

A 10-day-old girl is brought to the office for evaluation of bilateral eye discharge. The patient was born at home to a 16-year-old girl who had no prenatal care. The discharge began 3 days ago and was initially watery but has become mucoid. The patient's temperature is 36.7 C (98 F). She has bilateral chemosis, mild eyelid swelling, and mucopurulent discharge. The rest of the examination is normal. Which of the following is recommended to prevent this patient's condition?

- ☐ A. Early screening and treatment of the newborn
- ☐ B. Erythromycin ophthalmic ointment applied within 1 hour of birth
- ☐ C. Gentle massage over the nasolacrimal ducts
- ☐ D. Lubrication with artificial tears
- ☐ E. Maternal testing and treatment during pregnancy

A 10-day-old girl is brought to the office for evaluation of bilateral eye discharge. The patient was born at home to a 16-year-old girl who had no prenatal care. The discharge began 3 days ago and was initially watery but has become mucoid. The patient's temperature is 36.7 C (98 F). She has bilateral chemosis, mild eyelid swelling, and mucopurulent discharge. The rest of the examination is normal. Which of the following is recommended to prevent this patient's condition?

- ☐ A. Early screening and treatment of the newborn [2%]
- ☐ B. Erythromycin ophthalmic ointment applied within 1 hour of birth [52%]
- ☐ C. Gentle massage over the nasolacrimal ducts [1%]
- ☐ D. Lubrication with artificial tears [0%]
- ☒ E. Maternal testing and treatment during pregnancy [45%]

Proceed to Next Item

Explanation:

User Id: [REDACTED]

Type	Onset age	Findings	Treatment
Chemical	<24 hr	Mild conjunctival irritation/injection & tearing after silver nitrate ophthalmic prophylaxis	Eye lubricant
Gonococcal	2-5 days	Marked eyelid swelling; profuse purulent discharge; corneal edema/ulceration	Intravenous or intramuscular ceftriaxone or cefotaxime
Chlamydial	5-14 days	Eyelid swelling; chemosis; watery, bloody, or mucopurulent eye discharge	Oral erythromycin

©UWorld

This patient's clinical presentation is most consistent with acquired chlamydial conjunctivitis, one of the most common causes of neonatal conjunctivitis. Maternal infection may be asymptomatic but can be transmitted to the neonate during vaginal delivery. Up to 50% of exposed infants develop conjunctivitis, but up to 30% develop

Chlamydial	5-14 days	Eyelid swelling; chemosis; watery, bloody, or mucopurulent eye discharge	Oral erythromycin
------------	-----------	--	-------------------

©UWorld

This patient's clinical presentation is most consistent with acquired chlamydial conjunctivitis, one of the most common causes of neonatal conjunctivitis. Maternal infection may be asymptomatic but can be transmitted to the neonate during vaginal delivery. Up to 50% of exposed infants develop conjunctivitis, but up to 30% develop pneumonia. Chlamydial conjunctivitis typically develops at **age 5-14 days** and presents with bilateral **chemosis** (thickened, injected conjunctivae), **eyelid swelling**, and **watery or mucopurulent discharge**. Eye discharge can also be bloody due to the friable conjunctivae. Untreated infection can lead to corneal and conjunctival scarring. Chlamydial pneumonia typically manifests at age 4-12 weeks with a paroxysmal staccato cough.

First-line treatment for both chlamydial conjunctivitis and pneumonia consists of a course of **oral erythromycin**. Oral erythromycin is associated with risk of infantile hypertrophic pyloric stenosis, but the benefits of treating and preventing complications of chlamydial infection outweigh this risk.

The Centers for Disease Control and Prevention recommends that all pregnant women should be screened for chlamydia at the first prenatal visit. Maternal screening should be repeated in the third trimester in all high-risk women (eg, age <25, new or multiple sexual partners). Treatment of maternal chlamydia is the best method to prevent neonatal infection.

(Choice A) Newborn screening is recommended for inborn errors of metabolism, congenital hypothyroidism, cystic fibrosis, and numerous other conditions. However, universal screening for neonatal chlamydia is not recommended, as maternal screening is highly effective for preventing neonatal infection.

(Choice B) Erythromycin ophthalmic ointment is recommended for all newborns regardless of prenatal screening results. It is applied to prevent gonococcal conjunctivitis (ie, ophthalmia neonatorum), which typically presents at age 2-5 days with copious purulent eye discharge and eyelid swelling. However, topical erythromycin ointment is not effective in preventing or eradicating chlamydia.

(Choice C) Dacryostenosis is the most common cause of neonatal eye discharge due to poor drainage of tears through the nasolacrimal duct. This condition is generally benign and not associated with conjunctival or eyelid inflammation. Gentle massage over the nasolacrimal duct is recommended for dacryostenosis.

(Choice D) In neonates, chemical conjunctivitis occurs commonly on the first day of life

of oral erythromycin. Oral erythromycin is associated with risk of infantile hypertrophic pyloric stenosis, but the benefits of treating and preventing complications of chlamydial infection outweigh this risk.

The Centers for Disease Control and Prevention recommends that all pregnant women should be screened for chlamydia at the first prenatal visit. Maternal screening should be repeated in the third trimester in all high-risk women (eg, age <25, new or multiple sexual partners). Treatment of maternal chlamydia is the best method to prevent neonatal infection.

(Choice A) Newborn screening is recommended for inborn errors of metabolism, congenital hypothyroidism, cystic fibrosis, and numerous other conditions. However, universal screening for neonatal chlamydia is not recommended, as maternal screening is highly effective for preventing neonatal infection.

(Choice B) Erythromycin ophthalmic ointment is recommended for all newborns regardless of prenatal screening results. It is applied to prevent gonococcal conjunctivitis (ie, ophthalmia neonatorum), which typically presents at age 2-5 days with copious purulent eye discharge and eyelid swelling. However, topical erythromycin ointment is not effective in preventing or eradicating chlamydia.

(Choice C) Dacryostenosis is the most common cause of neonatal eye discharge due to poor drainage of tears through the nasolacrimal duct. This condition is generally benign and not associated with conjunctival or eyelid inflammation. Gentle massage over the nasolacrimal duct is recommended for dacryostenosis.

(Choice D) In neonates, chemical conjunctivitis occurs commonly on the first day of life when silver nitrate is used to prevent neonatal bacterial conjunctivitis. Lubrication drops or ointment is recommended to alleviate noninfectious conjunctivitis but would not be significantly helpful in patients with bacterial conjunctivitis.

Educational objective:

Universal maternal prenatal testing and treatment for chlamydia are recommended to prevent neonatal infection. Oral erythromycin is the treatment of choice for neonatal chlamydia. Erythromycin ophthalmic ointment can prevent neonatal gonococcal but not chlamydial conjunctivitis.

References:

1. [Chlamydial and gonococcal infections in infants and children.](#)
2. [Sexually transmitted diseases treatment guidelines, 2010.](#)