**Early Management of Suspected Meningitis and Meningococcal Sepsis in Immunocompetent Adults**

### Early recognition is crucial

Consider meningitis or meningococcal sepsis if **ANY** of the following are present:

- Headache
- Fever
- Altered consciousness
- Neck stiffness
- Rash
- Seizures
- Shock

### Immediate Action

- **Suspected Meningitis** (meningitis without signs of shock, severe sepsis or signs suggesting brain shift)
  - Blood cultures
  - Lumbar puncture
  - Dexamethasone 10mg IV
  - Ceftriaxone OR Cefotaxime 2g IV immediately following LP

- **Suspected meningitis with signs suggestive of shift of brain compartments secondary to raised intracranial pressure**
  - Get Critical Care input
  - Secure airway, high flow oxygen
  - Take bloods including Blood Cultures
  - Give Dexamethasone 10mg IV
  - Give Ceftriaxone OR Cefotaxime 2g IV immediately after blood cultures taken
  - Delay LP
  - Arrange neurological imaging

- **Signs of severe sepsis or a rapidly evolving rash** (with or without symptoms and signs of meningitis)
  - Get Critical Care input
  - Secure airway and give high flow oxygen
  - Fluid resuscitation
  - Blood Cultures
  - Ceftriaxone OR Cefotaxime 2g IV immediately after blood cultures taken
  - Delay LP
  - Follow Surviving Sepsis Guidelines at: http://www.survivingsepsis.org/guidelines

### Careful Monitoring and Repeated Review is essential

### Additional Investigations

- **Blood**
  - FBC, renal function, glucose, lactate, clotting profile
  - Meningococcal and Pneumococcal PCR (EDTA)
  - Blood gases
- **CSF** (if LP performed)
  - Glucose (with concurrent blood glucose), protein, microscopy and culture
  - Lactate
  - Meningococcal and Pneumococcal PCR
  - Enteroviral, Herpes Simplex and Varicella Zoster PCR
  - Consider investigations for TB meningitis

### Infection Control

Source isolate all patients until Meningococcal Disease is excluded or Ceftriaxone has been given for 24 hours (or a single dose of Ciprofloxacin)

Notify microbiology

### Public Health

Notify all cases to the relevant public health authority for contact tracing, give antimicrobial prophylaxis and vaccination where necessary

### Warning Signs

The following signs require urgent senior review +/- Critical Care input:

- Rapidly progressive rash
- Poor peripheral perfusion
  - Capillary refill time > 4 secs, oliguria or systolic BP < 90mmHg
- Respiratory rate < 8 or > 30 / min
- Pulse rate < 40 or > 140 / min
- Acidosis pH < 7.3 or Base excess worse than -5
- White blood cell count < 4 x 10^9/L
- Lactate > 4 mmol/L
- Glasgow coma scale < 12 or a drop of 2 points
- Poor response to initial fluid resuscitation

### Delay LP

If any of the following are present:

- Signs of severe sepsis or rapidly evolving rash
- SEVERE respiratory/ cardiac compromise
- Significant bleeding risk
- Signs suggesting shift of brain compartments (CT scan before LP is warranted, as long as patient is stable)
  - Focal neurological signs
  - Presence of papilloedema
  - Continuous or uncontrolled seizures
  - GCS ≤12

### Alternative initial antibiotics

- Penicillin/Cephalosporin
- Chloramphenicol 25mg/kg IV
- ú60 years old (not allergic)
- OR immunocompromised (including alcohol dependency and diabetes).
  - Ceftriaxone OR Cefotaxime 2g IV PLUS Amoxicillin 2g IV
- Penicillin/Cephalosporin anaphylaxis and ú60 years old
  - OR immunocompromised (including alcohol dependency and diabetes),
  - Chloramphenicol 25mg/kg AND Ce-trimoxazole 10-20mg/kg (of the trimethoprim component) in four divided doses

### Recent travel/risk of penicillin resistant pneumococci

- Ceftriaxone/Cefotaxime 2g IV PLUS
- Vancomycin 15-20mg/kg IV
- OR Rifampicin 600mg PO/IV

### The UK Joint Specialist Societies Guideline on the Diagnosis and Management of Acute Meningitis and Meningococcal Sepsis in Immunocompetent Adults.

Further copies from www.meningitis.org or Meningitis Research Foundation 0333 4056262. A charity registered in England and Wales no 1091105, in Scotland no SC037586 and in Ireland 20034368.