

Meningitis

Initial work-up/assessment

1. Blood cultures prior to antibiotics
2. Head CT: Does not need to be performed on all patients pre-LP. If there is a delay in obtaining head CT or LP, **DO NOT delay antibiotics**. Head CT recommended for patients with the following: Immunocompromised status, history of CNS diseases (shunts, trauma tumors), papilledema on exam or focal neurologic deficits, altered mental status or new onset seizure.
3. Lumbar puncture:
 - a. Opening pressure
 - b. Cell count + differential
 - c. Glucose
 - d. Protein
 - e. Bacterial culture
 - f. Additional studies to consider in selected patients based on clinical, epidemiologic, or radiographic findings include HSV 1, 2 PCR (NOT ANTIBODIES), VZV PCR, VDRL, Crypto antigen, fungal and/or AFB cultures, MTB PCR, West Nile Virus antibody, Enterovirus PCR, Histoplasma antigen. These should not be performed routinely on all patients. ID consultation should be considered in cases where management questions exist, and extra CSF should be saved to perform additional testing.

Empiric therapy

1. ANTIBIOTICS AS SOON AS POSSIBLE:
 - a. Ceftriaxone 2g IV q12h + Vancomycin , adjusted for renal function
 - o Piperacillin-tazobactam cannot be used due to poor CNS penetration
 - b. Optional coverage of *Listeria* for immunocompromised patients, pregnant women, or age >50 with IV ampicillin 2g q4h
 - c. If suspected HSV or VZV meningitis add IV acyclovir 10 mg/kg q8h with adequate IVF hydration
 - d. Consider empiric PO/IV doxycycline 100mg BID if tick-borne illness is suspected
 - e. Freeze extra tube of CSF if possible
2. Steroids: Based on IDSA guidelines and a recent meta-analysis, steroids (Dexamethasone 0.15 mg/kg q6h) should be given about 10-20 minutes before the first dose of antibiotics, or at the same time, in patients with suspected bacterial meningitis. Unless an organism other than pneumococcus is isolated, continue IV steroids for 2-4 days (including for culture negative cases). Dose: IV Dexamethasone 0.15 mg/kg q6h.
3. Infectious Diseases consultation

Duration: Duration should be guided by Infectious Diseases Consultation and varies based on organism recovered.