Child presents to ED with symptoms suggestive of meningitis

Assessment

Toxic/unstable?

Non-toxic

LP contraindicated? (Box B)

LP within 30 minutes?

- Perform LP
  - CSF MCS (urgent) and biochemistry
  - +/- Viral PCR
  - Blood cultures
  - +/- Meningococcal PCR
  - Seek senior advice re timing of antimicrobial therapy
  - +/- Dexamethasone (IV)
  - +/- Empirical antibiotic therapy (IV)
  - +/- Aciclovir (IV)

CSF consistent with meningitis?

Empirical antibiotics (IV) given?

- Consider discharge if well
- Management and disposition as per senior advice
- Refer to inpatient service

Toxic or unstable (Box A)

LP contraindicated (Box B)

See Sepsis Guideline

Resuscitate using ABCD

- Oxygen 15 L/min via NRBM
- Support ventilation (BVM)
- +/- ETT
- IV or IO access
- Bloods with BC + VBG as priority
- IV fluid boluses 20 mL/kg Sodium Chloride 0.9% as required
- Check BGL - give Glucose 10% (2 mL/kg) as required

Other management

- Blood cultures
- +/- Meningococcal PCR
- Dexamethasone (IV)
- Empirical antibiotic therapy (IV)
- +/- Aciclovir (IV)

Responding to treatment?

Yes

Empirical antibiotics (IV) given?

- Consider timing of LP
- Refer to Paediatric Critical Care

No

Management and disposition as per senior advice

Box A: Toxic or unstable

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

Box B: Contraindications to lumbar puncture (LP)

- Focal neurological signs
- Signs of raised intracranial pressure
- Reduced level of consciousness
- Haemodynamic instability
- Respiratory compromise

Call Retrieval Services Queensland (RSQ) on 1300 799 127 if no paediatric critical care facility onsite

Seek senior emergency/paediatric advice as per local practices

Consider seeking senior emergency/paediatric advice as per local practices

For more information refer to CHQ-GDL-60008 - Meningitis – Emergency management in children
Meningitis – Emergency management in children – Medications

Antimicrobial guidelines

Clinicians working in Townsville, Cairns and Gold Coast Hospital and Health Services should follow their local paediatric empirical antimicrobial therapy guidelines. Clinicians elsewhere in Queensland should follow the Children's Health Queensland paediatric antimicrobial prescribing guidelines until the results of microbiological investigations are available.

Links:
- Cairns (access via QH intranet)
- Children's Health Queensland
- Gold Coast
- Townsville (access via QH intranet)

Dexamethasone (IV) dosing for the treatment for meningitis in children over 3 months of age

<table>
<thead>
<tr>
<th>Dexamethasone (IV)</th>
<th>For children over 3 months of age:</th>
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<tbody>
<tr>
<td></td>
<td>0.15 mg/kg (maximum 10 mg/dose), every six hours for four days if able to start prior to or within one hour of antimicrobial therapy.</td>
</tr>
</tbody>
</table>

Do NOT delay antimicrobial therapy if steroids are not available.

Normal CSF values

<table>
<thead>
<tr>
<th>White cell count</th>
<th>Biochemistry</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Neutrophils (x 10^6/L)</td>
</tr>
<tr>
<td>Normal (more than 1 month of age)</td>
<td>0</td>
</tr>
<tr>
<td>Normal neonate (less than 1 month of age)</td>
<td>0</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 more information refer to CHQ-GDL-60008 - Meningitis – Emergency management in children