Genital Herpes: Management in Pregnancy

NHS University Hospitals of Leicester NHS Trust

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1. Introduction and Who Guideline applies to

This guideline is based on the joint British Association for Sexual Heath and HIV (BASHH) and RCOG guideline (2014) on the management of herpes in pregnancy. It is intended for use by medical staff, midwives and other relevant health care professionals. The severe consequences of neonatal herpes infection are well established and obstetricians and other health professionals caring for pregnant women need to be aware of interventions that may reduce the risk of perinatal transmission.

Related documents:

Herpes Simplex UHL Neonatal Guideline
Neonatal Herpes Simplex UHL Childrens Medical Guideline

Contents

Background:

Genital herpes is caused by the herpes simplex virus 1 and 2. The majority of infections are acquired sub clinically – 80% of people with antibodies are unaware they are infected. After coming into contact with the virus some people may never have any symptoms. Some will have the virus for days, weeks, months or years before any signs or symptoms develop because the virus becomes latent in local sensory ganglia reactivating to cause symptomatic lesions or asymptomatic viral shredding from the external genitalia/anorectum/cervix/urethra.

Local signs and symptoms are:

- Painful superficial ulceration
- Dysuria

- Vaginal/urethral discharge
- Painful inguinal lymphadenopathy

Systemic symptoms are:

- Fever
- Myalgia

Complications:

- Autonomic neuropathy leading to urinary retention
- Autoinoculation to fingers and adjacent skin on thighs
- Aseptic meningitis Enhanced HIC transmission
- Secondary bacterial infection
- Labial fusion

Acquisition in the first trimester has been associated with miscarriage. However, there is no conclusive evidence that it causes fetal abnormality if the pregnancy continues and it is not an indication for termination of pregnancy.

Neonatal herpes is a viral infection with a high morbidity and mortality which is most commonly acquired at or near the time of delivery. It is classified into three subgroups, depending on the site of infection:

- disease localised to skin, eye and/mouth
- local central nervous system (CNS) disease (encephalitis alone)
- disseminated infection with multiple organ involvement

Infants who present with skin, eye, and/mouth symptoms alone have the best prognosis: death is unusual and, with antiviral treatment, neurological and/or ocular morbidity is less than 2% (BASHH & RCOG 2014).

Disseminated disease and local CNS disease can present with or without skin, eye and/mouth infection. Disseminated disease carries the worst prognosis: with antiviral treatment, mortality is around 30% and 17% have long-term neurological sequelae. Infants with local CNS disease often present late (generally between 10 days and 4 weeks postnatally); with treatment, mortality is around 6% and neurological morbidity 70%. The poor outcomes of disseminated and local CNS disease have been attributed to delays between symptom onset and treatment.

Neonatal infection occurs as the result of an infection at the time of birth; in contrast, congenital herpes is extremely rare and occurs by transfer of infection in utero

