



THE CITY OF NEW YORK

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

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2005 Health Alert #46: Neonatal herpes infection with herpes simplex virus type 1 following circumcision with oral suctioning (metzitzah b'peh)

- The Health Department has documented 7 cases of neonatal herpes infection with herpes simplex virus type 1, including 5 cases in the past 2 years apparently linked to the religious practice of metzitzah b'peh.
- Three of the infants were circumcised by a single mohel. One baby died, and another suffered brain damage.
- *Metzitzah b'peh* is a practice performed by some mohelim in the Jewish community (religious circumcisers) wherein the mohel places his mouth on the freshly circumcised penis to draw blood away from the cut.
- Providers should suspect herpes infection in male infants presenting with vesicular lesions on the genitals, perineum, buttocks, or related dermatomes in the weeks after circumcision.
- Neonates suspected to have herpes infections should be hospitalized immediately and treated with intravenous acyclovir.
- Notify the Department of Health within 24 hours of diagnosis of any cases of herpes infection following circumcision as such would be unusual manifestations of disease (Neonatal herpes desk: 212-788-4423). The New York City Board of Health is also considering mandating reporting of all cases of neonatal herpes.

Please distribute to colleagues in Pediatrics (including Pediatric Infectious Diseases, Neonatology, and Urology), Adult Infectious Diseases, Emergency Medicine, Obstetrics/Gynecology

Dear Colleagues:

You may have heard about the Health Department's recent investigation of several cases of herpes simplex type 1 infection in male infants following circumcision which included metzitzah b'peh. Metzitzah b'peh is a practice performed by some mohelim (religious circumcisers) as part of the circumcision. After removing the foreskin, the mohel places his mouth on the baby's freshly circumcised penis to draw away the blood.

In 1998, the Health Department investigated two cases of neonatal herpes due to herpes simplex virus type 1 (HSV-1) – one of these

infections occurred in 1988, the other in 1998. Both were associated with one mohel (Mohel A) who performed *metzitzah b'peh* during circumcision. Mohel A agreed to stop practicing *metzitzah b'peh*.

In November 2004, the Health Department was notified of 3 male infants with HSV-1. All were circumcised by one mohel (Mohel B), who performed *metzitzah b'peh*. The infants developed herpes infection in the genital area 8-10 days after circumcision and were hospitalized for several weeks. One baby died from the infection. Two cases were reported by physicians in 2005 and both are also consistent with infection from *metzitzah b'peh*. Every case occurred in the time frame consistent with transmission from *metzitzah b'peh* (Figure).

Our investigation found Mohel B to be the source of the 2004 cases, and *metzitzah b'peh* to be the means of infection for these and other cases, for the following reasons:

- The medical circumstances are inconsistent with infection acquired at delivery, in the newborn nursery, or from caretakers.
- Infection is consistent with acquisition of herpes at circumcision. For example, two infants who were circumcised several weeks after birth showed signs of infection in the time frame that would be expected were the infection acquired during circumcision.
- Several mothers tested negative for HSV-1, making it impossible for them to have been the source of infection.
- All infants tested culture-positive for HSV-1, which is found in the mouths of most adults.
- The location of herpes sores (on infant genitals and buttocks) is very unusual and strongly suggests that infection was introduced at the genitals.

With an estimated average of fewer than 30 cases of all forms of infant herpes infections occurring per year in New York City, the odds of one mohel being associated with 3 cases of neonatal herpes are infinitesimally small (about 6.9 million to 1). In the interest of allowing religious communities to address these health concerns first, the Health Department agreed to let rabbinical authorities ensure that the mohel stopped performing the practice at least until the authorities conclude an investigation.

In addition, the connection between *metzitzah b'peh* and neonatal herpes has been documented in the medical literature. Three investigations published within the past 5 years (from New York City,¹ Israel,^{2, 3} and Canada³) describe 11 cases of males with HSV-1 infections on their genitals following *metzitzah b'peh*. Among the 11 cases, there are 4 pairs of cases (including the 1988/1998 cases from New York City).

In the United States, approximately 70% of persons age 40 and older are infected with herpes simplex virus type 1. The mouth is the most common site of HSV-1 infection; HSV-1 spreads easily through infected saliva, especially when saliva comes in contact with a cut or break in the skin, such as occurs during *metzitzah b'peh*. Most adults with oral herpes do not know they are infected and do not have symptoms. Even without symptoms, however, people with oral herpes can spread the infection to others. If herpes lesions are present, they tend to occur (and recur) on the skin or mucous membranes at the site at which infection was introduced or in related dermatomes. HSV-1 infection is lifelong; antibody is evidence of infection.

Evaluation and management of an infant with suspected neonatal herpes infection

Infants in the first 6-8 weeks of life suspected of having herpes infections should always be hospitalized and treated with intravenous acyclovir,^{1, 4, 5} a lumbar puncture should be performed at admission, and the infant should be managed in consultation with a pediatric infectious disease specialist. Herpes infection of the skin/eye/mucous membranes may progress to disseminated disease or central nervous system (CNS) infection. Infants with disseminated or CNS infection are at significant risk for death or serious sequelae even with treatment.

