Brain Abscess in Adults - Microbiology Summary Clinical Guideline

Reference number: CG-ANTI/2020/072

Clinical concerns re brain abscess (altered mental status, fever, focal neurological deficit, headache, nausea, seizure, vomiting, etc.)

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Investigation: first line, in general, CT head

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Collaborate with the neurosurgical registrar/consultant on call in Nottingham

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Investigation:

- Radiology
  - ± MRI; collaborate with the consultant radiologist
- Microbiology
  - Biopsy; in collaboration with the neurosurgeon
  - Blood cultures
- ± Histology
  - Biopsy; in collaboration with the neurosurgeon
- Blood sciences
  - FBC, CRP, lactate, U&E, and LFT

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Treatment; Empiric, Intravenous Antibiotics:

- If there is: (i) no past history of acute or chronic otitis media; and (ii) no symptoms, signs, or radiological findings of middle ear infectious disease:
  - First line: metronidazole 500 mg 8 hourly and ceftriaxone 2 g 12 hourly
  - If immediate rapidly evolving or non-immediate with systemic involvement penicillin allergy, second line: chloramphenicol 25 mg/kg 6 hourly (NB maximums of 2 g 6 hourly and of 8 g within 24 hours)
- If there is: (i) past history of acute or chronic otitis media; and/or (ii) symptoms, signs, or radiological findings of **middle ear infectious disease**:
  - First line: meropenem 2 g 8 hourly
  - If immediate rapidly evolving or non-immediate with systemic involvement penicillin allergy, second line: metronidazole 500 mg 8 hourly and ciprofloxacin 400 mg 8 hourly and linezolid* 600 mg 12 hourly
- If history of **penetrating traumatic injury to the brain or post-operative (neurosurgery)** brain abscess:
  - First line: meropenem 2 g 8 hourly and linezolid* 600 mg 12 hourly
  - If immediate rapidly evolving or non-immediate with systemic involvement penicillin allergy, second line: metronidazole 500 mg 8 hourly and ciprofloxacin 400 mg 8 hourly and linezolid* 600 mg 12 hourly
- * If linezolid contraindicated, vancomycin (dose as per hospital guidelines), target pre dose level 15-20 mg/l

Treatment; Directed, Intravenous Antibiotics: with microbiology cultures and sensitivities