



CLINICAL GUIDELINE

Eye Care: Eye Infections and Conjunctivitis

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| Scope (Staff): | Nursing and Medical Staff |
| Scope (Area): | NICU KEMH, NICU PCH, NETS WA |

This document should be read in conjunction with this [DISCLAIMER](#)

Background

Neonatal Conjunctivitis (also known as Ophthalmia Neonatorum) is a common infection in the newborn. Neonatal conjunctivitis is a form of conjunctivitis (inflammation of the outer eye) which affects newborn babies following birth. If left untreated may cause blindness. It can present as white, watery or purulent ocular discharge and drainage. Further symptoms can include redness swelling, eyelid oedema and itchiness to the whole ocular region (pruritus).

There are three main causes of neonatal conjunctivitis – Bacterial, Viral and Chemical. Bacterial infection is the most likely cause, if the symptoms occur within 2-5 days of birth.

Stages of Eye Irritation

1. **Moist eyes-** Presence of some eyelid oedema and moisture to eyes, but there is no stickiness and no crusting. This is usually bilateral and simple sterile eye toilets should be given to these infants.
2. **Sticky eyes-** Mild eye infections are sometimes referred to as 'sticky eyes'. Usually presents with eyelid redness, oedema and crusting around the eyelid. Frequent eye toilets with sterile cotton wool moistened with normal saline.
3. **Purulent eye infection** (conjunctivitis) - Purulent discharge from eyes may be a result from a congenital or acquired infection. Perform eye toilet and inform the medical team. Eye swabs are required, complete eye swabs prior to treatment with appropriate eye drops.

Eye Irritation other than infective causes

- Naso-lacrimal duct obstruction may cause ongoing stickiness to eyes.
- Corneal abrasion due to trauma at delivery
- Foreign body
- Glaucoma which can present with corneal cloudiness, or proptosis (protrusion of the eyeball)

Causes of Neonatal Conjunctivitis

| <p>Infection can be contracted during birthing process. Look at maternal history to ascertain risk of sexually transmitted diseases.</p> | |
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| Organism | Clinical Features |
| <p>Staphylococcus aureus, Streptococcus pneumoniae, Haemophilus spp, Enterococci</p> | <ul style="list-style-type: none"> • Onset 2-5 days post birth • Often unilateral crusted purulent discharge |
| <p>Neisseria gonorrhoeae Infants found to be positive should be checked for systemic infection with blood and CSF cultures</p> | <ul style="list-style-type: none"> • Onset 3 days-3 weeks post birth • Bilateral copious white discharge • Redness and oedema |
| <p>Pseudomonas aeruginosa</p> | <ul style="list-style-type: none"> • Onset 5-18 days post birth • Lid oedema with purulent discharge • Can have severe outcomes if left untreated • Consider ophthalmology review |
| <p>Chlamydia trachomatis</p> | <ul style="list-style-type: none"> • Onset 5-14 days post birth • Unilateral or Bilateral, with copious purulent discharge • Common cause of bacterial conjunctivitis |
| <p>Herpes Simplex</p> | <ul style="list-style-type: none"> • Conjunctivitis with vesicles on other parts of body • Requires urgent Ophthalmology review |

Performing Eye Care

Equipment Required

- Sterile cotton balls
- Sterile sodium chloride 0.9%
- Non sterile gloves

Procedure

1. Explain the procedure to the parents/carer.
2. Perform hand hygiene.
3. Open the cotton wool balls and moisten with sterile saline.
4. Perform hand hygiene.
5. Don non-sterile gloves.
6. Clean the least effected eye first.
7. Gently wipe across eyelids starting at the inner canthus (inner corner of eye) and moving laterally to the outer canthus. Discard the swab after one sweep. Continue until the eyelids appear clean.

- It may be necessary to gently separate eyelids to cleanse all discharge.
8. Discard equipment and gloves.
 9. Perform hand hygiene.
 10. Document.

