GUIDELINE

Eye Infections: Paediatric Empiric Guidelines

Scope (Staff):	Medical, Nursing and Pharmacy
Scope (Area):	Perth Children's Hospital (PCH)

Child Safe Organisation Statement of Commitment

The Child and Adolescent Health Service (CAHS) commits to being a child safe organisation by meeting the National Child Safe Principles and National Child Safe Standards. This is a commitment to a strong culture supported by robust policies and procedures to ensure the safety and wellbeing of children at CAHS.

This document should be read in conjunction with this DISCLAIMER

CLINICAL SCENARIO		Usual duration	DRUGS/DOSES			
			Standard Protocol	Known or Suspected MRSA[a]	Penicillin allergy[b] Low risk	Penicillin allergy[b] High Risk
Periorbital Cellulitis	Periorbital cellulitis < 1 month	7 days	IV cefotaxime (doses as per Neonatal Guidelines)	IV cefotaxime and vancomycin (doses as per Neonatal Guidelines)	As per standard protocol	Discuss with ID or Microbiology service
			For patients < 3 months swab for Gonorrhoea and Chlamydia			
	Mild periorbital cellulitis ≥ 1 month	7 days	Oral amoxicillin/clavulanic acid 25mg/kg (to a maximum of 875mg amoxicillin component) 12 hourly.	**Add** cotrimoxazole[c] to standard protocol	cefalexin[d] **or** cefuroxime[e] (if HiB suspected) **or** consider amoxicillin challenge in discussion with immunology	Discuss with ID or Microbiology service
			For patients < 3 months swab for Gonorrhoea and Chlamydia			

<table>
<tr><th colspan="2" rowspan="2">CLINICAL SCENARIO</th><th rowspan="2">Usual duration</th><th colspan="4">DRUGS/DOSES</th></tr>
<tr><th>Standard Protocol</th><th>Known or Suspected MRSA[a]</th><th>Penicillin allergy[b] Low risk</th><th>Penicillin allergy[b] High Risk</th></tr>
<tr><td rowspan="4">Periorbital Cellulitis</td><td rowspan="3">Moderate Periorbital (preseptal) cellulitis ≥ 1 month</td><td rowspan="3">Total 7-10 days (IV and oral)</td><td>IV flucloxacillin 50mg/kg/dose (to a maximum of 2 grams) 6 hourly.

and
IV ceftriaxone 50mg/kg/dose (to a maximum of 2 grams) once daily.

then consider
Step down to oral amoxicillin /clavulanic acid 25mg/kg/dose (to a maximum of 875mg amoxicillin component) 12 hourly.</td><td>ceftriaxone[g] and vancomycin[f]</td><td>ceftriaxone[g] and clindamycin[h]</td><td>Discuss with ID or Microbiology service</td></tr>
<tr><td colspan="4">For patients < 3 months swab for Gonorrhoea and Chlamydia</td></tr>
<tr><td colspan="4">Refer to HiTH Antimicrobial guidelines for suitable HiTH antibiotic options.</td></tr>
<tr><td>Severe periorbital (post septal) or orbital cellulitis (≥ 1 month)</td><td>Total 7-10 days (IV and oral)</td><td>IV ceftriaxone 50mg/kg/dose (to a maximum of 2 grams) once daily.
and
IV vancomycin 15mg/kg/dose (to a maximum initial dose of 750mg) 6 hourly.

then consider
Step down to oral amoxicillin /clavulanic acid 25mg/kg/dose (to a maximum of 875mg amoxicillin component) 12 hourly.</td><td colspan="2">As per standard protocol.</td><td>Discuss with ID or Microbiology service</td></tr>
<tr><td colspan="5">Antibiotics alone are not definitive management. Immediate referral to appropriate specialist surgical services is essential</td></tr>
<tr><td></td><td rowspan="2">Penetrating eye injury (including open globe rupture or laceration) and / or endopthalmitis</td><td rowspan="2">Total 7 days (IV and oral)</td><td>IV ceftazidime 50mg/kg/dose (to a maximum of 2 grams) 8 hourly.
and
IV vancomycin 15mg/kg/dose (to a maximum initial dose of 750mg) 6 hourly.</td><td colspan="2">As per standard protocol.</td><td>ciprofloxacin[i] and vancomycin[f]</td></tr>
<tr><td colspan="5">Antibiotics alone are not definitive management.
Immediate referral to appropriate specialist surgical services is essential.