For infants suspected of having herpes infection, cultures should always be done on skin vesicles if present. Other sites that may yield positive cultures and should be cultured include blood, nasopharynx, anorectum, conjunctivae, urine, and stool. Direct fluorescent antibody (DFA) staining, if available, may provide a rapid and specific diagnosis. The yield of culture and DFA from HSV skin vesicles is very good if specimens are properly collected. To collect a specimen from a vesicle, unroof or open the vesicle with a sterile needle or scalpel and vigorously rub or twist a sterile swab on the exposed base of the lesion. Use the swab to inoculate sterile viral transport medium and send immediately to the laboratory. Samples for DFA staining should be obtained in the same manner with the material from the lesion smeared onto a glass microscopic slide.

Cerebrospinal fluid (CSF) and blood specimens should be tested by polymerase chain reaction (PCR) for HSV-1 and herpes simplex virus type 2 (HSV-2). CSF cultures for HSV are usually negative in a patient with HSV encephalitis, so if a limited sample of CSF is available, PCR testing on the CSF should be done in preference to culture. Because of the passive transfer of maternal antibody, type-specific herpes serologic testing is not useful in making a herpes diagnosis in an infant unless maternal serologies are also done and are negative. Consult your institution's clinical laboratory director to identify a laboratory licensed to perform viral culture and polymerase chain reaction for HSV-1 and HSV-2.

Reporting neonatal herpes cases to the Health Department

Up to 20% of neonatal herpes cases never develop skin lesions, so providers must maintain a high index of suspicion for herpes infection following circumcision which includes *metzitzah b'peh*.

Providers should suspect herpes infection in male infants presenting with vesicular or pustular lesions on the genitals, perineum, buttocks, or related dermatomes in the weeks after circumcision, or, in any infant with fever or other signs of systemic illness in the weeks following circumcision.

New York City Health Code section 11.03(b) requires providers to report 'unusual manifestations of disease. Providers should report all suspected cases of herpes occurring in the weeks following circumcision to the Health Department.

Call 212-788-4423 and ask for the 'neonatal herpes desk'

¹ In addition to antibiotics to cover other possible causes of bacterial sepsis in the newborn period.

After hours call the Poison Control Center at 1-800-222-1222

Health Department Recommendations with Regard to *Metzitzah B'peh*

The Health Department has issued an open letter to the Jewish community regarding the recent cases of neonatal herpes linked to metzitzah b'peh and the risk of HSV-1 transmission with metzitzah b'peh, (<http://www.nyc.gov/html/doh/downloads/pdf/std/std-bris-commishletter.pdf>) and has developed a fact sheet to inform parents about this public health issue which will be available online (<http://www.nyc.gov/html/doh/html/std/std-bris.shtml>) and through 311 in English, Yiddish and Hebrew.

During *metzitzah b'peh* the mouth of the mohel comes into direct contact with the baby's circumcision cut, risking transmission of herpes simplex virus to the infant. While severe illness associated with this practice may be rare, because there is no proven way to reduce the risk of herpes infection posed by *metzitzah b'peh*, the Health Department advises against this practice.

Some parents whose infants had *metzitzah b'peh* say they did not know in advance that the mohel would perform it. The Health Department advises parents to ask the mohel **several days in advance** of the bris whether he performs *metzitzah b'peh*. This offers parents a chance to weigh the risks of *metzitzah b'peh* and choose another option if they wish. While some mohelim consider *metzitzah b'peh* the only acceptable way to draw blood away from the circumcision cut, others use different means. For example, a mohel may use a sterile glass tube or a glass tube attached to a rubber bulb to suction the blood away from the baby's cut. Other mohelim use a sponge or sterile gauze pad to wipe the blood away. Unlike *metzitzah b'peh*, there is no evidence that any of these practices cause herpes infection.

Sincerely,

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¹Rubin LG, Lanzkowsky P. Cutaneous neonatal herpes simplex infection associated with ritual circumcision. *Pediatric Infectious Diseases Journal*. 2000. 19(3) 266-267.

²[Distel R](#), [Hofer V](#), [Bogger-Goren S](#), [Shalit I](#), [Garty BZ](#). Primary genital herpes simplex infection associated with Jewish ritual circumcision. *Israel Medical Association Journal*. 2003 Dec;5(12):893-4

³[Gesundheit B](#), [Grisaru-Soen G](#), [Greenberg D](#), [Levtzion-Korach O](#), [Malkin D](#), [Petric M](#), [Koren G](#), [Tendler MD](#), [Ben-Zeev B](#), [Vardi A](#), [Dagan R](#), [Engelhard D](#). Neonatal genital herpes simplex virus type 1 infection after Jewish ritual circumcision: modern medicine and religious tradition. 2004. *Pediatrics*. 114(2):259-63

⁴American Academy of Pediatrics. Herpes simplex. In: Pickering LK, ed. Red Book: 2003 Report of the Committee on Infectious Diseases. 26th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2003: 344-353.

⁵Kimberlin DW. Neonatal Herpes Simplex Infection. Clinical Microbiology Reviews. 2004. 17 (1): 1-13.

Figure