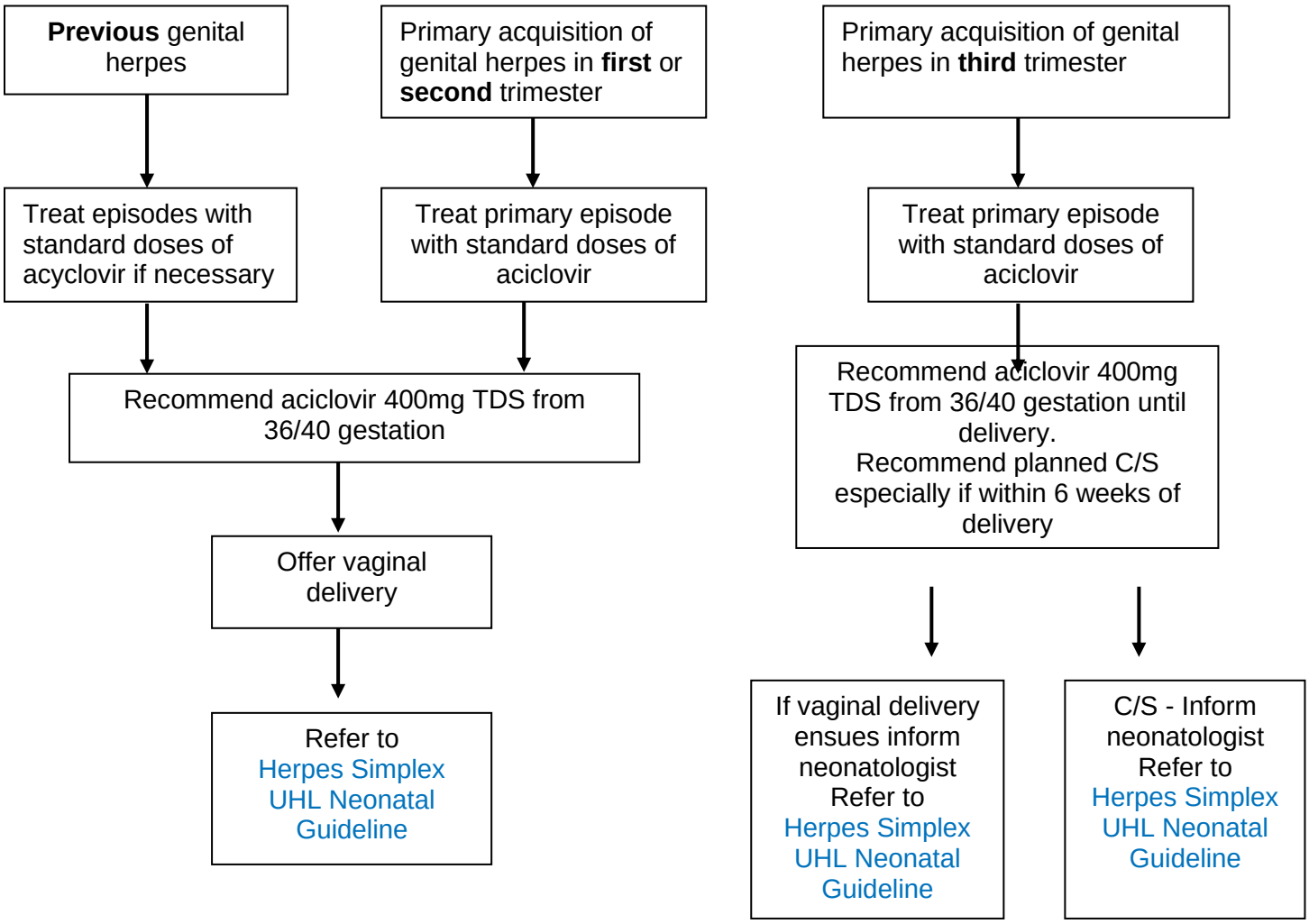
Neonatal herpes is rare in the UK; active surveillance by the British Paediatric Surveillance Unit (BPSU) between 1986 and 1991 demonstrated an incidence of one in 60 000 live births annually. Subsequent surveillance 2004-2006 showed an approximate doubling of incidence (BASHH & RCOG 2014).

Neonatal herpes may be caused by herpes simplex virus type 1 (HSV-1) or herpes simplex virus type 2 (HSV-2), as either viral type can cause genital herpes. Almost all cases of neonatal herpes occur as a result of direct contact with infected maternal secretions, although cases of postnatal transmission have been described.

Factors influencing transmission include the type of maternal infection (primary or recurrent), the presence of transplacental maternal neutralising antibodies, the duration of rupture of membranes before delivery, the use of fetal scalp electrodes and mode of delivery. The risks are greatest when a woman acquires a new infection (primary genital herpes) 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. Very rarely, congenital herpes may occur as a result of transplacental intrauterine infection.

Flowchart management of herpes in pregnancy



2. Guideline Standards and Procedures

2.1 Women who volunteer a history that they or their partner have had genital herpes

- The woman should be reassured that in the event of an HSV recurrence during pregnancy, the risk of transmission to the neonate is very small even if genital lesions are present at delivery (0–3% for vaginal delivery)
- Pregnant women who have a previous history of genital herpes should be ~~offered~~ recommended daily suppressive aciclovir, 400 mg three times a day, from 36 weeks of gestation until delivery for the prevention of recurrence.

- Aciclovir reduces the risk of recurrence and may also reduce asymptomatic shedding of the virus.

