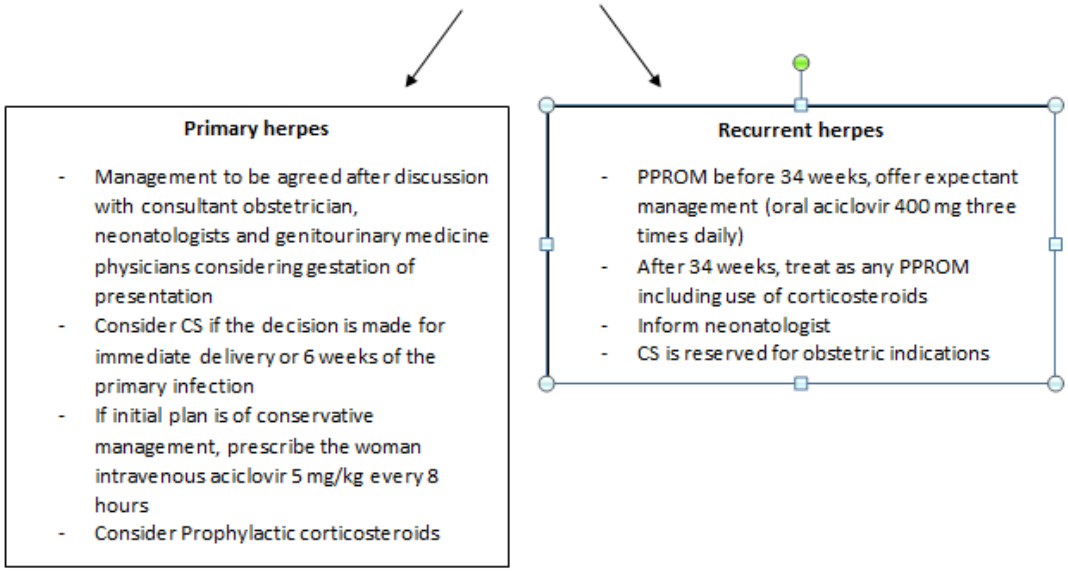


*Vaginal delivery should be anticipated in the absence of other obstetric indications for caesarean section

Management of women with lesions at onset of labour

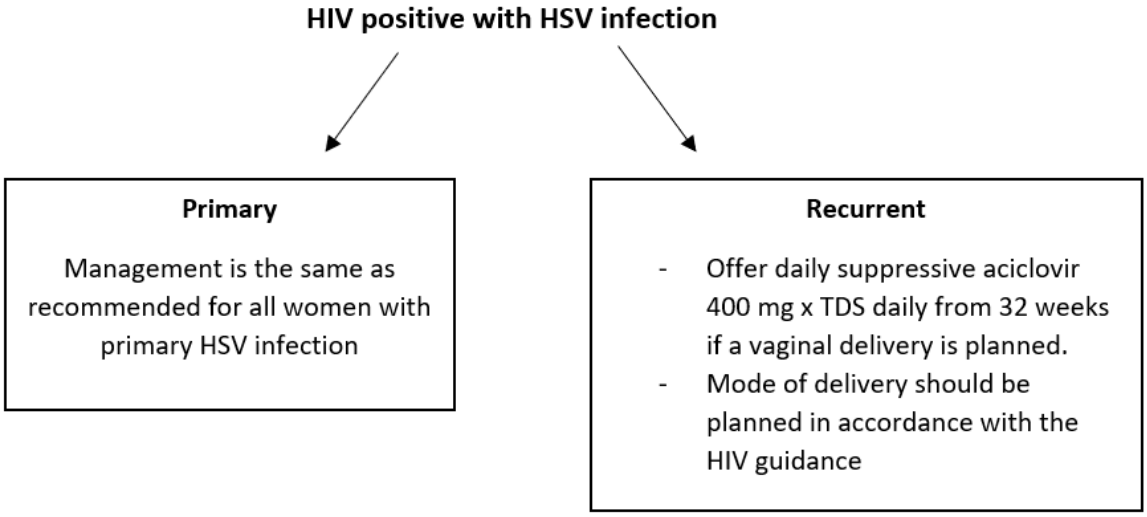


PROM before 37 weeks



* Any women who is known HSV should be advised to report to MMAU if she has PROM/SROM and should be brought in for assessment.

