

Eye Prophylaxis Waiver of Liability

Excerpt from Case Based Pediatrics For Medical Students and Residents, Department of Pediatrics, University of Hawaii School of Medicine, Chapter XVII.1. Neonatal Conjunctivitis and Eye Prophylaxis, Sheree Kuo, MD, January 2002. And Bulletin of the World Health Organization, 2001, 79 (3): Is Credé's prophylaxis for ophthalmia neonatorum still valid? Schaller & Klaus

Ophthalmia neonatorum (ON)¹ is the most common ocular disease in the newborn, occurring in 2-12% of neonates. The causative agents of neonatal conjunctivitis are chemical, chlamydial, bacterial and rarely viral, usually caused by herpes simplex virus. The mode of infectious transmission is believed to be acquisition during passage through a colonized or infected birth canal^(1,2). While nearly every bacterial species has been implicated, ocular infection with *Neisseria gonorrhoeae* is felt to be one of the most serious because of its potential to damage vision and cause blindness^(1,3).

At the end of the 19th century in Europe the prevalence of ON among live births in maternity hospitals exceeded 10%, producing corneal damage in 20% and blindness in approximately 3% of affected infants⁽¹¹⁻¹³⁾. Up to 50% of children in schools for the blind were there because of ON^(11,12). In 1880, German Dr. Carl Credé instituted the use of a 2% aqueous solution of silver nitrate to wash the eyes of all newborn babies. This intervention alone reduced the number of cases of ON in Credé's maternity hospital from 30-35 per year to only one case in the second half of 1880, and led ultimately to a dramatic reduction in the prevalence of ON in Europe and around the world⁽¹⁴⁾. Today blindness from ON is rare (1000-4000 babies each year worldwide) and ON due to gonococcal infection is reported as 0.3 per 1000 live births in the USA. *Chlamydia trachomatis* is now the most common infectious agent causing neonatal conjunctivitis in approximately 0.4%-2.8% births in this country^(4,5,16). Recognizing the irritant effects of silver nitrate (frequently causes chemical conjunctivitis) and its ineffectiveness against *Chlamydia*; the 0.5% erythromycin ointment, 1% tetracycline ointment and 2.5% povidone-iodine solutions have all been suggested and utilized as less chemically irritating alternatives in preventing neonatal gonococcal conjunctivitis. However, none have been shown to consistently prevent chlamydial conjunctivitis^(1-4,6-9). A problem with antibiotics is the high incidence of multidrug-resistant gonococcal strains, including penicillinase strains and strains with relatively high minimum inhibitory concentrations for tetracycline^(11,15).

Shortly after birth, ophthalmic prophylaxis for gonorrhea should be administered to all infants, including those delivered by cesarean section since ascending infection can occur. Two drops of a 1% silver nitrate solution or a 1 cm ribbon of antibiotic ointment (0.5% erythromycin or 1% tetracycline) are applied to each lower conjunctival sac. The eyes should not be flushed or irrigated⁽⁸⁾. Currently, there is no antibiotic agent effective for use as prophylaxis for *Chlamydia ophthalmia neonatorum*^(1-4,6-9). Chemical conjunctivitis is self-limiting and requires no treatment.

Without prompt treatment, *N. gonorrhoeae* ocular infection may spread to the deeper layers of the conjunctiva and cornea^(2,10). Corneal ulceration and perforation, iridocyclitis, anterior synechiae, and panophthalmitis from untreated gonococcal ophthalmitis may result in permanent vision loss and blindness^(1,4,6). Some countries (e.g. Denmark, Sweden, and the United Kingdom) discontinued general prophylaxis for ON altogether, arguing that no substance is 100% safe for the purpose. In these countries the risk of contracting a sight-threatening infection with *N. gonorrhoeae* is extremely low and most women receive prenatal care including screening for Sexually Transmitted Infections⁽¹⁵⁾.

References

- Hammerschlag MR. Neonatal Conjunctivitis. *Pediatr Ann* 1993; 22(6):346-351.
- Overall JC. The Fetus and the Neonatal Infant. In: Behrman RE, et al (eds). *Nelson Textbook of Pediatrics*, 14th ed. 1992, Phil: W.B. Saunders Company, pp. 504-505.
- Chlamydial Infections. In: Pickering LK (ed). 2000 Red Book: Report of the Committee on Infectious Diseases, 25th ed. 2000, Elk Grove Village, IL: AAP, pp. 205-212.
- Schachter J. Why we need a program for the control of *Chlamydia trachomatis* (editorial). *New Engl J Med* 1989;320(12):802-803.
- Phillips CF. Chapter 12 - Infectious Diseases. In: Behrman RE, et al (eds). *Nelson Textbook of Pediatrics*, 14th ed. 1992, Phil: W.B. Saunders Company, pp. 786-787.
- Hammerschlag MR. Neonatal ocular prophylaxis. *Pediatr Infect Dis J* 1988; 7:81-82.
- Hammerschlag MR, et al. Efficacy of neonatal ocular prophylaxis for the prevention of chlamydial and gonococcal conjunctivitis. *New Engl J Med* 1989; 320(12):769-772.
- Prevention of Neonatal Ophthalmia. In: Pickering LK (ed). 2000 Red Book: Report of the Committee on Infectious Diseases, 25th ed. 2000, IL: AAP, pp. 735-742.
- Gonococcal Infections. In: Pickering LK (ed). 2000 Red Book: Report of the Committee on Infectious Diseases, 25th ed. 2000, Elk Grove Village, IL: AAP, pp. 254-260.
- Wagner RS. Eye infections and abnormalities: Issues for the pediatrician. *Contemp Pediatr* 1997; 14(6): 137-153.
- Klauss V, Schwartz EC. Other conditions of the outer eye. In: Johnson GJ, Minassian DC, Weale R, eds. *The epidemiology of eye disease*. London, Chap & Hall, 1998.
- Klauss V, Franssen L. Neonatal ophthalmia in tropical countries. In: Bialasiewicz AA, Schaal KP, eds. *Infectious diseases of the eye*. London, Butterworth-Heinemann, 1994.
- Oriel JD. Eminent venereologists. 5: Carl Crede. *Genitourinary Medicine*, 1991, 67: 67-69.
- Crede CSF. Die Verhütung der Augenzündung der Neugeborenen [Prevention of inflammatory eye disease in the newborn]. *Archiv für Gynaekologie*, 1881, 17:50-53.
- Egger SF, Huber-Spitzy V. Prophylaxe der ophthalmia neonatorum [Prophylaxis of ophthalmia neonatorum]. *Spektrum der Augenheilkunde*, 2000, 14: 159-162.
- Nsanze H et al. Ophthalmia neonatorum in the United Arab Emirates. *Annals of Tropical Paediatrics*, 1996, 16: 27-32.

I/We have read about the risks of *N. gonorrhoeae* ocular infection and do hereby release our midwives from any and all liability related to NOT administering eye prophylaxis to our newborn. I/We have been informed of the possible consequences.

Date _____

Client _____

Witness _____

Partner _____

¹ Severe purulent conjunctivitis, or inflammation of the mucous membrane that lines the eyelids.