Newborn Services Clinical Guideline

Note: The electronic version of this guideline is the version currently in use.
Any printed version can not be assumed to be current. Printed copies of this document are valid for Saturday, July 11, 2020.
The general disclaimer regarding use of Newborn Services Guidelines and Protocols applies to this guideline.

Neonatal Conjunctivitis

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Demographics Diagnosis Causes References Antibiotics

Incidence

- 2-12% of newborns develop conjunctivitis in the first 28 days of life.

Presentation

- Conjunctival erythema
- Purulent discharge
- Lid oedema
- Look for involvement of any other system, e.g. herpes vesicles, infected scalp pH site.
- In a well term baby take swab and consider saline drops alone while awaiting swab results. The most common cause of conjunctival discharge/sticky eye is naso lacrimal duct obstruction. Often self-limiting.

History

Maternal history

- sexually transmitted diseases or exposure.
- results of high vaginal, cervical and urethral swabs in pregnancy

Diagnosis

Bacterial culture - Do this first unless Chlamydia is strongly suspected - if Gram stain finds Gram -ve bacilli, seriously consider Pseudomonas and consider sepsis screen and parenteral anti-Pseudomonal antibiotics	- Swab for MC & S (standard blue swab). - Ask lab to process urgent gram stain for gonococcus if suspected. In working hours a special swab can be used to test for N.gonorrhea
- if Gram stain finds Gram -ve bacilli, seriously consider Pseudomonas and consider sepsis screen and parenteral anti-Pseudomonal antibiotics	- PCP (BD probe tec swabs). Can also be used for Chlamydia (use small blue).
Chlamydia - Tends to present between days 5-14.	- Swab as above (Chlamydia PCR).
Viral Conjunctivitis, Adenovirus, Enterovirus and HSV	- Green viral culture swab for HSV(processed 5 days/week).

NB: Transport all specimens ASAP to Microbiology Laboratory, LabPlus.

Causes

Non-Infectious	■ Nasolacrimal duct obstruction may cause 'sticky' eyes. ■ Corneal abrasion following trauma at delivery. ■ Glaucoma (watch for corneal clouding or proptosis, is associated with portwine stains in the ophthalmic region). ■ Foreign body.

Infectious	**Organism**	**Age of Onset**	**Clinical Features**	**Therapy**
	Staphylococcus aureus Streptococcus pneumoniae, Haemophilus spp, Enterococci	2-5 days	Unilateral, crusted purulent discharge	Topical Framycetin (soframycin) drops qds for 5 days
	Neisseria gonorrhoeae # Infants who are positive need to be evaluated for disseminated infections	3 days to 3 weeks	Bilateral, hyperaemic, chemosis, copious thick white discharge	Ceftriaxone 50mg/kg IV/IM as a single dose (maximum 125mg), Saline irrigations hourly until exudate resolves.
	Pseudomonas aeruginosa +	5-18 days	Oedema and erthyema of lid, purulent discharge.	IV anti-pseudomonal antibiotics. Topical Gentamicin.
	Chlamydia trachomatis *	5-14 days	Unilateral or bilateral, mild conjunctivitis, copious purulent discharge.	PO erythromycin 50mg/kg/day x 14d (qid)Alternative, 5 days Azithromycin syrup (= pertussis dosing 10mg/kg/day and 5mg/kg day 2-5)
	Herpes simplex		Conjunctivitis with vesicles elsewhere Need ophthalmology review within 24 hours.	Acyclovir 30mg/kg/day IV tid x 14-21d. Topical acyclovir 3% 5 times daily. Isolation.

Uncommon, potential for serious consequences - severe keratitis and endophthalmitis. Requires early recognition and treatment. Needs blood and CSF culture. Consider concomitant chlamydial infection if poor response to cephalosporin. Parents require investigation and screening.

+ Risk of rapid progression from purulent discharge to denuding of corneal epithelium, and perforation of cornea. The anterior chamber can fill with fibrinous exudate, iris can adhere to cornea and later blood vessel invasion. The late ophthalmic complications can be followed by bacteraemia and septic foci.

* Most common pathogen, 20-50% of exposed infants will develop chlamydia conjunctivitis, 10-20% will develop pneumonia. If relapse occurs repeat course of erythromycin for further 14 days. Parents require treatment.
NB: Chloramphenicol in topical therapy can obscure results of tests for chlamydia.

In cases of Chlamydia/N.gonorrhea, the LMC (midwife) needs to be informed.

Antibiotic Eye Preparations

Generic Name	Trade Name and Preparation	Usual susceptibility				Potential Adverse Effects
		Staphylococci	Steptococci	Gram negative bacilli	Pseudomonas	
Chloramphenicol 0.5% QDS for 5 days	Chlomin drops, ointment Chloromycetin drops, ointment Chloroptic drops, ointment Chlorsig drops, ointment Minims drops	+	+	+	-	May obscure results of tests for *Chlamydia;* rarely marrow aplasia.
Framycetin (Soframycin)	Framycetin 5% drops, ointment	+	+	-	-	May obscure results of tests for *Chlamydia*; rarely ototoxicity or marrow aplasia.
Fusidic acid (Sodium fusidate)	Fucithalmic 1% drops	+	-	+	-	Rarely transient stinging.
Gentamicin	Genoptic 0.3% drops Minims drops	+	-	+	+	Sensitisation; development of resistant organisms.
Sulphacetamide	Acetopt drops Bleph 10% Liquifilm drops Minims drops	+	+	+	-	Inactivated by pus and tissue breakdown products.

References

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.

Starship Children's Health Guidelines, Infections in and around the eye.