* There is no evidence to guide the management of women with spontaneous rupture of membranes at term, but many clinicians will advise expediting delivery in an attempt to minimise the duration of potential exposure of the fetus to HSV.


HIV positive with HSV infection
Primary
Management is the same as recommended for all women with primary HSV infection
Recurrent
- Offer daily suppressive aciclovir 400 mg x TDS daily from 32 weeks if a vaginal delivery is planned.
- Mode of delivery should be planned in accordance with the HIV guidance

Trust Guideline for the Management of Herpes Simplex Virus (HSV) Infection in Pregnancy

The scope of this guideline is the inpatient and outpatient management of genital herpes simplex virus infection in the antenatal, intrapartum and postnatal periods. This document was produced in accordance with the guidance set out in a joint BASHH and RCOG guideline on the management of herpes in pregnancy issued in October 2014. This national guideline elaborates on the risks to mothers and babies that are touched on in this guideline.

Importance:

Neonatal Herpes is a rare but serious infection with a high morbidity and mortality. 90% of neonatal herpes is perinatally acquired, 5-8% is congenital whilst a few infections are acquired postnatally.

Transmission from the mother to fetus is dependent on:

- the type of maternal infection (primary or secondary)
- transplacental maternal neutralising antibodies
- duration of ruptured membranes before delivery
- use of fetal scalp electrode
- mode of delivery

Primary genital herpes:

This refers to a new infection acquired first time during pregnancy. It can be difficult to distinguish clinically between primary and recurrent genital HSV infections, as in up to 15% of cases where a woman presents with a first episode of clinical HSV infection it will actually be a recurrent infection.

Risks to mother:
The maternal mortality associated with this condition is high. They are at increased risk of more severe and frequent symptomatic recurrent episodes of genital herpes during pregnancy and of asymptomatic shedding of HSV at term. The frequency of transmission in such case is higher (30%-50%) than amongst those who reactivate HSV-2 at delivery (<1%).

Disseminated herpes is a rare condition in adults but more commonly reported in pregnancy, particularly in the immunocompromised. It may present with encephalitis, hepatitis, disseminated skin lesions or a combination of these conditions.

Risks to fetus:
Risk to the fetus is greatest in the third trimester, particularly within 6 weeks of delivery, as viral shedding may persist and the baby is likely to be born before the development of protective maternal antibodies.

Neonatal herpes is classified into 3 groups: localised to skin, eyes or mouth; local central nervous system; and disseminated infection.
Disseminated herpes is more common in preterm infants and occurs almost exclusively as a result of primary infection in the mother.

Recurrent genital herpes:

Recurrent attacks may be more frequent in pregnancy, however is associated with low risk to the fetus. Recurrent herpes at the time of delivery is commonly asymptomatic or unrecognised, but may cause the localised forms of neonatal herpes: both local CNS disease and skin, eye and mouth infection. Transplacentally acquired HSV antibodies do not prevent herpes virus spreading to the brain of the neonate.

Both primary and recurrent herpes may be without symptoms.

Antenatal Care – Primary Herpes

A neonatal alert should be completed for all cases of primary herpes.

First or second trimester acquisition (until 27+6 weeks of gestation)
Antenatal women with suspected genital HSV infection should be referred to a genitourinary medicine clinic:

iCash 1A Oak Street, Norwich, Norfolk, NR3 3AE
Tel: 0300 300 3030

Appointments can be made at the closest clinic, or patients can sit and wait to be seen between 9 and 11am on weekdays.

