10 CARE OF THE NEONATE

10.5 COMPLICATIONS OF THE NEONATE

10.5.1 NEONATAL SEPSIS

10.5.1.1 EYE INFECTIONS IN THE NEWBORN

AIM

The identification and appropriate management of eye infections in the neonate.

BACKGROUND INFORMATION

Conjunctivitis is the most common neonatal infection, and bacterial infection is the most likely cause if it occurs within 2-5 days of birth. Purulent discharge is more common with bacterial infections. Infection from *Chlamydia trachomatis* (usually seen 5-14 days post birth) may initially present as watery discharge and later become purulent, and if blood-stained is highly specific for Chlamydia. *Herpes simplex* conjunctivitis may present 5 - 14 days post birth and usually causes a nonpurulent and serosanguineous discharge. A greenish discharge is more characteristic of *Pseudomonas aeruginosa* infection, while gonorrhoea infection causes the neonate to have red, swollen eyes with purulent discharge.¹

Other causes that may mimic conjunctivitis such as foreign bodies, lacrimal duct obstruction, trauma and glaucoma should be excluded.¹

DEFINITIONS AND MANAGEMENT

‘PUFFY EYES’

Both upper and lower eyelids are oedematous so that the conjunctivae are not visible. There are no extra secretions. This is usually bilateral and no treatment is required.

‘MOIST EYES’

The eyelids may be oedematous and moist but there is no stickiness and no crusting of the lids. This is usually bilateral and simple sterile eye toilets should be given to these neonates.

NASAL LACRIMAL DUCT OBSTRUCTION

Nasolacrimal duct obstruction is caused by an imperforate membrane at the end of the nasolacrimal duct, and is found in 2 – 6% of all newborns.² Persistent tearing, crusting or matting of the eyelids, and spilling of tears without conjunctivitis may indicate nasal lacrimal duct obstruction,²,³ which is usually unilateral.¹ Mucopurulent material discharge may occur and indicate need for ophthalmic antibiotics. Conservative management is recommended in the first year of life as the majority of cases will resolve spontaneously or with massage.²,³
‘STICKY EYES’
Mild eye infections are referred to as ‘sticky eyes’. Frequent eye cleansing with sterile cotton wool moistened with normal saline may be all that is required.\(^n\)

**Note:** if there are any doubts about eye discharge / infection with \(^p\) purulent discharge, inform the paediatric team immediately.

**PURULENT EYE INFECTION (CONJUNCTIVITIS)**

Purulent discharge from eyes may result from congenital or acquired infection. Perform eye toilet and inform the paediatrician/paediatric registrar or RMO.

**Note:** if there are any doubts about eye discharge / infection with \(^p\) purulent discharge inform the paediatric team immediately.

Conduct a history, physical examination, and document the eye discharge including:

- the age of the infant – timing of the eye infection may indicate risk from different causative bacteria\(^1\)
- determination if the infection is unilateral or bilateral\(^1\)
- the characteristics of the discharge\(^1\)
- maternal history of sexually transmitted diseases,\(^1\) and confirmation of normal pathology results for sexually transmitted infections if done during the pregnancy
- exclusion of other causes e.g. eye trauma, lacrimal duct obstruction, foreign bodies, glaucoma\(^1\)
- physical examination to exclude respiratory or systemic infection\(^1\)

**EYE TOILET**

**EQUIPMENT**

- Sterile cotton balls
- Sterile sodium chloride 0.9%

**PROCEDURE**

1. Explain the procedure to the mother/parents
2. Open the cotton wool balls and pour the sodium chloride over them
3. Perform hand hygiene
4. Clean the least effected eye first
5. Gently wipe across eyelids starting at the inner canthus and moving laterally to the outer canthus. Discard the swab after one sweep. Continue until the eyelids appear clean.\(^5\)
6. Perform hand hygiene
7. Document

**SPECIMEN COLLECTION**

Refer to [Neonatal Clinical Care Unit Guidelines, Section 8 Infection, septic screening and management](#) for instruction regarding collection of bacterial / viral eye swabs.

- Specimens are collected from each eye
- Perform an eye toilet after collection of the swabs
TREATMENT OF EYE INFECTIONS

Refer to Neonatal Clinical Care Unit Guidelines, Section 8 Infection, septic screening and management
Also see Clinical Guidelines Neonatal Drug Protocols A-Z for individual antibiotic treatments

1. Ensure written instruction are clearly documented on the ‘MR811 Neonatal Inpatient Medication Chart’.
2. Label all eye medications with the neonate’s identification sticker, the date of opening and the eye the medication is to be used in e.g. left or right eye. Discard the medication according to the expiry date following manufacturer’s instructions.
3. The medication must be checked against the written order and the neonate’s identification bands by two nursing /midwifery staff.
4. Perform hand hygiene, then complete an eye toilet.
5. Instil eye medication.
6. Perform hand hygiene.
8. Provide verbal instructions to the mother about the technique of instilling eye medication, the expiry date of the medication, storage, and hygiene measures prior to discharge if the treatment has not been completed.

REFERENCES