



06/13/24 Morning Report with @CPSolvers



"One life, so many dreams" Case Presenter: Han Nguyen (@Flower_freeland) Case Discussants: Rabih (@rabihmgeha) and Maryana (@maryanamribeiro)

CC: 50 YO M p/w fever and severe headache

HPI: After 30 min in hospital, LOC. Did not respond to family members. Admitted to TB hospital. On arrival, became agitated and lost his vision. Ordered LP and received meropenem. Then transferred to infectious hospital. 2 days ago, had alcohol use but stopped a day before presenting to hospital. No SOB, cough, N/V.

ROS: +fever, headache, vision loss, deafness. No weight loss, cough, or chest pain

PMH:
Osteosynthesis in L thigh 2 yr ago due to traffic accident
Unknown blood transfusion
Unknown TB

Meds:
None

Fam Hx:
Lived with wife and 2 children in south of Vietnam, no one had TB or liver disease
Soc Hx:
Retired rice farmer

Health-Related Behaviors:
According to wife, drank a lot of alcohol (3-4 x per week), unknown amount.
No substance use

Vitals: T: 38.5 HR: 100 BP: 150/99 RR: 20 SpO2: 98%

Exam:

Gen: Wake, but no response to questions.

HEENT: Vision loss, deafness, no LAD, no ulcers

CV: no murmur, no gallop

Pulm: normal breath sounds

Abd: nondistended, nontender

Neuro: GCS 12, b/l dilated pupils, neck stiffness

Extremities/skin: No rash or lesions, no visible wounds in hands/feet

Notable Labs & Imaging:

Hematology:

WBC: 10.6 w/ neu 8.01 (74.9%), lymph 0.79 (9.1%), eos 0.04 (0.4%)

Hgb: 12.9 Plt: 180

Chemistry:

Na: nl K: nl Cl: HCO3: BUN: 26.08 Cr: nl glucose: 4.44 mmol/l

AST: 43 nl ALT: 33 nl GGT: 98 Tbili: 23.1 umol/l (direct: 13.8)

Imaging:

CXR: normal

Brain MRI: Thickening dural, fluid-fluid level in lateral ventricle

CSF (TB hospital): Cloudy, WBC 2880 cells w/ neu 80%, protein:

2.07, glu CSF/glu serum: 2/8.9, fungal neg

CSF (infectious hospital): pink, opening pressure: 18, WBC 7043 w/

neu 6726 (89%) and lymph 767 (11%), RBC: 9000, protein: 1.85, glu

CSF/glu serum: 1.98/4.44, lactate: 6.06

CSF culture & microscopy: neg

Malaria, AFB neg

PCR in CSF: Strep suis

Dx: meningitis due to Strep suis

Problem Representation: 50 YO M from rural Vietnam and PMH AUD and TBI p/w fever, headache, vision loss, and LOC (GCS 12)

Teaching Points (Julia):

→ fever & headache inflammation inside the brain? - most prevalent causes of headache are localised extracranial

Encephalopathy (fever + brain): distinguish **parenchyma, meningeal** or **vascular** (less common)

Focal lesion on MRI that causes LOC are most commonly localised in the **brain stem**
diffuse cortical problem e.g. in meningoencephalitis → **central nerves** are affected
Vascular: multifocal embolic phenomenon

Viral: herpes, enterovirus (no manifestations outside the brain) vs bacterial causes: Strep.pneumo + N. meningi (w/ systemic fingerprint) Tb, cryptococcus (in between)

Venn diagram of **vision loss + deafness**

conflict: optic nerve (**CNS**) - vulnerability to demyelinating processes vs. cranial nerves (**PNS**)

→ PRESS, pituitary hemorrhage, methanol intoxication, aggressive meningitis (compression of adjacent nerves)

Thickening of the meninges: (1) **inflammation** (lepto- or pachymeningitis) (2) **CFS-hypotension** (→ edema) (3) **dural venous sinus thrombosis** (4) **irritation** (2/2 lumbar puncture)

=> Perform LP AFTER MRI to avoid secondary meningeal thickening

Fluid in the Lateral ventricle think about PUS = **ventriculitis** (bacterial)

Meningeal involvement can transfer to all 3 compartments 1) **vasculitis** 2) **ventriculitis** 3) **meningoencephalitis**

in patient with alcohol use: listeria (disproportionate CNS involvement), Strep pneumo

Culture negative findings do NOT exclude bacterial causes

In our patient still think about → listeria, neisseria, strep pneumo, miliariosis & strep suis
Time course can help: TB (subacute) + lymphocytic OR acute => neutrophilic predominance TB CAN DO ANYTHING

Strep suis can present with CNS predominance without systemic symptoms