Clinicians should send swab samples to Virology to confirm the diagnosis by polymerase chain reaction (PCR), advise on management and arrange a screen for other sexually transmitted infections. The swabs are the green and white virology swabs

However, treatment should not be delayed. Management of the woman should be in line with her clinical condition and will involve:

- Oral (or intravenous for disseminated HSV infection) Aciclovir in standard doses of 400 mg three times daily, usually for 5 days). Aciclovir is not licensed for use in pregnancy but is considered safe and has not been associated with an increased incidence of birth defects.
- Paracetamol and topical lidocaine 2% gel can be offered as symptomatic relief
- Any women who had first of second trimester infection should be offered daily suppressive Aciclovir 400 mg three times daily from 36 weeks of gestation to reduce HSV lesions at term and hence the need for delivery by caesarean section

Women with suspected genital HSV infection who are having midwifery-led care should be referred for review by an obstetrician, ideally after review by a genitourinary medicine physician.

Providing that delivery does not ensue within the next 6 weeks, the pregnancy should be managed expectantly and vaginal delivery anticipated.

Third trimester acquisition (from 28 weeks of gestation)

Treatment for antenatal women in group should not be delayed. Management of the woman should be in line with her clinical condition and will involve

- Use of oral(or intravenous for disseminated HSV infection) Aciclovir in standard doses (400 mg three times daily, usually for 5 days)
- In the third trimester, treatment will usually continue with daily suppressive Aciclovir 400 mg three times daily until delivery.

Caesarean section should be the recommended mode of delivery for all antenatal women developing first (primary) episode of genital herpes in the third trimester. This is particularly applicable to those developing symptoms within 6 weeks of expected delivery, as the risk of neonatal transmission of HSV is very high at 41%.

It can be difficult to distinguish clinically between primary and recurrent genital HSV infections, as in up to 15% of cases where a woman presents with a first episode of clinical HSV infection, it will be a recurrent infection.

Antenatal women presenting with first episode genital herpes in the third trimester, particularly within 6 weeks of expected delivery, type-specific HSV antibody testing (IgG) antibodies to HSV-1 and HSV-2) is advisable. For these women, characterising the infection will influence the advice given regarding mode of delivery and risk of neonatal herpes infection. The presence of antibodies of the same type as the HSV detected by PCR from genital swabs would confirm this episode to be a recurrence rather than a primary infection and elective caesarean section would not be indicated to prevent neonatal transmission.

It may take more than a week for the results of HSV serology to become available. Therefore, an initial plan of delivery should be based on the assumption that all first episode lesions are primary genital herpes. This plan can then be modified if HSV antibody test results subsequently confirm a recurrent, rather than primary infection. Interpretation of HSV serology can be complicated, for this reason the results should be discussed with a virologist.

Antenatal Care – Recurrent Herpes

The majority of recurrent episodes of genital herpes are short-lasting and resolve within 7–10 days without antiviral treatment. Supportive treatment measures using saline bathing and analgesia with standard doses of paracetamol alone will usually suffice.

Vaginal delivery should be anticipated in the absence of other obstetric indications for caesarean section. Daily suppressive Aciclovir 400 mg three times daily should be considered from 36 weeks of gestation. The risks, benefits and alternatives to daily suppressive therapy should be discussed with women who have a history and prophylaxis initiated for women who desire intervention.

Sequential PCR testing during late gestation to predict viral shedding at term or at delivery to identify women who are asymptomatically shedding HSV, is not indicated.

Management of women with primary or recurrent genital HSV infection at the onset of labour

Management of a woman with genital HSV infection at the onset of labour should be based on clinical assessment as there will not be time for confirmatory laboratory testing. The clinician must take a history in order to ascertain whether this is a primary or recurrent episode. However, a viral swab from the lesion(s) should still be taken, since the result may influence management of the neonate. The neonatologist should be informed.

Management of primary episode at the onset of labour

Caesarean section is recommended to all women presenting with primary episode genital herpes lesions at the time of delivery, or within 6 weeks of the expected date of delivery, in order to reduce exposure of the fetus to HSV (unless this is clinically inappropriate such as in advanced labour or the patient declines).

There is some evidence to suggest that the benefit of caesarean section is reduced if the membranes have been ruptured for greater than 4 hours. However, there may be some benefit in performing a caesarean section even after this time interval. Therefore any woman with primary herpes with ruptured membranes needs to present to the maternity assessment unit urgently.