- The woman with no history of genital herpes may reduce her risk of acquiring herpes during pregnancy and of subsequent transmission to the neonate by using condoms or from abstaining from sexual intercourse during the third trimester

- The woman should be advised that she could acquire genital herpes through receptive orogenital contact if their partners have orolabial herpes (cold sores)

2.2 Suspected primary episode of genital herpes

- Should be referred to a genitourinary physician and the diagnosis confirmed

- The diagnosis should be confirmed by viral culture or PCR
- The woman should be screened for other sexually transmitted infections
- The woman should be given a detailed explanation of the condition and the long term implications
- Women who present with a primary infection in pregnancy should be seen in a consultant led antenatal clinic as soon as possible.

2.3 Treatment during pregnancy

- Treatment should be in line with the woman's condition

- Management should be with oral (or intravenous for disseminated HSV) aciclovir in standard doses (400 mg three times daily, usually for 5 days) although it should be used with caution before 20 weeks gestation
- The woman should be informed of the potential risk and benefits of treatment with Aciclovir as it is not licensed for use in pregnancy. However, there is substantial clinical experience supporting its safety
- Primary herpes - Treatment with oral Aciclovir at a dose of 400mg three times daily for five days - In immunocompromised / HIV positive women the dose can be increased to 400mg five times daily for seven to ten days
- Disseminated HSV infection, if the woman has severe symptoms and in the immunocompromised / HIV positive women (BNF 2012) - Treatment with IV Aciclovir at a dose of 5mg/kg using ideal body weight every 8 hours for five days may be indicated. Aciclovir is hydrophilic and so will mainly be distributed into lean compartments of the body. Ideal body weight (IBW) should be used for those women identified as obese at booking to reduce issues of toxicity associated with overdosing of IV aciclovir in this group. (IBW) is independent of booking and current weight as its calculated using height only. https://www.mdcalc.com/ideal-body-weight-adjusted-body-weight
- Paracetamol and topical lidocaine 2% gel can be offered as symptomatic relief
- Following first or second trimester acquisition, daily suppressive aciclovir 400 mg three times daily from 36 weeks of gestation reduces HSV lesions at term and hence the need for delivery by caesarean section

2.4 Vaginal delivery should be anticipated if the infection was acquired in the first or second trimester

- The mode of delivery should be discussed with the woman

2.5 Primary episode genital herpes lesions at the time of delivery or within 6 weeks of the expected EDD or onset of labour

- 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%.
- Caesarean section should be offered to all women presenting with first episode genital herpes lesions at the time of delivery or within 6 weeks of the EDD or onset of labour
- Caesarean section may not be of benefit in reducing transmission for women presenting with ruptured membranes for greater than 4 hours
- Continuous Aciclovir in the last 4 weeks of pregnancy should be should be used as it can reduce the risk of clinical recurrence at term and delivery by caesarean section
- If vaginal delivery is unavoidable or where the woman opts for vaginal birth, rupture of membranes and invasive procedures should be avoided. IV Aciclovir should be considered intrapartum for the woman and for the neonate.
- The Neonatologist should be informed in the case of vaginal delivery with a primary infection

2.6 Recurrent episodes of genital herpes should be managed appropriately

- Symptomatic recurrence is likely to be brief
- Antiviral treatment is rarely indicated for the treatment of recurrent episodes of genital herpes
- Cultures during late gestation to predict viral shredding are not indicated
- Women with recurrent herpes should be seen in a consultant led antenatal clinic at approximately 30 weeks gestation
- Aciclovir suppressive treatment from 36 weeks gestation should be considered
- Women with recurrent genital herpes lesions at the onset of labour should be informed that the risk to the baby of neonatal herpes is small. The risk calculated from several studies is 0-3% (RCOG 2007). This risk must be balanced against the risks to the mother of caesarean section. The risks of neonatal herpes and the risks of Caesarean section should be discussed with the woman and agreement reached regarding the most appropriate mode of delivery on an individual basis.
- Women with recurrent genital herpes lesions and confirmed rupture of membranes at term should be advised to have delivery expedited by the appropriate means
- Invasive procedures in labour should be avoided for women with recurrent genital herpes lesions.
- 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
- Evidence from the Netherlands shows that a conservative approach, allowing vaginal delivery in the presence of an anogenital lesion, has not been associated with a rise in the number of neonatal HSV cases.
    - Women should be informed that if there is a recurrence at any gestation and they haven't received aciclovir from 36 weeks, the baby is likely to have to remain an inpatient and receive intravenous aciclovir until negative PCR is obtained. This can take 5-7 days on average.

