



06/07/24 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Masah (@Mardinimasah) Case Discussants: Rabih (@rabihmgeha) and Reza (@DxRxEdU)



CC: 25 YO M w/ decreased LOC and urinary continence

HPI: 25 YO M with AUD brought to ED w/ decreased LOC and urinary continence. 7 days prior, p/w headache and vomiting, d/c on symptomatic treatment.

GCS 11 w/ right gaze deviation. In ED, tachycardic, hypothermic, and had seizures, so was started on IV diazepam. Admitted to ICU, was intubated and started on empirical abx and anti-epileptics

ROS: altered mental status, no N/V and SOB

PMH:
Alcohol use disorder (Abstained from alcohol use for 2 months)

Meds:
Paracetamol as needed

Fam Hx:
Unknown
Soc Hx:
1 L vodka daily 2 months prior
Sexual and illicit drugs use unknown
Health-Related Behaviors:
Immigrant from Morocco

Allergies:
Unknown

Vitals: T: 34.7 HR: 110 BP: 110/89 RR: 18 O2: 96% on RA

Exam:

CV: normal S1, S2

Pulm: No added lung sounds

Abd: No tenderness, normal bowel sounds

Neuro: opening eyes w/ R gaze deviation, localizing pain, no signs of lateralisation. PERL in ED but small and b/l nonreactive pupils in ICU (on mechanical ventilation), - b/l Basinski

Extremities/skin: no LE edema

Notable Labs & Imaging:

Hematology:

WBC: 11300 Hgb: 14.2 Plt: D Dimer: 0.7, CRP: 50.2

Chemistry:

Na: 130 K: 4.1 AST: 28 ALT: 16 Alk-P: 116.7 Albumin: 28.4 Tbili: 7.9

HIV: neg, Influenza A/B: Neg, Toxicology: neg, Toxoplasma IgG: neg

Imaging:

CXR: Multiple scattered small patchy opacities in left upper lung with congested hilar vascular markings

CTE brain: ill-defined hypodensities in L and R parietal occipital regions and R frontal temporal regions, no bleeding or acute infarctions, no mass effect/midline shift. Air-fluid levels in maxillary sinuses and bubbly appearance on all other sinuses

HRCT: linear and nodular tree-and-bud opacities showing patchy areas of consolidation

Brain MRI: multiple ring-enhancing lesions and some regions with focal edema in R frontal and precentral regions, and R and L posterior parietal regions

CSF analysis: protein 2443, glu 3.5, leukocytes 64 w/ lymphocyte predominance

AF culture: positive

Dx: CNS tuberculoma

Problem Representation: 25 YO M with PMH AUD p/w subacute SIRS physiology and pathology in both lung and brain

Teaching Points (Ibrahim):

- **Neuro: stabilization** (control seizures, BP, cerebral edema), r/o structural lesion(s) [esp. If headache and vomiting coexist together → elevated ICP + right gaze deviation → get CT]

- **Alcohol use withdrawal [intentional vs unintentional → think cirrhosis]** → risk of seizures in withdrawal → get urine tox, blood alcohol

- **fixed gaze deviation** → brain cortex (frontal eye fields → push eyes the other way → R deviation: activation of left frontal eye → contralateral gaze deviation);

- **Parapontine reticular formation (PPRF)** → ipsilateral gaze deviation

- **Pinpoint pupils:** can occur 2/2 to bilateral brainstem lesion

- **Seizures:** hx of seizures, structural lesions, metabolic, toxins

- **Time course: hypothermia** → happens over time → **loss of energy over production** → **loss** is due: *environment, vasodilation (sepsis, alcohol consumption [facial rubor]);*

reduced production is due: *hypothyroidism [bradycardia], malnourishment, hypothalamic [cyclic hypothermia]/brainstem dz*

- **Bilirubin:** hematological [indirect, anemia] vs hepatic [direct]. If hepatic → parenchyma [transaminases] vs. drainage system [ALP]; **If leukocytes + bilirubin** → alcohol

- **Hyperbilirubinemia w/ systemic features** are MOSTLY due to parenchymal liver dz

- **PATCHY OPACITIES IN UPPER LOBE (esp. If young)** → think brain + lung + liver → **immune status (HIV, alcohol)** → **infection** (atypical: mycobacteria, nocardia, actinomycosis; dimorphic fungi: cocci, histoplasma, blasto) vs **immune process** (GPA, rheumatoid, sarcoid, malignancy [lymphoma]) → start broad-spectrum abx, send sputum culture, MRI, LP, LDH, AFP

- **Tree-and-bud opacities** → infectious (mainly mycobacteria but can include others [including typical organisms])

- **Nodular opacities** → location (airway, lymphatic, vascular), hilar lymphadenopathy → sarcoid, random → malignancy; **Brain abscess** → TB vs. nocardia [1/3rd are immunocompetent] until proven otherwise, fungal are mostly meningeal