

Newborn Eye Medication

PREVENTIVE TREATMENT FOR NEWBORN EYE INFECTION

Why are the newborn's eyes treated with medication after birth?

Treatment of the newborn's eyes is done to prevent or reduce eye infections, collectively called neonatal ophthalmia, caused by exposure to certain organisms from sexually transmitted diseases, primarily Gonorrhoea and Chlamydia. These organisms can infect the newborn if present in the mother's vagina at birth. Gonorrhoea is the more virulent bacteria, and may cause permanent damage, including blindness, in the early newborn period, although this is now rare in Canada.

What is Neonatal Ophthalmia?

Neonatal ophthalmia is defined as conjunctivitis that occurs within the first four weeks of life. It is a relatively common illness, occurring in 1% to 12% of newborn infants. Originally, neonatal ophthalmia referred to conjunctivitis in the newborn caused by infection with *Neisseria gonorrhoeae*, but now the term refers to any conjunctivitis in this age group, irrespective of the cause.

N gonorrhoeae accounts for less than 1% of reported cases of neonatal ophthalmia in Canada and the United States, while that due to *Chlamydia trachomatis* varies from 2% to 40%. Rates of ophthalmia by these two sexually transmitted pathogens have declined over the past two decades as a result of the decreased prevalence of these infections in the general population as well as the general institution of routine prenatal screening for them.

In most instances, neonatal ophthalmia is a relatively mild illness. The exception is ophthalmia due to infection with *N gonorrhoeae*. Without preventive measures, gonococcal ophthalmia has been observed to occur in 30% to 42% of infants exposed to *N gonorrhoeae* during delivery and may progress quickly to corneal ulceration and permanent visual impairment. The primary purpose for the use of prophylaxis for neonatal ophthalmia is to prevent disease due to *N gonorrhoeae*.

Aren't women tested in pregnancy?

Although women are usually routinely tested in pregnancy, no test is 100% reliable and women may be unaware that they have an infection due to a false negative test result or by being re-infected after the testing period.

What if I don't have an STD?

The law in British Columbia states that all babies must be treated prophylactically (preventively) within one hour of birth. However, in 1995 this B.C. law was changed to allow parents the option of **refusing this treatment with informed consent**.

If your testing was negative and/or you are confident that you and your partner have not acquired either of these infections since then you may decide not to give this eye medication. It is important that you are absolutely confident of your sexual relationship/history as you cannot rely on absence of symptoms as your indicator of infection.

Despite the dramatic decrease in prevalence since 1983, *N gonorrhoeae* continues to be regularly identified in newborns in Canada. Furthermore, the infection is frequently asymptomatic in women. Thus, the Canadian Pediatric Society continues to promote universal prophylaxis for neonatal gonococcal ophthalmia, in addition to routine prenatal screening for *N gonorrhoeae* and *C trachomatis*, and treatment of identified infections during pregnancy (1).

What is the treatment and when is it given?

Erythromycin, an antibiotic ointment is administered to the baby's eyes within the first hour after birth. Although erythromycin is effective against both organisms, gonococcal ophthalmia (eye infection) has occurred despite treatment with erythromycin ointment. While no treatment is 100% effective the risks are significantly reduced with preventive treatment. If a documented gonococcal infection exists, topical erythromycin therapy alone is inadequate. Erythromycin provides additional protection against other bacterial eye infections and decreases the incidence of local irritation.

Although it is proven that this treatment has reduced the incidence of infection to the newborn, there have not been any controlled trials which prove that this preventive measure is a more effective means of preventing blindness than careful observation of the newborn followed by adequate treatment of any conjunctivitis that should appear. This becomes an issue of weighing the responsibilities of careful observation against the intrusiveness of the treatment.

Recommendations for Treatment:

- When the possibility of infection is suspected, treatment should be administered immediately after birth.
- If a maternal infection is unsuspected, the ointment will still be administered unless both parents sign an informed refusal.

- If infection is unsuspected and you have declined treatment, it is still important to watch your baby's eyes for redness, discharge and swelling*.
- If symptoms occur, a culture may be done to test for gonorrhoea or chlamydia and to rule out yeast or other vaginal infections.

Are there any side-effects of routine treatment?

Treatment will cause blurry vision for a few hours after been given. We usually delay application for the first hour of life to enable the parents to enjoy the bonding time and the first breastfeeding experience. After this time when the newborn exam has been completed, the baby is usually ready to sleep and the ointment is absorbed while the baby rests.

In some cases the medication may cause a localized irritation of the eyelids, known as chemical conjunctivitis. This can lead to an overgrowth of non-susceptible organisms including fungi. Rarely, following an application of erythromycin, sensitivity may occur.

*Sticky Eyes

Mild eye infections in the newborn are common due their exposure to common organisms and the normal bacteria in our environment. "Sticky eyes" are generally self-limiting, resolving in about 48 - 72 hours. Sticky eyes usually present between the 3rd to 8th day postpartum. Treatment is warm water on a cotton ball, wiping the eye from the inner to the outer corner. Use each cotton ball once. If the sticky eye and discharge does not clear up with just warm water you may use a solution of black tea. Just use an ordinary black tea bag and make a cup of medium strength tea and wipe the baby's eye 4 times a day with the tea, or more often if the discharge is persistent. You should notice a difference in 24 - 36 hours. "Sticky eyes" are rarely an infection and do not respond to antibiotic ointment. Any discharge, swelling and inflammation of the newborn's eyes should be checked out. Please consult with your midwife.

(1) Recommendations for the prevention of neonatal ophthalmia

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