Administration of Eye Drops

Equipment Required

- Sterile cotton balls
- Prescribed Eye Drops
- Non sterile gloves

Procedure

1. Explain the procedure to the parents/carer.
2. Perform hand hygiene.
3. Open the cotton wool balls.
4. Perform hand hygiene.
5. Don non-sterile gloves.
6. Administer eye drop to affected eye.
ONE BOTTLE ONLY FOR BOTH EYES PER PATIENT
7. Wipe away excess drops with sterile cotton balls
8. Perform Hand Hygiene

TIPS: You may need a second person to assist with opening the baby's eyes. Offering the baby a dummy may also assist with any resistance during the procedure.

Swab Collection

Microbiological examination can be completed using eye swabs in a neonate with persistent discharging eyes. Medical review and order is required.

Key Points

- Bacterial eye swabs should be the first line of action. If the eye fails to respond to prescribed treatment, then chlamydial and viral swabs should be sent. Chlamydia has a longer incubation period, from 4 days and up to 2 weeks of age; therefore a sticky eye in the first 4 days of life is unlikely to be indicative of chlamydial infection.
- If the infant is delivered vaginally through active genital herpes lesions, an eye swab in viral medium should be sent on admission as part of the septic screen.
- Viral transport medium (VTM) contains antibiotics to keep the virus stable on transport to the laboratory; therefore it is important not to use VTM for chlamydial or bacterial examination.

Equipment Required

| Bacterial examination | Chlamydial examination | Viral examination |
|---|---|---|
| <ul style="list-style-type: none"> • Normal Saline • Charcoal Swab • Sterile Swab • Glass slide and slide carrier • Sterile cotton balls | <ul style="list-style-type: none"> • Normal Saline • Aluminium wire shafted swab • Teflon coated slide and slide carrier • Sterile scissors • Sterile cotton balls | <ul style="list-style-type: none"> • Normal Saline • Sterile Swab • Viral transport medium • Sterile scissors • Sterile cotton balls |

Procedure

1. Perform eye toilet as above, to remove exudate from eye. If both eyes have discharge present, a swab from each eye should be sent. Ensure the swabs they are correctly labelled (Right eye, Left eye).
2. Moisten swab stick with normal saline to provide optimum medium for bacterial / viral / chlamydial growth.
3. Gently fold down lower eyelid and run swab stick across the inner surface, rotating swab to ensure specimen collection.
 - If requiring chlamydial swabs continue on to the inner canthus and rotate the swab across the inner canthus.
 - Note: cells need to be collected not just exudate.
4. Avoid causing trauma to eye mucosa.
5. Smear swab along glass slide if applicable and place into transport medium.
6. The chlamydial swab and viral swab will need to be cut with sterile scissors.

Treatment

Treatment depends on the diagnosis and it can range from regular eye care to eye drops and eye ointment. As prescribed by the medical team.

Related CAHS internal policies, procedures and guidelines

Neonatology guideline



- [Sepsis: Neonatal](#)

References and related external legislation, policies, and guidelines

1. Red Book 2012 Report of the Committee on Infectious Diseases, American Academy of Paeds.
2. Remington and Klein. Infectious diseases of the fetus and newborn. 4th Ed. 1995.
3. Starship Children's Health Guidelines, Infections in and around the eye.
4. <https://www.msmanuals.com/en-au/professional/pediatrics/infections-in-neonates/neonatal-conjunctivitis>

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| File Path: | | | |
| Document Owner: | Neonatology | | |
| Reviewer / Team: | Neonatal Coordinating Group | | |
| Date First Issued: | December 2019 | Last Reviewed: | 23 rd December 2019 |
| Amendment Dates: | | Next Review Date: | 23 rd December 2022 |
| Approved by: | Neonatal Coordinating Group | Date: | 13 th January 2020 |
| Endorsed by: | Neonatal Coordinating Group | Date: | |
| Standards Applicable: | NSQHS Standards:   | | |
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