- 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.
- The neonatologist should be informed of babies born to mothers with recurrent genital herpes lesions at the time of labour

2.7 Genital herpes in woman with HIV infection should be managed appropriately

- 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 (see point 2.5 above).
- HIV women with recurrent 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 than usual should be considered in view of the increased possibility of preterm labour in HIV-positive women.
- The mode of delivery should be made keeping in view obstetric factors and HIV parameters such as HIV viral load
- 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.
- Resistance to antiviral drugs is more common in those with HIV infection and is associated with treatment failure
- Highly Active Anti-Retroviral Therapy (HAART) will reduce the frequency of recurrences but has less effect on symptomatic shedding
- The efficacy of suppressive therapy is less in woman with HIV

2.8 Management of genital herpes in preterm prelabour rupture of membranes (<37wks)

Primary genital herpes in preterm prelabour rupture of membranes (PPROM):

- Management should be guided by MDT 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 the initial management is conservative, intravenous aciclovir 5 mg/kg (using ideal body weight) every 8 hours is recommended
- 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.

Recurrent genital herpes in PPROM:

- When PPROM is encountered in the presence of recurrent genital herpes lesions, the risk of neonatal transmission is very small
- In the case of PPROM < 34 weeks, expectant management is appropriate, including oral aciclovir 400 mg three times daily for the mother until delivery.

- If PPROM >34 weeks, it is recommended that management is undertaken as for PPROM and antenatal corticosteroid administration to reduce neonatal morbidity and mortality and is not influenced by the presence of recurrent genital herpes lesions

2.9 Prevention of postnatal transmission

- In 25% of cases a possible source of postnatal infection is responsible, usually a close relative of the mother and advice should be given to the mother
- The mother and all those with herpetic lesions who may be in contact with the neonate, including staff, should practice careful hand hygiene
- Those with oral herpetic lesions (cold sores) should not kiss the neonate.

3. Education and Training

None

4. Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
All women with primary genital herpes have been referred to a Genitourinary physician	Audit	Audit lead	Annually	Maternity Audit group
Documentation of delivery decisions for the woman with recurrent genital herpes	Audit	Audit lead	Annually	Maternity Audit group
Documentation of appropriate management of labour in women with recurrent genital herpes	Audit	Audit lead	Annually	Maternity Audit group
Documentation of referral to the Neonatologist where the neonate has been exposed or potentially exposed to genital herpes	Audit	Audit lead	Annually	Maternity Audit group
Pregnant women with genital herpes should be provided with written information on genital herpes in pregnancy (e.g. the RCOG patient information leaflet)	Audit	Audit lead	Annually	Maternity Audit group

5. Supporting References

- Consensus guideline between the British Association for Sexual Health and HIV (BASHH) and the Royal College of Obstetricians and Gynaecologists (RCOG) Management of Genital Herpes in Pregnancy, (October 2014)

6. Key Words

Genital herpes, neonatal herpes, herpes simplex virus

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

DEVELOPMENT AND APPROVAL RECORD FOR THIS DOCUMENT		
Author /	Chandrima Roy Consultant Obstetrician	**Lead Officer:** Chief Medical Officer
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REVIEW RECORD			
Date	**Issue Number**	**Reviewed By**	**Description Of Changes (If Any)**
18.12.14	V1	C Roy	No change
October 2017	V2	C Roy and F Shakeel	General update. Disseminated with changes highlighted.
October 2020	V3	C Roy and F Shakeel	Pregnant women who had a previous history of genital herpes should be offered daily suppressive aciclovir from 36 weeks. Added use of Ideal Body Weight to calculate IV Aciclovir dosage. Reformatted.
February 2023	V4	F Hills	Amended wording from; Recurrent herpes to previous herpes Changed consider aciclovir to recommend aciclovir. Pregnant women who have a previous history of genital herpes should be ~~offered~~ recommended daily suppressive aciclovir, 400 mg three times a day, from 36 weeks of gestation until delivery for the prevention of recurrence. Aciclovir reduces the risk of recurrence and may also reduce asymptomatic shedding of the virus. Added statement to inform women who have not received AN aciclovir, infants may need to remain in hospital for a period of observation.