**GUIDELINE**

# Intra-abdominal Sepsis – Paediatric Empiric Guidelines

| **Scope (Staff):** | Clinical Staff – Medical, Nursing , Pharmacy |
|---|---|
| **Scope (Area):** | Perth Children's Hospital (PCH) |

**Child Safe Organisation Statement of Commitment**

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

**This document should be read in conjunction with this disclaimer**

| **CLINICAL SCENARIO** | | **DURATION** | **DRUGS/DOSES** | | |
|---|---|---|---|---|---|
| | | | **Standard Protocol (including known or suspected MRSA[a])** | **Low Risk Penicillin allergy[b]** | **High Risk Penicillin allergy[b]** |
| Peritonitis | Presumed or proven peritonitis <1 month old | variable | IV piperacillin/tazobactam (dose as per neonatal guidelines)<br>**OR**<br>IV gentamicin[c] **WITH** IV amoxicillin **AND** IV metronidazole (doses as per neonatal guidelines) | Discuss with Infectious Diseases or Clinical Microbiology service. | |
| Peritonitis | Presumed or proven peritonitis ≥1 month old | variable | IV amoxicillin/clavulanic acid[d] | ceftriaxone[f] **AND** metronidazole[g] | gentamicin[e] **AND** clindamycin[h] |

| | CLINICAL SCENARIO | DURATION | DRUGS/DOSES | | |
|---|---|---|---|---|---|
| | | | **Standard Protocol (including known or suspected MRSA[a])** | **Low Risk Penicillin allergy[b]** | **High Risk Penicillin allergy[b]** |
| Appendicitis | Presumed Appendicitis ('normal' appendix) | Stop after surgery | IV amoxicillin/clavulanic acid[d] | ceftriaxone[f] **AND** metronidazole[g] | gentamicin[e] **AND** clindamycin[h] |
| Appendicitis | Appendicitis (**without** peritoneal soiling) | Stop after surgery | IV amoxicillin/clavulanic acid[d] | ceftriaxone[f] **AND** metronidazole[g] | gentamicin[e] **AND** clindamycin[h] |
| | | | **CONSIDER** switching to oral amoxicillin/clavulanic acid 25mg/kg/dose (to a maximum of 875mg amoxicillin component) 12 hourly for oral switch | Discuss with Infectious Diseases or Clinical Microbiology service when considering switch to oral switch | |
| Appendicitis | Appendicitis (**with** peritoneal soiling) | Up to 5 days (IV and oral) after source control | IV amoxicillin/clavulanic acid[d] | ceftriaxone[f] **AND** metronidazole[g] | gentamicin[e] **AND** clindamycin[h] |
| | | | **CONSIDER** switching to oral amoxicillin/clavulanic acid 25mg/kg/dose (to a maximum of 875mg amoxicillin component) 12 hourly for oral switch | Discuss with Infectious Diseases or Clinical Microbiology service when considering oral switch | |
| Other infections | Biliary sepsis or ascending cholangitis | variable | IV amoxicillin/clavulanic acid[d] | ceftriaxone[f] **AND** metronidazole[g] | gentamicin[e] **AND** clindamycin[h] |
| Other infections | Spontaneous bacterial peritonitis | 5 days if symptoms improve rapidly | IV ceftriaxone 50mg/kg/dose (to a maximum of 2 grams) once daily | As per standard protocol | Discuss with Infectious Diseases or Clinical Microbiology service. |
| **Intraperitoneal dosing for Peritoneal Dialysis (PD) associated peritonitis.** | | | | | |
| For long term renal patients on peritoneal dialysis refer to individual patient profiles as per PCH renal team. For patients in Paediatric Critical Care (PCC) unit at PCH undergoing peritoneal dialysis with presumed or confirmed peritonitis, contact the Renal and/or Infectious Diseases team. Treatment should be conducted in line with the ISPD Guidelines / Recommendations | | | | | |

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, Pilbara and Goldfields) 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) Gentamicin is rapidly bactericidal and should be administered prior to amoxicillin and metronidazole. Aminoglycoside antibiotics may be inactivated by penicillin and cephalosporin antibiotics and lines should be flushed well with a compatible fluid between administration.

d) IV amoxicillin/clavulanic acid (doses based on amoxicillin component):
- Birth (term) to 3 months and <4kg: IV infusion 25mg/kg/dose every 12 hours.
- Birth (term) to 3 months and >4kg: IV infusion 25mg/kg/dose every 8 hours.
- 3 months and <40kg: IV 25mg/kg/dose (maximum 1g) every 8 hours; increase to every 6 hours in severe infections.
- >40kg: IV 1g every 8 hours; increase to every 6 hours in severe infections. Up to 2g every 6-8 hours can be used.

e) IV/IM gentamicin Children ≥ 1 month old to 10 years old: 7.5mg/kg/dose ONCE daily to a maximum of 320mg. Children >10 years to 18 years: 6-7mg/kg/dose ONCE daily to a maximum of 560mg. Therapeutic drug monitoring required.

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

g) IV metronidazole **12.5mg/kg/dose** (to a maximum of 500mg) 12 hourly.

h) IV clindamycin **15mg/kg/dose** (to a maximum of 600mg) 8 hourly.

| Related CAHS internal policies, procedures and guidelines |
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| Antimicrobial Stewardship Policy |
| ChAMP Monographs |
| KEMH Neonatal Medication Protocols |

## References and related external legislation, policies, and guidelines


1. Therapeutic Guidelines Ltd. eTG complete [online]. West Melbourne: Therapeutic Guidelines Ltd; accessed online 12th October 2019.
2. Warady BA, Bakkaloglu S, Newland J, Cantwell M, Verrina E, Neu A, et al. Consensus Guidelines for the Prevention and Treatment of Catheter-Related

Infections and Peritonitis in Paediatric Patients Receiving Peritoneal Dialysis: 2012 Update. Perit Dial Int. 2012;32:S29-S86.

3. Li PK-T, Chow KM, Cho Y, Fan S, Figueiredo AE, Harris T, et al. ISPD peritonitis guideline recommendations: 2022 update on prevention and treatment. Peritoneal Dialysis International. 2022;42(2):110-53.

| Useful resources (including related forms) |
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| Therapeutic Guidelines |
| International Society for Peritoneal Dialysis Guidelines |

This document can be made available in alternative formats on request.

| File Path: | W:\Safety & Quality\CAHS\CLOVERS MEDICAL Pharmacy\Procedures Protocols and Guidelines\ChAMP\Word\Empiric Guidelines\PCH Templated (ED Guidelines) | | |
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