IV treatment around the time of injury and for one to two (1-2) days. Consider changing to oral ciprofloxacin 10mg/kg/dose (to a maximum of 750mg) 12 hourly for seven (7) days once surgically stable.</td></tr>
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<tr><td rowspan="2">Conjunctivitis</td><td>Conjunctivitis</td><td>Up to 7 days</td><td colspan="4">Topical chloramphenicol 0.5% eye drops; instil one to two (1-2) drops into the affected eye(s)
every two (2) hours on day one (1), then reduce to four (4) times daily until discharge resolves.</td></tr>
<tr><td>Contact lens conjunctivitis</td><td>varies</td><td colspan="4">Topical steroids to reduce inflammation (e.g. prednisolone 0.5% eye drops; instil one to two (1-2) drops into the affected eye(s) two (2) to four (4) times a day).

and / or
Topical ciprofloxacin 0.3% eye drops; instil one (1) drop into the affected eye(s) four (4) times daily.

Patients should be instructed to stop using contact lenses for at least two (2) weeks and review lens care with an optometrist.</td></tr>
<tr><td rowspan="2">Dacryocystitis</td><td>Dacryocystitis (mild)</td><td>5 days</td><td colspan="4">Topical chloramphenicol 0.5% eye drops; instil one to two (1-2) drops into the affected eye(s) four (4) times daily.</td></tr>
<tr><td>Dacryocystitis (severe)</td><td>7 days</td><td>Oral cefalexin 12.5mg/kg/dose (to a maximum of 500mg) 6 hourly.</td><td>cotrimoxazole[c]</td><td>As per standard protocol</td><td>cotrimoxazole[c]</td></tr>
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a. Children known or suspected to be colonised with MRSA may need to have their therapy/prophylaxis modified. Children suspected of having MRSA include:

   i. Children previously colonised with MRSA
   ii. Household contacts of MRSA colonised individuals
   iii. In children who reside in regions with higher MRSA rates (e.g. Kimberley and the Pilbara) a lower threshold for suspected MRSA should be given
   iv. Children with recurrent skin infections or those unresponsive to ≥ 48 of beta-lactam therapy. For further advice, discuss with Microbiology or ID service

b. Refer to the ChAMP Beta-lactam Allergy Guideline:

   - Low risk allergy: a delayed rash (>1hr after initial exposure) without mucosal or systemic involvement (without respiratory distress and/or cardiovascular compromise).
   - High risk allergy: an immediate rash (<1hr after exposure); anaphylaxis; severe cutaneous adverse reaction {e.g. Drug Rash with Eosinophilia and Systemic Symptoms (DRESS) and Stevens – Johnson syndrome (SJS) / Toxic Epidermal Necrolysis (TEN)} or other severe systemic reaction.

c. Oral cotrimoxazole 4mg/kg/dose of trimethoprim component 12 hourly; equivalent to 0.5mL/kg/dose of mixture, (maximum of 160mg trimethoprim component per dose).

d. Oral cefalexin 12.5mg/kg/dose (to a maximum of 500mg) 6 hourly.

e. Oral cefuroxime:

   i. Child 3 months to <2 years: 10mg/kg/dose (to a maximum of 125mg) 12 hourly.
   ii. Child ≥ 2 years: 15mg/kg/dose (to a maximum of 500mg) twice daily

f. IV vancomycin 15mg/kg/dose (to a maximum initial dose of 750mg) 6 hourly. Therapeutic drug monitoring is required.

g. IV ceftriaxone 50mg/kg/dose (to a maximum of 2000mg) once daily.

h. IV clindamycin 10mg/kg/dose (to a maximum of 600mg) 8 hourly.

i. IV ciprofloxacin 10mg/kg/dose (to a maximum of 400mg) 12 hourly. ChAMP approval required.

Related CAHS internal policies, procedures and guidelines
Antimicrobial Stewardship Policy
ChAMP Empiric Guidelines and Monographs

References and related external legislation, policies, and guidelines *(if required)*

1. Antibiotic Writing Group. Therapeutic Guidelines - Antibiotic. West Melbourne: Therapeutic Guidelines Ltd; 2019. Available from: http://online.tg.org.au.pklibresources.health.wa.gov.au/ip/.
2. Open Globe Injuries: Emergent evaluation and initial management [Internet]. Up To Date. 2016 [cited 19/07/2016]. Available from: https://www-uptodate-com.pklibresources.health.wa.gov.au/contents/open-globe-injuries-emergency-evaluation-and-initial-management?search=open%20globe%20injury&source=search_result&selectedTitle=1~16&usage_type=default&display_rank=1
3. Peri-orbital and orbital cellulitis [Internet]. BMJ Best Practice. 2016 [cited 19/07/2016]. Available from: http://bestpractice.bmj.com.pklibresources.health.wa.gov.au/best-practice/monograph/734.html
4. Acute conjunctivitis [Internet]. BMJ Best Practice. 2016 [cited 02/08/2016]. Available from: http://bestpractice.bmj.com.pklibresources.health.wa.gov.au/best-practice/monograph/68/treatment/details.html

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