

Supplementary Table 1. Definition of meningitis, ventriculitis and intracranial infection according to the guidelines of CDC [15]**Meningitis/ventriculitis**

Presence of at least one of the following criteria:

(I) Organisms cultured from CSF

(II) Presence of at least one of the following signs or symptoms with no other recognized cause—fever (>38°C), headache, meningeal signs, cranial nerve signs, or irritability

and at least one of the following:

a. Increased white cells, elevated protein, and/or decreased glucose in CSF

b. Organisms seen on Gram stain of CSF

c. Organisms cultured from blood

d. Positive antigen test of CSF, blood, or urine

e. Diagnostic single antibody titer (IgM) or 4-fold increase in paired sera (IgG) for pathogen

and if diagnosis is made antemortem, physician institutes appropriate antimicrobial therapy.

Intracranial infection

Presence of at least one of the following criteria was met:

(I) Patient has organisms cultured from brain tissue or dura.

(II) Patient has an abscess or evidence of intracranial infection seen during a surgical operation or histopathologic examination.

(III) Patient has at least two of the following signs or symptoms with no other recognized cause: headache, dizziness, fever (38°C), localizing neurologic signs, changing level of consciousness, or confusion.

and at least one of the following:

a. Organisms seen on microscopic examination of brain or abscess tissue obtained by needle aspiration or by biopsy

b. Positive antigen test on blood or urine

c. Radiographic evidence of infection (e.g., abnormal findings on ultrasound, CT scan, MRI, radionuclide brain scan, or arteriogram)

d. Diagnostic single antibody titer (IgM) or 4-fold increase in paired sera (IgG) for pathogen;

and if diagnosis is made antemortem, physician institutes appropriate antimicrobial therapy.

CDC: Centers for Disease Control and Prevention; CSF: cerebrospinal fluid; IgM: immunoglobulin M; IgG: immunoglobulin G; CT: computed tomography; MRI: magnetic resonance imaging.