

## **GUIDELINE FOR CARE OF WOMEN AT RISK OF GENITAL HERPES INFECTION IN LABOUR AND THEIR NEWBORNS**

Herpes Simplex Virus (HSV) is a recurrent viral infection spread by direct contact with an infected individual with sores or when the virus is shedding just prior to an outbreak. The onset of an outbreak may be preceded by prodromal symptoms such as vague discomfort, fever, radiating pain, itching, burning, tingling and tenderness in the area where the outbreak will occur. The outbreak itself is an eruption of often painful vesicles which typically rupture, forming a shallow-based sore or ulcer which crusts over and heals without causing scarring. Herpes can occur anywhere on the body, but is most commonly found around the mouth (HSV-1) or genitals (HSV-2), including the vulva, vagina and cervix. In midwifery care, the primary concern is the risk of transmission of genital herpes to the newborn.

### **Primary Outbreaks**

A primary outbreak of HSV-2 is generally worse than a recurrent outbreak, and is associated with heightened sensations of tingling, shooting pains, swollen lymph glands in the groin, painful lesions, urinary retention and transient flu-like symptoms such as aches, fever, chills and fatigue.

Lesions usually appear on the vulva, vagina or cervix between 2 and 14 days following exposure to the virus. The lesions from a primary outbreak are generally larger, more numerous and last longer than those experienced with recurrent outbreaks. These lesions can last for three weeks if no therapy is prescribed.

There is an increased risk of transmission of the virus due to viral shedding for up to three months after the lesions from a primary infection have healed. Symptoms may or may not be present during this period.

Occasionally a woman may be unaware that she has acquired genital herpes. Individuals with a history of oral herpes (HSV-1) have antibodies that may reduce the symptoms associated with a primary outbreak of HSV-2. It is also possible that women may not notice internal vaginal or cervical lesions.

HSV antibodies IgG and IgM are produced by the body, even though the virus continues to live dormant in the nerve cells and cannot be eliminated. Non-type-specific serological testing can assist the midwife in differentiating primary from recurrent infections.

Type specific serological testing to indicate past exposure to herpes simplex virus type 1 or 2 can identify whether a pregnant woman with no history of herpes is at risk of

primary herpes infection from an infected partner. Both type specific and non-type specific testing may be ordered by a registered midwife<sup>1</sup>.

Antiviral therapy (e.g. Acyclovir<sup>2</sup>) is recommended for women experiencing a primary HSV infection in pregnancy as a primary outbreak poses a significantly higher risk to the newborn than a recurrent infection. A primary infection in the first trimester is likely to result in spontaneous abortion, in the second trimester, fetal herpes infection, and in the third trimester, neonatal infection (see Neonatal Herpes section below). The midwife should consult a physician to access appropriate drug therapy for her client.

If a pregnant woman has negative HSV serology and her partner has a history of HSV there is a major risk of infection. The midwife should refer the couple to their family physician to consider suppressive therapy for the partner for the duration of the pregnancy, counsel them on safe sex practices and discuss the risk of transmission with oral sex (Canadian STD Guidelines, 1998).

### **Recurrent Outbreaks**

Recurrent outbreaks vary from person to person in terms of the size and number of lesions. Typically the lesions recur in the same area as the primary outbreak. Generally they are less painful than the primary outbreak and last for 14 days or less. Recurrent outbreaks can be triggered by a variety of factors including sunlight, fever, drugs, sexual intercourse, flu and stress.

Antiviral therapy is also an option for pregnant women having frequent recurrent outbreaks. It has been found to be 80 – 90% effective in reducing outbreaks in pregnancy. If a woman is having frequent outbreaks and wishes to consider antiviral therapy, the midwife should consult a physician.

Some practitioners also recommend alternative therapies to treat or prevent HSV outbreaks (e.g. deodorized garlic, licorice ointment, homeopathic natrum mur, lysine, and arginine rich foods and vitamin C). At this time there is little research-based evidence to demonstrate the effectiveness or safety of any complementary therapies.

### **Risk of Transmission to the Newborn**

Most neonatal herpes is acquired through the birth process and intrauterine infection is rare. Neonates born to mothers with primary infections are at very high risk (up to 50%) even when the mother has no symptoms. The chance of transmission to the newborn born vaginally following a primary outbreak due to active viral shedding is 30-50%. The risk of transmission with an active recurrent lesion is 5%. If no lesions are present and the woman is not experiencing prodromal symptoms, the risk of transmission during a vaginal birth is 1:1000 or less.