Consider giving intravenous Aciclovir to the mother (5 mg/kg every 8 hours) and subsequently to the neonate (intravenous aciclovir 20 mg/kg every 8 hours) for those mothers opting for vaginal delivery. It is unknown whether intrapartum Aciclovir reduces the risk of neonatal HSV infection. Where primary episode genital herpes lesions are present at the time of delivery and the baby is delivered vaginally, the risk of neonatal herpes is estimated to be 41%.

Although vaginal delivery should be avoided if possible, in women who deliver vaginally in the presence of primary genital herpes lesions, invasive procedures, such as application of foetal scalp electrodes, foetal blood sampling, artificial rupture of membranes and/or instrumental deliveries should be avoided.

Management of recurrent genital HSV infection at the onset of labour

Antenatal women presenting with the history of recurrent genital herpes lesions at the onset of labour should be advised that the risk to the baby of neonatal herpes is low (0–3% for vaginal delivery).

Women with recurrent genital herpes lesions at the onset of labour should be offered vaginal delivery. A caesarean section delivery can be considered but the risk to the mother and future pregnancies should be set against the small risk of neonatal transmission of HSV with recurrent disease (0–3% for vaginal delivery).

It has been reported that invasive procedures, as mentioned above, increase the risk of neonatal HSV infection. However, given the small background risk (0–3%) of transmission in this group, the increased risk associated with invasive procedures is unlikely to be clinically significant so they may be used if required.

Prelabour Rupture of membranes at term

There is no evidence to guide the management of women with spontaneous rupture of membranes at term, but many clinicians will advise expediting delivery in an attempt to minimise the duration of potential exposure of the fetus to HSV.

Rest of intrapartum care should be offered in accordance with NICE guidelines on intrapartum care.

Management of genital HSV infection in preterm prelabour rupture of membranes (PPROM – before 37+0 weeks of gestation)

Primary genital HSV infection in PPROM

There is limited evidence to inform best obstetric practice when PPROM is complicated by primary HSV infection. Management should be guided by multidisciplinary team discussion involving the obstetricians, neonatologists and genitourinary medicine physicians and will depend on the gestation that PPROM occurred.

If the decision is made for immediate delivery then the anticipated benefits of caesarean section will remain. If there is initial conservative management, the mother should be recommended to receive intravenous Aciclovir 5 mg/kg every 8 hours.

Prophylactic corticosteroids should be considered to reduce the implications of preterm delivery upon the infant. If delivery is indicated within 6 weeks of the primary infection, delivery by caesarean section may still offer some benefit despite the prolonged rupture of membranes

Recurrent genital HSV infection in PPROM

If PPROM is encountered in the presence of recurrent genital herpes lesions, the risk of neonatal transmission is very small and may be outweighed by the morbidity and mortality associated with premature delivery.

In the case of PPROM before 34 weeks of gestation, there is evidence to suggest that expectant management is appropriate, including oral Aciclovir 400 mg three times daily for the mother.

After this gestation, it is recommended that management is undertaken in accordance with relevant RCOG guidelines on PPROM. Antenatal corticosteroid can be considered to reduce neonatal morbidity and mortality and is not materially influenced by the presence of recurrent genital herpes lesions

Management of antenatal women with HIV co-infection with HSV

Primary HSV infection

HIV-positive women with primary genital HSV infection in the last trimester of pregnancy should be managed according to the recommendations for all women with primary genital HSV infection.

Recurrent HSV infection

There is some evidence that HIV antibody positive women with genital HSV ulceration in pregnancy are more likely to transmit HIV infection independent of other factors.

Women who are HIV antibody positive and have a history of genital herpes should be offered daily suppressive Aciclovir 400 mg three times daily from 32 weeks of gestation to reduce the risk of transmission of HIV infection, especially in women where a vaginal delivery is planned. Starting therapy at this earlier gestation should be considered in view of the increased possibility of preterm labour in HIV-positive women.

The mode of delivery should be in line with the BHIVA HIV in pregnancy guideline recommendations.

There is currently no evidence to recommend daily suppressive treatment of HSV for HIV antibody positive women who are HSV-1 or -2 seropositive but have no history of genital herpes

References:

1. BASH and Royal College of Obstetricians and Gynaecologists. Management of Genital Herpes in Pregnancy. October 2014.