Child presents to ED with symptoms suggestive of meningitis

Assessment

Toxic/unstable?

No

Non-toxic

LP contraindicated? (A)

No

LP within 30 minutes?

Yes

- Perform LP
  - CSF MCS (urgent) & biochemistry
  - +/- Viral PCR
  - Blood cultures
  - +/- Meningococcal PCR
  - Seek senior advice re timing of antibiotics

- Dexamethasone (IV)
- Empirical antibiotics (IV)
- +/- Aciclovir (IV)

CSF consistent with meningitis?

No

Empiric antibiotics (IV) given?

No

Consider discharge

Refer to inpatient team or discharge as indicated

Yes

Refer to inpatient team

Yes

Refer to critical care

Yes

Consider timing of LP

No

Treatment as indicated

Yes

Consider treating

B. Toxic or unstable

- Altered level of consciousness or obtundation
- Signs of shock
- Coagulopathy
- Refractory seizures

See Sepsis Guideline

A. Contraindications to Lumbar Puncture (LP)
- Focal neurological signs
- Signs of raised intracranial pressure
- Reduced level of consciousness
- Haemodynamic instability
- Respiratory compromise

For more information refer to the Statewide Paediatric Guideline: Meningitis - Emergency Management in Children

Guideline 60008 - Appendix 1 (CHQ-GDL-60008) V1.0
Meningitis – Emergency Management in Children – Medications

Empiric antibiotic therapy for the treatment of meningitis – CHQ Antibiocard*

### Age | Drug
--- | ---
< 2 months | Cefotaxime (IV) 50mg/kg PLUS Ampicillin/Amoxyccillin (IV) 50 mg/kg  
See CHQ Antibiocard for subsequent dosing interval  
If encephalitis suspected ADD Aciclovir (IV) 20mg/kg

>2 months | Cefotaxime (IV) 50mg/kg (max 2g) every 6 hours  
OR Ceftriaxone (IV) 50 mg/kg (max 2g) every 12 hours  
If gram positive cocci in CSF:  
ADD Vancomycin (IV) 15mg/kg (max 500mg) every 6 hours  
If encephalitis suspected:  
ADD Aciclovir (IV) 10mg/kg every 8 hours

If documented cephalosporin anaphylaxis:  
Ciprofloxacin (IV) 10mg/kg (max 400 mg)  
PLUS Vancomycin (IV) 15 mg/kg (max 750 mg) and seek specialist ID advice within 24 hours.


Dexamethasone (IV) dosing for the treatment for meningitis in children > 3 months

### Dexamethasone (IV)
For children > 3months:  
0.15 mg/kg (maximum 10mg/dose), 6 hourly for 4 days if able to start prior to or within 1 hour of antibiotics.  
Do not delay antibiotic therapy if steroids are not available.

Fluid resuscitation (IV) for the management of shocked children

### Bolus dose
Normal saline (0.9% NaCl) administered in 20 mL/kg bolus to treat shock.  
Repeat in 20 mL/kg boluses as clinically indicated.

### Maintenance Fluid
0.9% NaCl + 5% glucose preferred.

Normal CSF values

<table>
<thead>
<tr>
<th></th>
<th>White cell count</th>
<th>Biochemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neutrophils (x 10^6/L)</td>
<td>Lymphocytes (x 10^6/L)</td>
</tr>
<tr>
<td>Normal (&gt;1 month of age)</td>
<td>0</td>
<td>≤ 5</td>
</tr>
<tr>
<td>Normal neonate (&lt;1 month of age)</td>
<td>0</td>
<td>&lt; 20</td>
</tr>
</tbody>
</table>

Taken from The Royal Children's Hospital, Melbourne, Australia, Clinical Practice Guideline on CSF Interpretation, [Internet; cited June 18], Available from: https://www.rch.org.au/clinicalguide/

For further information see Statewide Paediatric Guideline: Emergency Management in Meningitis