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<sup>1</sup> See CMBC *Guidelines for Ordering and Interpreting Diagnostic Tests*

<sup>2</sup> Acyclovir has recently been reclassified as a “Category B” drug, generally safe in pregnancy, from “Category C”, based on the most recent evidence.(Briggs et al, 2001)

Seventy percent of infants diagnosed with neonatal herpes are born to women without a history of genital herpes (Canadian STD Guidelines, 1998). Prevention should involve determining if an uninfected woman is at risk of exposure from an infected partner and reducing the risk of transmission during the pregnancy.

### **Neonatal Herpes**

The prevalence of neonatal herpes infection varies worldwide, from 1:2,000 to 1:15,000 live births. Most of these infections are the result of vaginal births with active herpes lesions. The incubation period is between 5 and 21 days, so most babies become ill in the second or third week of life. Neonatal Herpes can have serious consequences for the newborn, both in terms of the risk of morbidity and mortality. An infected baby may present with vague signs and symptoms including lethargy, fever, irritability and poor weight gain. The infection can be localized (affecting only the skin, eyes and mouth), involve the Central Nervous System (CNS) or be spread throughout the body. While the majority of Neonatal Herpes infections are localized and not associated with a risk of perinatal mortality, localized infections can progress to the CNS causing encephalitis, or become systemic, increasing the risk to the newborn. Neonatal Herpes affecting the CNS is associated with significant morbidity, including brain damage, and has a 15% mortality rate. Systemic Neonatal Herpes has a 57% mortality rate. Signs that may indicate CNS involvement include poor feeding, listlessness and irritability. It is also important to note that Neonatal Herpes can be contracted after birth from exposure to skin lesions.

### **Preventing Transmission to the Newborn**

As there is no cure, most treatments are aimed at preventing outbreaks and reducing risk of exposure to lesions at the time of delivery. A midwife who is concerned that a woman in her care may be having a primary outbreak should do both a viral culture swab and an antibody screen. While testing is helpful, it is not conclusive. Testing is most accurate when done during a primary outbreak, midwives should be aware that test results are significantly less accurate when the outbreak is a recurrent one. A viral culture swab of a lesion in a primary outbreak will be positive only 80% of the time, which is why antibody screening should be done as well. A swab of a crusted recurrent lesion will only detect the virus 40% of the time. For this reason a midwife is very reliant on the pregnant client to share her sexual history and report prodromal symptoms or suspicious lesions.

If a woman's partner has a history of HSV or any suspicious lesions the midwife should advise the couple to use condoms and other effective barriers for all sexual activities and to avoid sexual intimacy if either partner has prodromal symptoms or lesions. Pregnant women should be advised to be especially aware of any sign of an outbreak near term or if membranes rupture, and asked to report any lesions or prodromal symptoms.

As noted above, antiviral therapy is recommended for women experiencing primary HSV infection during pregnancy because of the increased risk of transmission to the

newborn. This therapy is also increasingly recommended where a pregnant woman is having frequent recurrent outbreaks.

Newborns can also contract Neonatal Herpes from contact with other infected individuals. Family members, friends and health care providers should all carefully cover any herpes lesions, including oral lesions, and use appropriate precautions, such as careful hand washing, to avoid transmission of the virus to the newborn.

### **Management of Labour and Delivery**

It is reasonable to anticipate that a pregnant woman with a history of genital HSV and **No** active lesions at the time of labour will deliver vaginally. A woman with recurrent non-genital lesions may deliver vaginally if the lesions are effectively covered with an occlusive dressing. Artificial rupture of the membranes and use of fetal scalp electrodes should be avoided in labour.

Birth by cesarean section is recommended in the following situations:

- Primary HSV outbreak during the third trimester
- Genital lesions (primary or recurrent) present at the onset of labour
- Genital lesions present when membranes rupture
- Prodromal symptoms at the onset of labour or when membranes rupture in a woman with a history of genital HSV

If a woman in midwifery care has active genital herpes at the onset of labour transfer of care to physician is required, as indicated in the College's ***Indications for Discussion, Consultation and Transfer of Care.***

### **Care of the Newborn**

Mothers with symptomatic outbreaks do not need to be isolated from their newborns. Care should be taken to shield the baby from contact with HSV lesions and careful handwashing before handling the baby is recommended. Observe the baby's skin and scalp for rashes and blister like sores, and watch for unexplained illness, including respiratory distress, seizures and signs of infection such as pyrexia or temperature instability. Breastfeeding has the benefit of passive immunity and can be encouraged, as long as there are no lesions on the breast.

## References

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