Diagnosis and secondary care: bacterial meningitis

Is there a reduced conscious level or focal neurological signs?

YES

Clinically stabilise child or young person. Perform CT scan in consultation with anaesthetist, paediatrician or intensivist to detect other possible intracranial pathologies.
Do not delay treatment to undertake a CT scan

NO

Are any of the following signs or conditions present?

- Features suggesting raised intracranial pressure other than a bulging fonatenelle
- Extensive or extending purpura
- Local superficial infection at potential lumbar puncture site
- Results of a CT scan show signs of raised intracranial pressure
- Uncorrected shock
- After convulsions
- Coagulation abnormalities
- Respiratory insufficiency

NO

Consider delaying lumbar puncture until there are no longer contraindications.

YES

Perform lumbar puncture as a primary investigation. Perform a repeat lumbar puncture in neonates who have persistent or re-emergent fever, deterioration in clinical condition, new clinical findings or persistently abnormal inflammatory markers.
Do not perform a repeat lumbar puncture in neonates:

- who are on the appropriate antibiotic and who are making a good clinical recovery.
- before stopping antibiotic therapy in those who are clinically well.

Lumbar puncture should not delay administration of parenteral antibiotics.

Do a CRP and white blood cell count.
Send blood and CSF samples for PCR testing, a CSF sample for examination of white blood cells, total protein and glucose concentrations, a Gram stain, and a corresponding blood sample for a laboratory-determined glucose concentration.
Results of microscopy and biochemical analyses should be available within 4 hours of the CSF sample being taken to inform early clinical management decisions.

Has CSF been measured and are the findings interpretable?

NO

Manage as if the diagnosis is confirmed regardless of CRP and white blood cell count.

YES

Is CRP and/or white blood cell count raised or normal?

RAISED

Suggestive of bacterial meningitis.
Is the child or young person a neonate?

NORMAL

Bacterial meningitis should not be ruled out.
Consider alternative diagnoses if the child or young person is significantly unwell.

YES

Start antibiotic treatment if CSF white blood cell count is >20 cells/μl.
If count is <20 cells/μl bacterial meningitis should still be considered.

NO

Start antibiotic treatment if CSF white blood cell count is >5 cells/μl or more than one neutrophil is present, regardless of other CSF variables.

If there is pleocytosis present and relevant history of exposure, evaluate for the diagnosis of tuberculosis (see'Tuberculosis' [NICE clinical guideline 33]).

Treat raised intracranial pressure and attempt to control seizures using local or national protocols.

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Bacterial meningitis and meningococcal septicaemia: Care pathway (part 2a) DRAFT (October 2009)